UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

EMOTIONS AND SENSEMAKING: HOW ANGER, GUILT, AND EMOTION REGULATION IMPACT ETHICAL DECISION MAKING

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

Degree of

DOCTOR OF PHILOSOPHY

By

DIANA GENEVIEVE JOHNSON
Norman, Oklahoma
2015

Downloaded from SHAREOK. Persistent Handle URL: https://hdl.handle.net/11244/14588

EMOTIONS AND SENSEMAKING: HOW ANGER, GUILT, AND EMOTION REGULATION IMPACT ETHICAL DECISION MAKING

A DISSERTATION APPROVED FOR THE
DEPARTMENT OF PSYCHOLOGY

BY

_____
Dr. Shane Connelly, Chair

_____
Dr. Michael D. Mumford

_____
Dr. Lori A. Snyder

_____
Dr. Robert Terry

_____
Dr. Michael R. Buckley

© Copyright by DIANA GENEVIEVE JOHNSON 2015
All Rights Reserved.

Acknowledgements

There are a few people I need to thank who helped make this dissertation possible. First, my advisor, colleague, and friend, Dr. Shane Connelly, who has stuck with me for the last five years to provide guidance, give advice, and share a few laughs. I would also like to thank my committee members for contributing their time and feedback to this project: Dr. Michael Mumford, Dr. Lori Snyder, Dr. Robert Terry, and Dr. Michael Buckley. I am also appreciative of the effort and expertise my raters, Alisha Ness, Brett Torrence, and Kelsey Medeiros, dedicated to this research effort. Last, my family and friends deserve a huge thanks for providing support and encouragement for this project and others – especially one person in particular. Ian Ainslie, thank you for being my rock.

Table of Contents

Acknowledgements iv
Table of Contents v
List of Tables vii
List of Figures viii
Abstract ix
Introduction 1
- Ethical Decision Making 2
- Emotions and EDM 3
  - Emotional appraisals 5
- Anger, Guilt, and EDM 6
  - Defining anger and guilt 6
  - Self- versus other-oriented appraisals and decision making 7
- Anger, Guilt, and Sensemaking 9
  - Metacognitive strategies 9
  - Cognitive processes 11
  - Social psychological behaviors 13
- Moderating Effects of Emotion Regulation 15
  - Cognitive reappraisal and suppression 15
  - Reappraisal, suppression, and EDM 16

Method 20
- Participants 20
- Design 20
- Procedure 20
- Manipulations 21
  - Emotion evocation 21
  - Emotion regulation 23
- Outcome Variables 23
  - Metacognitive strategies 24
  - Social psychological behaviors 25
  - Cognitive processes 25
  - Ethical decision making 27
- Covariate Measures 27
  - Personality 27
  - Emotional propensities 28
  - ER propensities 28
  - Trusting nature 28
  - Verbal reasoning 29
  - Demographics 29

Results 29
- Manipulation Checks 30
  - Emotion evocation 30
  - Emotion regulation 31
  - Effort, engagement, and fatigue 33
- EDM 34

Sensemaking and EDM 34
Metacognitive strategies 34
Cognitive processes 35
Social psychological behaviors 37
Discussion 38
Limitations 43
Future Research and Conclusions 44
References 46
Tables 67
Figures 76
Appendix A 78
Appendix B 79
Appendix C 82
Appendix D 83
Appendix E 84

List of Tables

Table 1. *Operational Definitions of Sensemaking Processes* 67
Table 2. *Means, Standard Deviations and Correlations among Study Variables: Covariates, Metacognitive Strategies, and Social Psychological Behaviors* ... 68
Table 3. *Means, Standard Deviations and Correlations among Study Variables: Covariates, Cognitive Processes, and Decision Ethicality* 69
Table 4. *Means, Standard Deviations and Correlations among Study Variables: Sensemaking Processes and Decision Ethicality* 70
Table 5. *Means and Standard Deviations for Metacognitive Strategies* 71
Table 6. *Means and Standard Deviations for Social Psychological Behaviors and Decision Ethicality* 72
Table 7. *Means and Standard Deviations for Cognitive Processes* 73
Table 8. *Mediational Effects of Metacognitive Strategies and Social Psychological Behaviors on Decision Ethicality* 74
Table 9. *Mediational Effects of Cognitive Processes on Decision Ethicality* 75

List of Figures

Figure 1. Example multiple mediation model. Covariates are included in analyses but are not shown in the figure. 76
Figure 2. Three-way interaction for the impact of manipulations on selfishness. 77

Abstract

Affect plays an important role in cognition and behavior, but how discrete emotions influence decision making is still unclear. To contribute to the understanding of this process, this study investigated the impact of guilt and anger in ethical decision making. By taking a sensemaking approach, the findings demonstrated that experiencing integral guilt and anger have important and differential impacts on sensemaking processes and resultant ethical decision making. Overall, guilt was more beneficial than anger, but both emotions drew participants' attention to particular aspects of the situation. Specifically, anger prompted reflection on the past and the causes of the situation while guilt helped participants focus on the future and the outcomes of the current situation. The moderating impact of two emotion regulation strategies, cognitive reappraisal and suppression, was also investigated, and results indicated that emotion regulation may be markedly difficult in ethical decision-making situations. In addition, suppressing anger may be particularly harmful for making ethical decisions via its impact on selfishness. Implications and future research directions are also discussed.

Keywords: Anger, guilt, ethical decision making, sensemaking, suppression, cognitive reappraisal

Introduction

Research on ethical decision making (EDM) in organizations has grown in the past several decades (Kish-Gephart, Harrison, & Treviño, 2010; Tenbrunsel & Smith-Crowe, 2008; Treviño, den Nieuwenboer, & Kish-Gephart, 2014) due to its importance for organizational functioning – for example, the recent ethical downfalls of large corporations such as major banks. As a whole, the workplace is permeated with opportunities to make (un)ethical decisions, with 62% of employees witnessing ethical misconduct at work each year (Ethics Research Center, 2015). Therefore, there is a need to understand how these poor ethical decisions arise and potential ways to deal with what causes them.

One factor that may play a critical role in perceiving ethical dilemmas and making ethical decisions is emotional experience, as emotional reactions are commonplace when dealing with ethical quandaries (Gaudine & Thorne, 2001; Mumford et al., 2008; Thiel, Bagdasarov, Harkrider, Johnson, & Mumford, 2012). Calls for the integration of emotion into EDM at work have become more frequent (e.g., Tenbrunsel & Smith-Crowe, 2008; Vitell, King, & Singh, 2013), as growing research on emotions in the workplace (Ashkanasy & Humphrey, 2011; Barsade & Gibson, 2007) and their impact on cognitive processes (Angie, Connelly, Waples, & Kligyte, 2011; Lench, Flores, & Bench, 2011; Lerner, Li, Valdesolo, & Kassam, 2015) provide an expanding foundation on which to understand the role of emotions in EDM.

By applying the sensemaking framework for EDM (Mumford et al., 2006, 2008), this study investigates the impact of two discrete emotions, anger and guilt, on EDM. Also of interest is the potential moderating influence of two emotion regulation

(ER) techniques, cognitive reappraisal and suppression, since dealing with one's emotions is important when making ethical decisions (Mumford et al., 2006, 2008; Kligyte, Connelly, Thiel, & Devenport, 2013). In addition, this study proposes that the effects of emotion and their regulation on EDM are due to their impact on the sensemaking processes that influence EDM.

Ethical Decision Making

Problematic situations with ethical implications are typically complex, ill-defined, and conflict-ridden (Werhane, 2002), oftentimes with serious consequences for multiple stakeholders. As a result, ethical quandaries require sensemaking to help individuals navigate these complexities (Mumford et al., 2008; Sonenshein, 2007). Sensemaking is a multi-step process with three key pieces – scanning the environment for information, interpreting and organizing information, and applying the information to make a decision. Throughout these steps, both cognitive and behavioral actions may be taken to help understand and integrate key environmental and individual factors. The decision made at the end of this process is therefore a product of the decision-maker's framing/understanding of the situation (e.g., causes and boundaries) and judgments regarding potential responses (Weick, 1995). By partaking in sensemaking processes, greater understanding of the situation is gained, and ethical decisions and actions are facilitated (Mumford et al., 2008; Sonenshein, 2007)

Sensemaking processes and behaviors can take a number of forms. Some are metacognitive strategies that involve reflection and assessment of how one reasons through a problem (Antes et al., 2007). As an example, understanding one's judgmental biases or recognizing situational complexities (Mumford et al., 2008) help individuals

move from biased to more systematic processing. Sensemaking may also involve other cognitive processes designed to provide a framework for analyzing the situation and forecasting its potential consequences (Stenmark et al., 2010). Various social psychological behaviors also represent strategies for dealing with an ethical quandary and include both positive and negative behaviors, such as acting unselfishly or engaging in deception (Mumford et al., 2006).

The literature is replete with examples in which these intermediary sensemaking processes impact EDM (Antes et al., 2007; Bagdasarov et al., 2015; Caughron et al., 2011; Kligyte et al., 2013; Mumford et al., 2006; 2008; Stenmark et al., 2010, 2011; Thiel, Connelly, & Griffith, 2011). For example, Caughron and colleagues (2011) found that applying reasoning strategies increased overall use of sensemaking processes, resulting in higher ethicality of decisions. Similarly, Stenmark et al. (2010) found that increased causal analysis and forecasting boosted consequential EDM. Notably, recent research has established the importance of sensemaking as a mediating, explanatory factor for EDM when participants were asked to take on a role within an organization (Bagdasarov et al., 2015; Stenmark et al., 2011). Overall, then, research supports the notion that sensemaking strategies, processes, and behaviors are critical driving factors of EDM.

Emotions and EDM

With sensemaking functioning as a critical driver of EDM, it is necessary to investigate variables that may change the use or application of these processes in an ethical event. Emotions offer an important situational and experiential factor to consider, as ethical dilemmas can be viewed as an affective event at work - events

which impact attitudes, judgment, and behavior (Gaudine & Thorne, 2001; Weiss & Cropanzano, 1996). This is especially true given the high-stakes nature of ethical events and their implications for personal and professional goals, which can induce appraisals of the event and evoke a number of emotional responses (Mumford et al., 2008). Researchers have long noted the inability for emotions to be separated from reason (e.g., Damasio, 1994), and this is reflected in the move away from early models of moral reasoning in which rational, logical thought was dominant (c.f. Kohlberg, 1984; Rest, 1986) to models implying that individuals are subject to quick, non-rational reactions that involve biases and emotions (Dedeke, 2013; Gaudine & Thorne, 2001; Haidt, 2001; Sonenshein, 2007). Therefore, emotions should not be ignored when engaging in EDM, potentially due to their impacts on cognitive processes and behavioral actions such as forecasting, self-reflection, and information gathering (Mumford et al., 2008; Thiel et al., 2012).

Growing empirical research sheds light on how emotions bear influence on judgment, reasoning, and decision making (Blanchette & Richards, 2010). Notably, research has demonstrated the ability of distinct emotions to differentially affect responses to tasks involving judgment and decision making (Lerner & Keltner, 2000; Nabi, 2002, 2003; Tiedens & Linton, 2001). Moreover, meta-analyses have shown discrete emotions' consistency in impacting not only cognitive outcomes but behavioral ones as well (Angie et al., 2011; Lench et al., 2011). Researchers in the EDM area are taking notice of these results, calling for research regarding how specific emotions impact moral awareness, judgment, intentions, and actions (Treviño et al., 2014; Treviño, Weaver, & Reynolds, 2006; Zerbe, Härtel, & Ashkanasy, 2008) since "the

uniqueness of a moral/ethical dilemma and its associated emotions are, therefore, likely to draw the decision-maker in different directions" (Krishnakumar & Rymph, 2012, p. 325).

Emotional appraisals. Much of the differences among discrete emotions is a function of the appraisals underlying the emotional experience. Cognitive Appraisal Theory holds that emotions are evoked due to primary and secondary evaluations of a situation (Frijda, 1986; Lazarus, 1991; Roseman, Spindel, & Jose, 1990; Scherer, 1988; Smith & Ellsworth, 1985; Smith & Pope, 1992). The primary appraisal of information with respect to goals and values leads to positive or negative emotional reactions, while the secondary appraisal determines the specific emotion evoked based on dimensions such as control, certainty, goal blockage, and self- or other-responsibility (Frijda, Kuipers, & ter Schure, 1989; Roseman et al., 1990; Smith & Ellsworth, 1985). Essentially, a specific, discrete emotion "activates a cognitive predisposition to appraise future events in line with the central-appraisal dimensions that triggered the emotion" (Lerner & Keltner, 2000, p. 477). Each emotion reflects a different constellation of appraisals, which impact cognition in disparate ways.

Limited research has been conducted to understand the effects of different appraisals and emotions on EDM. Although a great deal of research has focused on the different roles of shame and guilt in moral development (Eisenberg, 2000), only a handful of studies have investigated how these emotions impact EDM at work (e.g., Agnihotri, Rapp, Kothandaraman, & Singh, 2012; Cohen, 2010). Research on other emotions such as sadness, anger, and fear and their effect on workplace EDM (Thiel et al., 2011; Kligyte et al., 2013; Krishnakumar & Rymph, 2012) is also limited, with only

Kligyte and colleagues (2013) and Thiel et al. (2011) applying the sensemaking approach. Therefore, this study aims to extend this research by applying the sensemaking framework to compare the influence of anger and guilt, which, to our knowledge, have not been directly compared in the EDM literature. However, both are reported to occur at work, especially in response to unpleasant situations (Basch & Fischer, 2000; Boudens, 2005; Elfenbein, 2007), and are feasible reactions in ethical events due to the inherent nature of ethical issues (Gaudine & Thorne, 2001; Haidt, 2001; Mickel & Ozcelik, 2008)

Anger, Guilt, and EDM

Defining anger and guilt. Anger is a negative, high-arousal emotion (Russell, 1980) associated with appraisals of certainty about what has happened and its causes (Smith & Ellsworth, 1985), goal blockage (Lazarus, 1991), being treated unfairly (Kuppens, Van Mechelen, Smits, & De Boeck, 2003), and insult or offense against oneself or a person one cares about (Lazarus, 1991). Guilt, on the other hand, is a negative, self-conscious moral emotion associated with feeling that one has behaved in a way that violates social or moral norms, wronging or harming another person (Lazarus, 1991; Tangney, 1995). Guilt is associated with a level of arousal in that an individual experiencing guilt still believes they are able to deal or cope with the situation (Lazarus, 1991; Tangney, 1991).

Although anger and guilt are similar on a number of basic appraisals, such as levels of unpleasantness, certainty, and the belief that the emotion-evoking event is caused by a person as opposed to the situation, they are wholly opposite in self- versus other-blame and responsibility (Neumann, 2000; Smith & Ellsworth, 1985). This is

related to the idea of moral emotions as a whole, as emotions such as guilt draw focus to how one's behavior is related to the welfare of others while non-moral emotions like anger focus on perceived threats or opportunities primarily affecting the self (Haidt, 2003).

Self- versus other-oriented appraisals and decision making. The sizeable differences in the impact that anger and guilt have on decision making and judgment (Angie et al., 2011) may well be a function of these self- versus other- appraisals, which can be extended to making decisions in an ethical event. In fact, factors that focus on self-perception and beliefs about others, such as individuals' characteristics (Antes et al., 2007) and ethical organizational climates (Victor & Cullen, 1988), play a role in EDM and the use of strategies. For example, those high in Machiavellianism and narcissism, both of which are associated with concern for the self, tend to make more unethical decisions (Brown, Sautter, Littvay, & Bearnes, 2010; O'Fallon & Butterfield, 2005; Kish-Gephart et al., 2010). On the contrary, empathetic individuals, who understand the needs of others, tend to be make more ethical decisions (Brown et al., 2010; Eisenberg, 2000).

Similar findings have been uncovered for guilt and anger. Guilt-proneness has predicted the likelihood that individuals will engage in ethical behavior (Tangney, Stuewig, & Mashek, 2007) such that those higher in guilt-proneness were less likely to engage in counterproductive work behaviors (CWBs) (Cohen, Panter, & Turan, 2013) or approve of unethical bargaining tactics (Cohen, 2010). Salespeople high in guilt-proneness have also had more positive ethical attitudes, resulting in more ethical behavior (Agnihotri et al., 2011). In addition, research has found that those who are

higher in trait guilt were also more likely to make more ethical choices (Connelly, Helton-Fauth, & Mumford, 2004) and fewer unethical business decisions (Cohen, Wolf, Panter, & Insko, 2011).

Generally, anger, whether situationally-induced or dispositional, tends to result in decisions lower in ethicality that involve aggression, punitive judgments of others, or taking action against the causal agent (Eisenberg, 2000; Lerner & Tiedens, 2006). For example, Umphress, Ren, Bingham, and Gogus (2009) found that perceived unfairness increased the likelihood of acting unethically. Those high in trait anger were also more likely to engage in CWBs, such as stealing at work (Penney & Spector, 2002; Spector, 2011). Several researchers have also found anger and related appraisals of certainty to decrease decision ethicality (Thiel et al., 2011; Kligyte et al., 2013; Krishnakumar & Rymph, 2012).

Taken together, these results suggest that experiencing guilt will lead to greater EDM than experiencing anger. However, one of the shortfalls of the EDM literature is a focus on emotional proneness as opposed to actual emotional experience (Vitell et al., 2013), and actual experience may result in even stronger effects. On a related note, studies have typically used incidental emotions (triggered by a different scenario) as opposed to integral emotions (triggered by the current scenario) (e.g., Thiel et al., 2011; Kligyte et al., 2013 – see Krishnakumar & Rymph, 2012, for an exception), and Vitell and colleagues' (2013) review notes that task-related emotions are oftentimes more impactful on EDM than incidental emotions. Therefore, this study aims to address this gap by studying the potential for integral, state emotions in an organizational setting to

influence EDM, and we propose that previous research findings will be replicated within this design.

Hypothesis 1: State guilt will lead to greater EDM than state anger stemming from an ethical problem.

Anger, Guilt, and Sensemaking

The impact of underlying appraisals such as the concern for self versus others seen with anger and guilt is likely to extend to the focus, use, and engagement in sensemaking strategies in an ethical quandary. These sensemaking processes and behaviors are of particular concern as they are established factors that drive differences in EDM (as discussed previously), and this study investigates how anger and guilt influence a number of sensemaking variables – thereby impacting downstream EDM.

Metacognitive strategies. Experiencing anger or guilt has a number of implications for sensemaking strategies that require individuals to reflect upon how they think through a problem. In general, anger and its related appraisals prompt biased and heuristic processing (Angie et al., 2011; Tiedens & Linton, 2001). By reducing the level of systematic processing, angry decision makers tend to consider the issue at hand in less depth (Lerner & Tiedens, 2006), leading to riskier, more impulsive decisions (Lerner & Keltner, 2000, 2001). Experiencing guilt typically has the opposite effect. Guilt causes individuals to think critically about their behavior (Tangney, 1995) and how it is related to the current event, especially the people within it. In fact, the social, between-person nature of guilt (Baumeister, Stillwell, & Heatherton, 1994) means that guilt triggers a perception that one fell short of the expectations of others in a

relationship (Sommer & Baumeister, 1997), causing a systematic processing of how and why one's behavior transgressed moral imperatives.

In general, then, the level and type of processing induced by anger and guilt influence two metacognitive aspects important for EDM: evaluation from others' perspectives or expectations and concern about others due to one's actions. When experiencing guilt in an ethical event, individuals are likely to become more attuned to their role in the social and organizational sphere (Tangney, 1991), partially by assessing themselves from the perspectives of others (Leary, 2007) and empathizing and understanding how others may be feeling or thinking (Cohen et al., 2011; Tangney & Dearing, 2002). Therefore, guilt-ridden individuals are able to expand their understanding and recognition of the circumstances (e.g., relationships, conflicts, job role/responsibilities, social climate and expectations) beyond only their perspective or viewpoint. Research has shown that angry individuals are not as capable at accomplishing this (Thiel et al., 2011; Kligyte et al., 2013). Accordingly, guilt is more likely to prompt evaluation of the judgment and personal motivations that lead to the guilt-inducing behavior (Tangney, 1995) while the certainty of other-blame that leads to anger evocation can prevent individuals from questioning their own judgment (Thiel et al., 2011). Moreover, the cognitions involved with guilt draws focus on generating a range of consequences of one's behavior for others (Tangney, 1991). By giving enhanced attention to the interwoven social relationships within the ethical event, individuals experiencing guilt will likely consider the implications of these consequences for themselves as well. In contrast, the focus on threat and harm associated with anger (Lazarus, 1991) will prompt angry individuals to solely focus on

the consequences for themselves, particularly negative ones, resulting in consideration of fewer consequences in less detail (Thiel et al., 2011). Certainty appraisals and low evaluations of risk (Lerner & Tiedens, 2006) may also prevent individuals experiencing anger, as opposed to guilt, from recognizing the need to get help from others to solve the problem, especially since those experiencing guilt are motivated to fix the situation (Tangney, 1991). Since all of these strategies are linked with EDM, we propose:

Hypothesis 2: a) State guilt will lead to greater use of metacognitive strategies than state anger stemming from an ethical problem, and b) these metacognitive strategies will mediate the relationship between anger, guilt, and EDM.

Cognitive processes. Related to the evaluative nature of guilt and the heuristic processing style of anger, it is of interest to understand how these emotions affect how individuals diagnose and frame the ethical problem – a critical precursor to downstream processes such as forecasting, which involves making predictions about potential future outcomes based on current observations.

The effects of anger on these processes largely stem from its ability to strongly confine the scope of focus and lead individuals to pursue a specific cognitive or behavioral route for a significant amount of time (Lazarus, 1999). Individuals tend to retroactively seek evidence that confirms their initial, visceral reactions (Sonenshein, 2007), which has the potential to attract their attention one way or another (Blanchette & Richards, 2010) and have sizeable impacts on information gathering and interpretation (MacDougall, Bagdasarov, Johnson, & Mumford, 2015). For anger, an individual's attention is typically drawn to more superficial cues (Tiedens & Linton, 2001) while somewhat overlooking cues more critical to the situation (Bodenhausen,

Sheppard, & Kramer, 1994). The initial cues on which people focus when angry are significant drivers of how they frame the situation in terms of problem definition, interpretation of causes, and preferred actions (Nabi, 2003), implicating the unfolding issues that anger may cause from start to finish.

Less is known about guilt's effect on affective framing and forecasting. Drawing on the evaluation that is characteristic of guilt, guilty individuals may initially focus on information confirming that they are indeed the cause of the negative ethical event, but greater information gathering and self-reflection may be induced to best understand how to take effective reparative action, which is an overwhelming goal when feeling guilty (Tangney, 1991).

When considered in conjunction, the literature suggests that the relative narrowing of anger compared to guilt can have significant impacts on problem recognition, causal analysis, boundary analysis, and forecasting. Angry individuals have been found to perceive and apply fewer diagnostic cues (Lerner, Goldberg, & Tetlock, 1998) due to an increased sensitivity and focus on information relevant to the goals and experience of anger (DeSteno, Petty, Rucker, Wegener, & Braverman, 2004; Nabi, 2003). Confidence in what happened and certainty of its cause may also result in angry individuals favoring initial attributions regarding the cause (Lerner & Tiedens, 2006), stunting analysis of causality. Perceived responsibility and anticipatory guilt, however, has led to continued diagnostic processes and information gathering even when initial results are unfavorable (Mancini & Gangemi, 2006), potentially enhancing the recognition of the ethical issues at hand and the causes behind them. In addition, the decreased cognitive exploration of the ethical event associated with anger has also been

linked to identifying fewer situational constraints that could impede decision or action (Thiel et al., 2012). Anger has also been shown to reduce the quality and originality of planning processes (Thiel et al., 2012), which encompasses processes such as forecasting both long- and short-term outcomes based on current understanding (Mumford, Mecca, & Watts, in press). The self-reflection consistent with guilt can have a more positive effect on forecasting and the analysis of the plan's impact for oneself and others (Mumford et al., 2008).

Essentially, the narrowing nature of anger, compared to guilt, may hinder cognitive EDM processes and decision making since there is usually more than one correct course of action in ethical situations. This leads to our third hypothesis:

> *Hypothesis 3: a) State guilt will lead to greater use of cognitive sensemaking processes than state anger stemming from an ethical problem, and b) these cognitive processes will mediate the relationship between anger, guilt, and EDM.*

Social psychological behaviors. In addition to cognitive processes, emotions trigger "action tendencies" that enable the individual to navigate the opportunities or problems they encounter (Frijda, 1986). The social environment in which organizational ethical events occur underscores the need to consider behavior with social psychological bases, such as retaliation, deception, avoiding responsibility, and selfishness. As a whole, the benefits of understanding how anger and guilt and their differential self- versus other-focus impacts such behaviors is derived from the behaviors' explicable negative effects on EDM (Mumford et al., 2006).

In general, guilt is associated with an increase in socially proactive, constructive behaviors and a decrease in defensive ones (Tangney, 1991; Tangney et al., 2007) to help the individual mitigate the feelings of guilt (Ketelaar & Au, 2003; Westen, 1994). To deal with the experience of anger, angry individuals have a tendency to change the situation by acting against another person or obstacle (Frijda et al., 1989; Lerner et al., 2015), resulting in hostility and other antisocial behaviors (Fitness, 2000). For example, those who are experiencing anger tend toward self-serving retaliatory behaviors such as a desire for and movement towards retributive punishment and penalties (Fitness, 2000; Gibson & Callister, 2010; Lerner et al., 1998; Lerner & Tiedens, 2006; Nabi, 2003), including during EDM (Kligyte et al., 2013). On the contrary, guilt is linked to inhibition in interpersonal aggression (Tangney, 1991). Research has also shown that guilty individuals were more likely to trust others than individuals experiencing anger (Dunn & Schweitzer, 2005), which may help explain why individuals feeling guilt were less likely to engage in deceptive behaviors such as lying (Cohen, 2010; Cohen et al., 2011). On a related note, guilt evocation prompts actions including confessing to the undesirable behavior, apologizing, and taking responsibility for the aversive behavior (Baumeister et al., 1994; Tangney, 1995; Tangney et al., 2007), while anger has been found to involve avoidance of responsibility due to the externalization of blame (Neumann, 2000). Therefore, we propose our fourth hypothesis.

> *Hypothesis 4: a) State guilt will lead to decreased use of negative social psychological behaviors than state anger stemming from an ethical problem, and b) these social psychological behaviors will mediate the relationship between anger, guilt, and EDM.*

Moderating Effects of Emotion Regulation

As shown, emotions are an inherent part of the cognitive complexities involved in EDM. Therefore, emotional recognition, understanding, and regulation is an important part of handling ethical events (MacDougall et al., 2015; Mumford et al., 2006, 2008). As an example, ER is proposed to mitigate the effects that emotions have on moral judgment and reflection (Dedeke, 2013). Empirical work has also shown ER to be linked to how individuals frame a situation and forecast its outcomes (Miu & Crişan, 2011; Thiel et al., 2012). Individual differences in emotional intelligence, which has an emotion management component, have also been found to influence how well individuals handle emotions when making decisions and taking action in an ethical event (Deshpande & Joseph, 2009; Krishnakumar & Rymph, 2012).

Cognitive reappraisal and suppression. ER consists of a number of different techniques or "processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (Gross, 1998b, p. 275). Two commonly compared strategies for ER are cognitive reappraisal and suppression (e.g., Grandey, 2000; Gross & John, 2003; John & Gross, 2007). Cognitive reappraisal involves changing the situational meaning and therefore the impact of the internal emotional experience (Gross & Thompson, 2007). This oftentimes involves thinking through the emotion-evoking event in order to alter one's interpretation of or ability to manage the situation (Gross & John, 2003; Webb, Miles, & Sheeran, 2012). Suppression functions differently in that it focuses on the inhibition of physiological, cognitive, or behavioral responses to an emotion-eliciting event (Gross & Thompson, 2007). To effectively suppress emotions, individuals may attempt to hide

their emotions by not expressing them physically or may attempt to block the emotions by not allowing themselves to experience them (Webb et al., 2012).

Individuals at work engage oftentimes engage in reappraisal and suppression (e.g., deep or surface acting), resulting in differential experiences and responses to situations (Grandey, 2000; Hochschild, 1979). These differences may be partially explained by consistent findings that cognitive reappraisal is more effective and cognitively efficient than suppression (Richards & Gross, 2000; Gross & John, 2003; Liu, Prati, Perrewé, & Brymer, 2010). In effect, cognitive reappraisal successfully changes both the emotional experience *and* expression while suppression only changes the expression (Gross, 2002; Koole, 2009). The incongruence between how one feels and how one behaves depletes cognitive and physiological resources (Grandey, 2000, 2003; Gross & John, 2003), impairing memory for the emotion-triggering event and potentially intensifying the original emotion experienced (Lerner et al., 2015). Suppression has also been shown to have a negative impact on social interactions compared to reappraisal (Butler et al., 2003; Gross, 2002).

Reappraisal, suppression, and EDM. The cognitive impacts of cognitive reappraisal and suppression might be particularly influential in EDM situations, which evoke a cognitive load due to their complexity (Martin, Bagdasarov, & Connelly, 2015). Therefore, the effects of the cognitive (in)efficiencies of reappraisal and suppression may be amplified.

Of particular interest is how these two ER strategies interact with the cognitive processes and consequential behavior involved with experiencing anger and guilt. The growing knowledge that negative emotions may not always have negative consequences

(Forgas, 2013) is relevant here, as the negative emotion of guilt is proposed to have a more positive impact than anger on EDM. Perhaps, then, regulating guilt away is not desirable while finding a useful method for regulating anger in an ethical quandary is. An alternative is that cognitive reappraisal may boost the evaluative nature of guilt while suppression is still harmful for guilt. Gross (2002) underscores the need to understand the situational impact on the use of suppression and reappraisal, and the unique complexity of EDM and the ability for ethical events to trigger intense experiences of anger and guilt warrants such an investigation.

Currently, there is an extreme paucity on the impact of these regulation strategies on judgment and decision making (Lerner et al., 2015), especially with regard to discrete emotions (see Kligyte et al., 2013 as an exception). Much of what has been found in the workplace to-date regarding these regulation strategies has focused on individual differences using suppression and reappraisal (Liu et al., 2010) or measuring the actual use of these and other ER strategies (Diefendorff, Richard, & Yang, 2008; Totterdell & Holman, 2003; Grandey, Dickter, & Sin, 2004). Studies that have implemented manipulations involving training in the use of ER strategies typically provide participants with a general training before the emotional stimulus (e.g., Gross, 1998a; Gross & Levenson, 1993; Quartana & Burns, 2007; Shiota & Levenson, 2009), but recent work underscores the commonality of post-evocation regulation, as not all emotion-inducing events can be predicted (Cristea, Tatar, Nagy, & David, 2012; Rivers, Brackett, Katulak, & Salovey, 2007; Sheppes & Meiran, 2007). Therefore, giving instructions to regulate after an emotional experience mimics real-life more closely in situations such as those with conflict (Griffith, Connelly, & Thiel, 2014) and ethical

implications. This study aims to help address these research gaps by investigating the potential moderating impact of cognitive reappraisal and suppression after the emotion of anger or guilt is evoked in a situation with ethical implications.

Anger, guilt, and cognitive reappraisal. Although the literature is limited, inducing cognitive reappraisal might have a number of outcomes. For anger, it is likely that reappraisal will benefit the sensemaking undergone by angry individuals by broadening their perspective and understanding of the situation, its causes, and its consequences (Schwarz, 1990; Schwarz & Clore, 1983). Cognitive interventions or trainings are oftentimes used to reduce biases, increase empathetic concern, and re-evaluate anger-evoking events in a more objective manner (Lochman & Wells, 2004; López-Pérez & Ambrona, 2015; Richards & Gross, 2000). Research in EDM supports this, as cognitive reappraisal has been found to dampen the negative effects of anger on forecasting activities, metacognitive strategies, social psychological behaviors, and overall EDM (Kligyte et al., 2013; Thiel et al., 2012).

Far less is known about the influence of cognitive reappraisal on guilt. Several possible outcomes are feasible. Cognitive reappraisal may have no effect, as guilt already facilitates in-depth cognitive processing. Alternatively, cognitive reappraisal may help individuals come to terms with their guilt and see some potential positive outcomes and routes to achieve these outcomes. Guilty individuals are already motivated to fix the problem (Tangney, 1991), and reappraisal might enable them to align their motivations and behavior more effectively. On the contrary, cognitive reappraisal may be used to justify behavior that is harmful to the self or others (Ortner,

Zelazo, & Anderson, 2013) or change accurate construals of the situation (Gross, 2002) that would be initially beneficial to EDM.

Anger, guilt, and suppression. Even less is known about these discrete emotions and the impact of suppression. Although suppression is an operationally effective ER strategy, it is oftentimes not as effective as reappraisal in decreasing negative emotions (Liu et al., 2010; Gross & John, 2003; Szasz, Szentagotai, & Hofmann, 2011), therefore maintaining more of the effects of the emotions compared to reappraisal (Ortner et al., 2013). This suggests that suppression might not be a successful moderator for either guilt or anger.

However, asking individuals to ignore their feelings might be particularly harmful in an ethical quandary, as suppression has led to less cognitive persistence on a task than reappraisal (Szasz et al., 2011). Angry individuals are already less likely to spend time evaluating the situation, and magnifying that impact might be even more detrimental. Negatively impacting the evaluative nature of guilt may result in similar detriments, if not more serious ones. Additional research has found that sensemaking processes can be enhanced by vicariously experiencing emotions in an ethics case (Thiel et al., 2013), suggesting that experiencing some emotion may be better than none as it provides information for thinking through the problem. Ignoring this emotion through suppression may be harmful, especially when experiencing the emotion first-hand such as in this study. On the contrary, the negative effects of anger on sensemaking may lead to positive effects when suppressing this anger, in that any type of anger regulation may be helpful for EDM.

Due to the uncertainties of what ER might look like for anger and guilt in an ethical quandary, we ask:

Research Question 1: How will reappraisal and suppression moderate the effects of anger and guilt on sensemaking strategies and EDM?

Method

Participants

Participants were 247 psychology undergraduate students at a large south central university in the United States who volunteered to complete the study for course credit. All participants completed the study using an online data collection system in a proctored setting. The participants' mean age was 19.39 (*SD* = 1.97) and 166 (67.2%) of the participants were female. On the average, the participants had 3.14 years of work experience.

Design

A 3 (emotion evocation of anger, guilt, or neutral) x 3 (ER technique of cognitive reappraisal, suppression, or none) between-subjects design was employed to investigate the proposed hypotheses. The manipulations were not fully crossed, however, as those in the neutral emotion evocation condition always received the no emotion regulation manipulation. These participants served as a more neutral comparison group, resulting in seven total conditions to which participants were randomly assigned.

Procedure

After the informed consent process, participants first completed a series of covariate measures. Following these measures, participants were informed that they

would be taking on the role of a marketing research analyst in the next portion of the study. Participants were then provided with information regarding their role, including the organization's background, their job within the organization, and a description of their relationship with a coworker and manager (See Appendix A). Next, participants were presented with a situation occurring within the organization, including an email from their coworker, that had complex ethical implications (Appendix B). Immediately following, participants were asked to write about their reactions, such as how the situation made them feel, and what they would write in an email back to their coworker. After completing a number of manipulation checks specific to the emotion evocation (e.g., the levels of guilt and anger induced), participants in the ER conditions were asked to engage in either cognitive reappraisal or suppression techniques. Consequential levels of guilt and anger were then assessed. Next, participants were asked to answer seven follow-up questions designed to reflect the sensemaking processes and behaviors discussed by Mumford and colleagues (2006, 2008), seen in Appendix C. The last portion of the study included a manipulation check for ER usage and measures to gather information regarding participant effort and engagement, intelligence, and demographics. A mood enhancement exercise was also provided to the participants in the anger or guilt emotion evocation conditions. All participants were debriefed at the conclusion of the study session.

Manipulations

Emotion evocation. Since one goal of this study was to investigate the role of emotions integral to an EDM scenario, the emotion evocation manipulation (anger, guilt, or none) was embedded in the case in which we asked participants to play a role.

This scenario was modified from a case used in past studies on EDM (e.g., Bagdasarov et al., 2015) and included four components of ethical complexity: data management, study conduct, professional practices, and business practices (Helton-Fauth et al., 2003). Within the case, the participant functions as a member of a market research group at an organization named InnoMark Inc., and a mistake is caught regarding research done for a pharmaceutical drug ad campaign. After the mistake is caught, the participant receives a simulated email from a coworker with a reminder to complete the report for the project.

With all other content being held constant, the source and potential outcomes of the mistake were manipulated to reflect the underlying appraisal patterns of guilt and anger. Since the first step (i.e., the primary appraisal) for garnering negative emotions is personal goal incongruence (Lazarus, 1991), for the anger and guilt conditions, the email from their coworker emphasized the large-stakes nature and potential consequences of not completing the project report such as someone losing their job. The comparison group read a general email about the need to complete the project report by the deadline.

To specifically generate anger or guilt, the secondary appraisal of self- or other-blame and responsibility (Lazarus, 1991; Smith & Ellsworth, 1985) was manipulated. In the anger conditions, it was made clear that the mistake was made by the coworker and that this mistake could result in the participant losing their job. The opposite situation was given to those in the guilt conditions, in that the mistake was the participants' fault and they could be the cause of their coworker losing his job. As a result, the secondary appraisal of controllability (Smith & Ellsworth, 1985) was held constant in that the

mistake was committed by a person. These secondary appraisals were also emphasized in a statement following the scenario that underscored the mistake and its consequences. In the comparison condition, there was no specific source mentioned as the scenario simply referenced the work group, creating a vague source of error and controllability (manipulations delineated in Appendix B).

Emotion regulation. After guilt or anger was evoked, participants engaged in either cognitive reappraisal, suppression, or no ER. The cognitive reappraisal condition had the participants work through a series of five questions (see Appendix D) that asked them to describe potential positive outcomes (e.g., lessons learned) and how they might lessen the negative aspects of the situation (Garnefski & Kraaij, 2007; Grisham, Flower, Williams, & Moulds, 2011; Rood, Roelofs, Bögels, & Arntz, 2012; Rusting & DeHart, 2000; Schmidt, Tinti, Levine, & Testa, 2010; Shiota & Levenson, 2009). As shown in Appendix E, the suppression manipulation asked participants to suppress both emotional experience and expression with the goal of remaining emotionally neutral inside and out for the rest of the study (Gross, 1998a; Quartana & Burns, 2007; Webb et al., 2012). Participants were provided with some strategies for achieving this and asked to practice before moving on.

Outcome Variables

All open-ended responses to the InnoMark Inc. ethical case were coded for EDM and the sensemaking variables by three expert PhD-level students blind to the study's conditions. Thorough frame-of-reference training (Bernardin & Buckley, 1981) was conducted with the coders in which they received and applied operational definitions (See Table 1) and benchmark rating scales of all variables. After two

practice rounds and meetings, consensus was reached and the raters were given all participant responses to code.

Since the seven questions participants answered were designed to differentially prompt responses regarding use of the various sensemaking processes and strategies, different questions were rated for different outcome variables. The metacognitive strategies and social psychological behaviors were all rated on a 5-point Likert scale (1 = *Very low*, 5 = *Very high*) based on the participant's decision made, their rationale behind the decision, and factors the participants mentioned as important to consider in solving the problem. The cognitive processes were coded via various questions and scales noted in the variable descriptions below.

Metacognitive strategies.

Recognition of circumstances. Recognition of circumstances was defined as the extent to which participants appeared to understand the ethical problem and how it was related to their role, goals, and values, along with connections among the people around them and their goals and values. Interrater agreement (r^*_{wg}) was .63.

Questioning one's judgment. To assess the level to which participants questioned their judgment, the coders rated how much the response acknowledged potential reasoning errors by engaging in practices such as taking time to think before acting (r^*_{wg} = .84).

Consideration of others. Participants' responses were rated for the extent to which they considered others' perspectives and how their actions could impact others, both socially and professionally. The variable's interrater agreement (r^*_{wg}) was .64.

Analyzing personal motivations. Looking within was defined as the amount to which participants reflected on how their personal goals, motives, or biases could influence their choices (r^*_{wg} = .74).

Anticipating consequences. For this variable (r^*_{wg} = .66), raters assessed how much the participants thought about the positive and negative outcomes of their actions for themselves and others (e.g., peers, organization, and society) in terms of both long- and short-term time ranges.

Asking for help. Asking for help was defined as the extent to which participants discussed requesting or researching outside information by consulting guidelines, rules, similar cases, or talking to people such as advisors, peers, or colleagues (r^*_{wg} = .75).

Social psychological behaviors.

Retaliation. Retaliatory behaviors were assessed by rating the extent to which participant decisions reflected aggression, vengeance, or spite. Interrater agreement (r^*_{wg}) was .95.

Deception. Participant deception was defined as the degree to which their response was misleading or involved lying to themselves or others (r^*_{wg} = .87).

Avoidance of responsibility. Avoiding responsibility (r^*_{wg} = .83) was rated based on the extent to which participants appeared to diffuse, avoid, or deflect responsibility for their actions.

Selfishness. To rate participant selfishness (r^*_{wg} = .84), raters assessed the degree to which their decision and behaviors was oriented toward personal gain or aggrandizement, including saving face or avoiding costs.

Cognitive processes.

Problem recognition. Participants were asked "What is the problem in this situation?" Their responses were rated on a 5-point Likert scale for the extent to which they identified the various elements of the ethical dilemma (1 = *Fails to identify any part of the case problem*, 5 = *Identifies most/all of the case problem*). The variable's r^*_{wg} was .82.

Causes. Participants' responses to a question regarding the causes of the problem were rated for both the number of causes they identified (as a basic frequency count) and the extent to which the causes they identified were critical in terms of importance or relevancy to the ethical dilemma. The criticality variable was rated on a 5-point Likert scale with responses ranging from 1 (*None to very little criticality in causes identified*) to 5 (*Extensive criticality in causes identified*), $r^*_{wg} = .81$.

Constraints. Constraints were defined as obstacles or other factors that would interfere with the ability to make an ethical decision. Participants' responses to a question about what the key factors and challenges were for the problem were coded for the number of constraints listed (numeral count) and the criticality of the constraints identified on a 1-5 Likert scale (1 = *None to very little criticality in constraints identified*, 5 = *Extensive criticality in constraints identified*) ($r^*_{wg} = .78$).

Forecasting. Forecasting timeframe and quality were measured by rating the participants' descriptions of possible outcomes of the situation. Both were coded on a 5-point Likert scale, with high scores reflecting a more long-term timeframe considered (1 = *Highly short-term*, 5 = *Highly long-term*) and a higher-quality forecast in terms of detail, relevance, and realism (1 = *Poor quality*, 5 = *Very good quality*). Interrater agreements (r^*_{wg}) were .74 and .82, respectively.

Ethical decision making. Participants were asked to describe the decision they would make to solve the InnoMark Inc. problem and to explain the rationale behind their decision. Overall EDM was rated based on the amount to which the participant's response reflected 1) regard for the welfare of others, 2) attention given to personal responsibilities, and 3) adherence to/awareness of social obligations (Bagdasarov et al., 2015; Stenmark et al., 2011).

Regard for the welfare of others was defined as the extent to which the participant's decision indicated intentionally working to benefit others, even at possible personal expense. Attendance to personal responsibilities was identified by the extent to which the participant's response reflected being accountable for their actions and proactive in avoiding bias. Adherence to and awareness of social obligations was defined as the extent to which the participant appeared to consider social guidelines, norms, and values for both their role and the roles of others around them. The raters considered all three of these subdimensions when coding responses for overall ethicality on a 5-point Likert scale, with 1 reflecting very low ethicality and 5 reflecting very high ethicality. Interrater agreement (r^*_{wg}) was .78.

Covariate Measures

Personality. Since personality has been linked to the use of sensemaking strategies and EDM (Antes et al., 2007; Spector, 2011), personality variables were measured using the Big Five Inventory (BFI; John & Srivastava, 1999), which asked participants to indicate their level of agreement with 44 statements on a 1-5 Likert scale (1 = *Disagree strongly*, 5 = *Agree strongly*). Cronbach's α was .78 for agreeableness,

.77 for conscientiousness, .78 for openness, .82 for neuroticism, and .88 for extraversion.

Emotional propensities. Some individuals tend to experience guilt and anger more often than others in response to the same situations. Therefore, we measured the likelihood of experiencing guilt or shame with the 16-item Test of Self-Conscious Affect – Version 3 (TOSCA-3; Tangney, Dearing, Wagner, & Gramzow, 2000), where participants rated reactions to scenarios on a 5-point Likert scale (1 = *Not likely*, 5 = *Very likely*). A similarly structured measure was used to measure anger-proneness (Anger Response Inventory; Tangney, Wagner, Marschall, & Gramzow, 1999). Cronbach's α for guilt-, shame- and anger-proneness was .73, .75, and .88, respectively.

ER propensities. Participants are likely to engage in natural suppression or reappraisal. To control for these individual differences, the Emotion Regulation Questionnaire (ERQ; Gross & John, 2003) was administered such that participants answered 10 questions about their use of ER on a 7-point Likert scale ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*) (cognitive reappraisal α = .80, suppression α = .76.

Trusting nature. The likelihood of participants to trust others was measured using the Philosophies of Human Nature measure (Wrightsman, 1974) which includes 10 items rated on a 7-point Likert scale (1 = *Strongly disagree*, 5 = *Strongly agree*) (α = .72). This measure was included since past research has shown a relationship between lack of trust and the engagement in self-protective behaviors relevant to EDM (Mumford et al., 2006).

Verbal reasoning. The Employee Aptitude Survey (EAS; Ruch & Ruch, 1983) was used to assess participants' general intelligence, since intelligence has been related to problem solving such as the use of cognitive sensemaking processes (Stenmark et al., 2010). The 5-minute timed measure had participants indicate if conclusions provided to a series of statements were true, false, or not determinable.

Demographics. Age, gender, and marketing experience were all measured due to their relationship with sensemaking processes (Thiel et al., 2011) and their potential impact on the ability to effectively respond to the ethical case.

Results

Descriptive statistics and variable intercorrelations can be seen in Tables 2-7. All sensemaking strategies correlated with EDM as expected. Covariates for each analysis were determined by inspection of the correlation table and analytical significance ($p < .05$). ANCOVAs were conducted to test all direct effects. All indirect mediational effects were tested using a MEDIATE SPSS macro from Hayes and Preacher (2014) employing 20000 bootstrapped resamples (see Figure 1 for an example). Since multiple mediator models are increasingly preferred due to a more accurate assessment compared to single mediator models (MacKinnon, Fairchild, & Fritz, 2007), unique models were conducted for each sensemaking category, resulting in three multiple mediator models. Each model included a multicategorical independent variable, with first the comparison then the anger condition set as the reference group. Significant mediational effects were signified when the indirect effect's 95 percent confidence interval ($CI_{.95}$) did not include zero (see Tables 8-9).

Manipulation Checks

Emotion evocation. All emotion evocation manipulation checks were successful and tested using a series of one-way ANOVAs.

Prior to ER, participants' self-reported levels of anger and guilt were assessed using a 1-5 Likert scale of current experience (1 = *Very slightly/Not at all* to 5 = *Extremely*). Anger was measured using the adjectives angry, irritated, irate, and mad (Nabi, 2003), $\alpha = .88$, while guilt was measured using the adjectives guilty, regret, remorse, self-conscious, and humiliated (Harder & Zalma, 1990), $\alpha = .84$. Those in the anger condition experienced higher levels of anger ($M = 3.85$, $SD = .98$) than those in the guilt conditions ($M = 2.85$, $SD = 1.03$), Bonferroni $p \leq .001$, and those in the comparison conditions ($M = 3.02$, $SD = 1.11$), Bonferroni $p \leq .001$, $F(2, 244) = 23.93$, $p \leq .001$. These self-report manipulation checks were confirmed with ratings of participant anger ($r^*_{wg} = .87$) and guilt ($r^*_{wg} = .86$) in their reactions to the ethical case by the same three coders as the EDM variables. Open-ended responses for those in the anger conditions reflected higher amounts of anger ($M = 2.92$, $SD = 1.11$) compared to the guilt ($M = 1.27$, $SD = .62$) or comparison conditions ($M = 1.28$, $SD = .57$), $F(2, 244) = 114.62$, $p \leq .001$. For both measures of anger, the neutral and guilt conditions were not significantly different.

Since the underlying appraisals of the emotions are also of interest, self- versus other-control and responsibility was assessed using 5-point Likert scales (1 = *Not at all* to 5 = *To a great extent*) in response to seven items modified from Roseman (1996) (self-responsibility $\alpha = .85$, other-responsibility $\alpha = .88$). Participants who had anger evoked perceived others (namely, the coworker) as more responsible ($M = 4.06$, $SD =$

.81) than participants who had guilt (M = 2.20, SD = .79), Bonferroni $p \leq .001$, or no specific emotion evoked (M = 2.86, SD = .77), $p \leq .001$, $F(2, 244) = 128.23$, $p \leq .001$. The comparison conditions also perceived significantly more other-blame than the guilt conditions ($p \leq .001$).

Similar confirmatory results were found for guilt. Participants in the guilt conditions experienced significantly higher levels of guilt (M = 3.77, SD = .85) than participants in the anger conditions (M = 2.43, SD = .97) and comparison conditions (M = 2.70, SD = 1.08), $F(2, 244) = 47.87$, $p \leq .001$. The open-ended guilt conditions' responses (M = 2.57, SD = 1.13) were also significantly higher than the anger conditions (M = 1.05, SD = .17) and comparison conditions (M = 1.14, SD = .34) in the level of guilt expressed, $F(2, 244) = 125.51$, $p \leq .001$. Those who were in the guilt conditions also perceived themselves as being more responsible for the situation (M = 4.12, SD = .68) than those in the anger (M = 2.29, SD = .72) or neutral comparison conditions (M = 2.91, SD = .78), $F(2, 244) = 148.75$, $p \leq .001$. For the guilt manipulation checks, all Bonferroni post hoc analyses comparing guilt to the other conditions were significant at $p \leq .001$ while the neutral and anger conditions were not significantly different. The self-responsibility appraisals were also significantly higher for the neutral than the anger conditions, Bonferroni $p \leq .001$.

Emotion regulation. The manipulation checks for the ER strategies, which also included both self-report and coded measures, were wholly successful.

Participants' use of suppression was first reflected in their response to two questions in the manipulation prompt asking them to apply the suppression strategy. Their responses were coded by the same three PhD-level coders for the level of

suppression strategies used (r^*_{wg} = .68) and cognitive reappraisal strategies used (r^*_{wg} = .85). A paired-samples *t*-test showed that participants who were given the suppression strategy appeared to apply more suppression (*M* = 3.86, *SD* = .78) than cognitive reappraisal (*M* = 1.27, *SD* = .56), *t*(56) = 17.28, $p \leq .001$. These participants also used suppression strategies more in response to their prompt (*M* = 3.86, *SD* = .78) than the cognitive reappraisal conditions to their prompt (*M* = 1.22, *SD* = .35) (r^*_{wg} = .86), *t*(117) = 24.08, $p \leq .001$. Towards the end of the study, all participants were also asked to discuss what strategies they used to deal with their emotions throughout the study and completed a 15-item, 5-point Likert scale (1 = *Strongly disagree*, 5 = *Strongly agree*) self-report measure of ER (suppression α = .76, reappraisal α = .80). When the responses were rated for level of suppression (r^*_{wg} = .72) and reappraisal (r^*_{wg} = .71), participants who were provided with the suppression strategy reported using more suppression techniques (*M* = 3.25, *SD* = 1.03) than reappraisal techniques (*M* = 1.75, *SD* = .93), *t*(117) = 8.34, $p \leq .001$. Similar findings resulted from the self-report measure, *t*(117) = 6.55, $p \leq .001$, with the suppression conditions higher in the use of suppression techniques (*M* = 3.75, *SD* = .63) than those in the cognitive reappraisal conditions (*M* = 2.91, *SD* = .74).

In the cognitive reappraisal conditions, participants were asked questions to prompt cognitive reappraisal, and their responses were coded on the same scales of suppression (r^*_{wg} = .86) and reappraisal (r^*_{wg} = .66) as the suppression conditions. The manipulation was successful as participants in these conditions cognitively reappraised more (*M* = 3.41, *SD* = .72) than suppressed (*M* = 1.22, *SD* = .35), *t*(61) = 22.24, $p \leq .001$. Participants in these conditions also cognitively reappraised more (*M* = 3.41, *SD* =

.72) than the participants in the suppression conditions (M = 1.27, SD = .56), $t(117)$ = 18.04, $p \leq .001$, when responding to their prompts. The open-ended responses at the end of the study regarding participant ER use also demonstrated higher levels of cognitive reappraisal in the reappraisal conditions (M = 2.84, SD = 1.03) than the suppression conditions (M = 1.57, SD = .88), $t(117) = 7.21$, $p \leq .001$. The cognitive reappraisal scores were not significantly different on the self-report measure across ER conditions, however, $t(117) = .02$, $p = .98$.

The manipulations were also successful in that they decreased the negative emotions of anger ($\alpha = .91$) and guilt ($\alpha = .93$) reported to be felt by the participants in the anger and guilt evocation conditions, respectively. For suppression, pre-regulation anger (M = 4.07, SD = .79) was higher than post-regulation anger (M = 1.75, SD = .94), $t(29) = 12.60$, $p \leq .001$. Similarly, pre-regulation guilt (M = 3.81, SD = .72) was significantly higher than post-regulation guilt (M = 1.73, SD = .95), $t(26) = 9.64$, $p \leq .001$. Cognitive reappraisal also successfully regulated both emotions, as anger experienced before reappraisal (M = 3.63, SD = 1.05) was higher than anger experienced after reappraisal (M = 2.74, SD = 1.26), $t(30) = 4.36$, $p \leq .001$, as was guilt before reappraisal (M = 3.85, SD = .80) compared to after reappraisal (M = 3.12, SD = 1.19), $t(30) = 4.13$, $p \leq .001$.

Effort, engagement, and fatigue. Towards the end of the study, participants reported engagement, effort, and fatigue levels on a 5-point Likert scale. There were no significant differences between experimental conditions, with means indicating high effort (M = 4.47, SD = .61), engagement M = 3.46, SD = .67), and fatigue (M = 3.24, SD = .77) on the average – scores parallel to previous similar research (Thiel et al., 2011).

EDM

To test Hypothesis 1, which proposed that state guilt would lead to greater EDM than state anger, a two-way ANCOVA controlling for agreeableness and guilt-proneness was conducted. A main effect of emotion evocation resulted, $F(2, 238) = 7.23$, $p \leq .001$, $\eta_p^2 = .06$, with Bonferroni post hoc comparisons indicating that the significant difference was due to anger resulting in lower EDM ($M = 2.71$, $SE = .07$) than guilt ($M = 3.08$, $SE = .07$), $p \leq .001$, or more neutral emotions ($M = 3.03$, $SE = .08$), $p = .01$. Therefore, Hypothesis 1 was supported. In addition, the neutral comparison and guilt conditions were not significantly different from each other. There were also no main or moderating effects of ER, partially addressing Research Question 1.

Sensemaking and EDM

Metacognitive strategies. The ability for state guilt and anger to influence the use of metacognitive strategies was tested using a series of ANCOVAs (Hypothesis 2a). When controlling for trusting nature and intelligence, participants who experienced anger evocation were less able to consider the consequences of their behavior within the situation ($M = 1.88$, $SE = .09$) compared to participants in the guilt evocation ($M = 2.30$, $SE = .10$), Bonferroni $p = .01$, or neutral evocation conditions ($M = 2.21$, $SE = .11$), Bonferroni p trending at .07, $F(2, 238) = 5.48$, $p = .01$, $\eta_p^2 = .04$. The neutral and guilt conditions were not significantly different. However, no direct overall results were found for any of the other variables: recognizing circumstances, questioning judgment when controlling for age, gender, and trait reappraisal, analyzing personal motivations when controlling for agreeableness and shame-proneness, considering others, and

asking for help when controlling for marketing experience and trait reappraisal. As a result, H2a was partially supported. In addition, no moderating effects of ER were found for metacognitive strategies (RQ1).

To test Hypothesis 2b, a multiple mediation model with all six mediating metacognitive strategies was conducted (Table 8) controlling for agreeableness, guilt-proneness, trusting nature, intelligence, marketing experience, and trait reappraisal. Several partial mediation results were observed for anticipating consequences and asking for help. First, in contrast to the comparison condition, anger had a negative impact on EDM by reducing anticipation of consequences ($CI_{.95}$ = -.113, -.005). Guilt had a positive impact on EDM compared to anger, however, by increasing participant anticipation of consequences ($CI_{.95}$ = .014, .131). These results are parallel to the ANCOVA results. Emotion evocation was also found to impact EDM via asking for help, as guilt actually harmed EDM by decreasing the amount to which participants would ask others for help compared to the comparison conditions ($CI_{.95}$ = -.120, -.008) and anger conditions ($CI_{.95}$ = -.079, -.001).

Cognitive processes. When testing the third set of hypotheses, the study manipulations had no direct effect on a number of cognitive sensemaking processes – namely, problem recognition (controlling for age, trusting nature, intelligence), criticality of causes (controlling for trusting nature, guilt-proneness, and intelligence), number of constraints (controlling for age and trusting nature), and forecast quality (controlling for age, trusting nature, anger-proneness, and intelligence). However, a number of findings provided partial support for Hypothesis 3a. First, in an ANCOVA controlling for trusting nature and trait reappraisal, the emotion evocation impacted the

number of causes identified ($F(2, 238) = 3.10$, $p = .05$, $\eta_p^2 = .03$) with individuals in the guilt conditions identifying fewer causes of the ethical dilemma ($M = 1.71$, $SE = .08$) than individuals in the anger conditions ($M = 1.98$, $SE = .08$), Bonferroni $p = .06$. The neutral conditions ($M = 1.79$, $SE = .10$) were not significantly different from either. A trending main effect was also found for criticality of constraints such that, when controlling for age, trusting nature, and intelligence, anger evocations caused participants to identify fewer critical barriers to making an ethical decision ($M = 2.67$, $SE = .07$) in comparison to participants with no emotion evocation ($M = 2.98$, $SE = .08$), Bonferroni $p = .02$, $F(2, 237) = 2.75$, $p = .07$, $\eta_p^2 = .02$. Guilt ($M = 2.76$, $SE = .07$) was not significantly different from the anger or comparison groups. Last, emotion evocation had significant impacts on the forecast timeframe, $F(2, 237) = 4.24$, $p = .02$, $\eta_p^2 = .04$, when controlling for trusting nature, shame-proneness, and intelligence. Using Bonferroni post hoc comparisons, those who were in the neutral conditions engaged in more long-term forecasting ($M = 2.38$, $SE = .09$) than those in the anger ($M = 1.99$, $SE = .08$) ($p = .01$) or guilt conditions ($M = 2.10$, $SE = .08$) ($p = .08$). The anger and guilt conditions were not significantly different. There were also no moderating influences of the ER manipulations.

To test H3b, we conducted a multiple mediation model in which all seven of the cognitive processes served as mediators, and the covariates of agreeableness, guilt- and shame-proneness, trusting nature, age, and intelligence were included. Results can be seen in Table 9. Although these analyses still demonstrated the relative direct effects of guilt compared to anger in affecting the number of causes identified ($a_1 = -.25$, $p = .03$), anger compared to comparison for the criticality of constraints ($a_1 = -.30$, $p = .01$), and

anger (a_1 = -.38, $p \leq .01$) and guilt (a_2 = -.27, p = .03) relative to comparison for forecast timeframe, mediational effects were not found for these variables when including all other cognitive processes in a multiple mediational model. However, partial mediation was found for quality of forecast such that participants in the guilt condition had better EDM compared to those in the anger condition due to guilt's beneficial impact on quality of forecasting ($CI_{.95}$ = .008, .174), partially supporting Hypothesis 3b.

Social psychological behaviors. Hypothesis 4a, which stated that participants in the angry conditions would engage in more negative social psychological behaviors than participants in the guilt conditions, was partially supported. Although no direct effects of emotion manipulation were found for deception (controlling for gender and agreeableness) or avoiding responsibility, retaliation was significantly more common for participants in the anger evocation conditions (M = 1.25, SE = .02) compared to the guilt evocation (M = 1.01, SE = .02) or no evocation conditions (M = 1.00, SE = .03), both Bonferroni post hocs $p \leq .001$, $F(2, 240) = 10.14$, $p \leq .001$, $\eta_p^2 = .08$. The neutral and guilt conditions were not significantly different. There were also no main or moderating effects of the ER manipulation for these behaviors.

For Research Question 1, a three-way interaction was found for selfishness when controlling for guilt-proneness. Figure 2 portrays the three-way interaction, $F(2, 239) = 3.37$, p = .04, η_p^2 = .03. The main driver of the interaction is the significant differences found when comparing the angry suppression condition (M = 1.64, SE = .09) to the neutral no ER group (M = 1.11, SE = .06), guilty no ER condition (M = 1.12, SE = .09), guilty suppression condition (M = 1.05, SE = .10), guilt and reappraisal group

(M = 1.03, SE = .09) (all Bonferroni $p \leq .001$) and anger and reappraisal condition (M = 1.23, SE = .09), Bonferroni p = .024.

A multiple mediational analysis was also conducted to address H4b (see Table 8), controlling for agreeableness, guilt-proneness, and gender. Retaliation was removed as there was not enough variance across conditions to allow for mediational comparison. In addition, the homogeneity of regression assumption was violated for the mediator of selfishness, so the PROCESS macro (Hayes, 2012) was used, which allowed the interactions of the independent variable and mediators to be included in the path model (template 74). These analyses provided partial support for Hypothesis 4b in finding partial mediation for two paths. First, guilt improved EDM compared to anger via its ability to reduce participants' avoidance of responsibility ($CI_{.95}$ = .005, .135). Similarly, participants in the guilt conditions made less selfish decisions than participants in the anger conditions, which had a positive effect on EDM ($CI_{.95}$ = .023, .139).

Discussion

Emotional reactions when encountering problems with ethical implications are common (Gaudine & Thorne, 2001; Haidt, 2001), and the current study contributed to the sparse empirical understanding of emotions in EDM in three ways. First, it revealed some of the differential effects of guilt and anger on sensemaking and EDM. Second, it informed the growing research on the intermediary functions of sensemaking for ethical decisions (e.g., Bagdasarov et al., 2015). Third, the current efforts expanded previous research in discrete ER techniques and decision making (e.g., Kligyte et al., 2013) by investigating the effects of cognitive reappraisal and suppression in EDM.

As a whole, our results support previous findings that anger is detrimental compared to more neutral emotionality when engaging in ethical sensemaking processes (Kligyte et al., 2013; Krishnakumar & Rymph, 2012; Thiel et al., 2011). Although guilt evocation did not necessarily improve EDM, participants in the guilt condition overall did not fare any worse than participants in the neutral emotion condition. This suggests that negative emotions may not always necessarily be detrimental to EDM, and our investigation into the underlying cognitive and behavioral sensemaking strategies sheds some light on why this may be the case.

One result of this study was that experiencing guilt or anger did not impact how or if participants perceived an ethical issue. In other words, emotional experience did not influence identification of the critical ethical issues or how these issues were related to the people and institutions involved. This contradicts Gaudine and Thorne's (2001) thinking that high-arousal emotions may increase awareness of ethical dilemmas. Such a finding is particularly interesting because the initial stages of sensemaking involve understanding the situation at hand, which impacts downstream processes. The impact of these emotions largely appeared further into the sensemaking process, however, suggesting that although emotions may not influence initial understanding of the situation, it does influence how an individual thinks through or reacts to the situation.

In particular, the experience of anger and guilt and their underlying appraisals were important drivers of how participants gathered, processed, and applied information in an EDM situation. Importantly, guilt did not always trigger more evaluative cognition or behaviors as previously proposed. Rather, both anger and guilt appeared to have a narrowing function in their ability to draw attention to different aspects of the situation

at hand. This might be due to the fact that these emotions are similar in their level of certainty (Smith & Ellsworth, 1985), but their differences in other core appraisals (e.g., self- or other-responsibility) may alter what individuals feel certain about. As a result, individuals engage in critical thinking and behaviors relevant to the motivational interests driving the emotional experience, such as blaming others when angry or blaming oneself when guilty.

Several findings within our study support this notion. Participants in the guilt condition identified fewer causes of the situation than those in the anger condition, arguably because those experiencing guilt find one source – themselves – while those experiencing anger might actively look for a number of external sources of blame. Relatedly, feeling guilty did not increase evaluative cognition such as looking within or questioning judgment and even harmed EDM by decreasing the likelihood of asking for help. Guilty individuals may have already accepted that they caused the situation by violating a moral code, avoiding further investigation into why it occurred or letting others know it occurred, focusing on the current situation. Ethical decision-making situations might function differently than guilt in other social situations, then, which typically prompts individuals to inform others of their wrongdoing to communicate understanding of the standards being violated (Barrett, 1995). Perhaps incidental guilt would result in this type of communication, since it is not directly connected to the situation at hand. In contrast to our findings with guilt, integral anger decreased individuals' abilities to evaluate the current situation and identify critical constraints that might hinder their decision-making process, reinforcing prior research (Thiel et al., 2012).

Therefore, individuals experiencing guilt may, as a whole, be more likely to accept the cause and focus on amending it (Tangney, 1995) while angry individuals' cognitive focus on the causal agents, including conflict, may lead to increased rumination (Griffith et al., 2014; Gross & Thompson, 2007) without being able to effectively shift to processing of the current situation or its potential outcomes. For example, previous research on decision making has found that guilty individuals tend to focus on the worse-case scenario and explore how to overcome it while anger motivates focus on the outcome that is most explicit without exploring alternatives (Gangemi & Mancini, 2007). Our findings that guilt can increase EDM by inducing greater anticipation of consequences and higher-quality forecasting than anger underscores the potential differences in cognitive focus and processes when experiencing anger versus guilt. These cognitive foci have implications for behaviors as well, as our study found that anger is far more likely to result in retaliation while guilt, in comparison, can improve EDM by decreasing selfish behaviors and increasing the likelihood of taking responsibility for one's decisions or actions. As a result, affective experiences appear to be important causal agents for ethical behavior and decisions (Gaudine & Thorne, 2001) such that anger resulted in individuals looking backward while guilt helped individuals to look forward.

The effects that emotions have on cognition and behavior are why instruction in the use of ER strategies and opportunities to practice them is oftentimes a critical component of successful EDM training (Mumford et al., 2008). Our findings indicated that ER may be particularly difficult in ethical situations, rendering strategies such as cognitive reappraisal and suppression ineffective for changing cognitive or behavioral

sensemaking reactions. These results are contrary to prior research that found cognitive reappraisal to be effective for moderating anger's impact on sensemaking (Kligyte et al., 2013). The emotional evocation in Kligyte and colleagues' study was incidental to the ethical situation, meaning that it occurred outside of the scenario participants were asked to work through. Although this is also a commonly used and effective emotion manipulation, our different results for ER may be due to the use of a more naturalistic integral emotion manipulation in that the emotion and situation could not necessarily be disentangled as easily for participants. Even though participants reported lower experience of guilt and anger post-regulation, they may have recalled the original appraisals that evoked the emotions when making their decisions. Recalling or thinking about an emotion-eliciting event such as one that involves self- or other-blame is a commonly used manipulation in studies (Dickerson, Kemeny, Aziz, Kim, & Fahey, 2004; Ekman, Levenson, & Friesen, 1983), and asking participants to work through the event with the seven questions may have re-evoked some of the emotional experience, potentially negating the impact of any ER that had been done. For anger, this showed to be detrimental. In the case of guilt, however, the lack of regulation effects might not have been particularly harmful.

As a whole, these findings underscore the difficulty of regulating emotions, especially when emotional reactions are inherent to the ethical circumstances, regardless if using cognitive reappraisal or suppression. Bearing this statement in mind, ER did play an important moderating role for selfishness. Suppression was singularly detrimental for angry individuals for increasing levels of selfishness and, as an extension, EDM. Those who suppressed self-reported significantly lower levels of

current anger than those who cognitively reappraised, suggesting that even though individuals may not be currently "feeling" angry, the underlying appraisals may still be negatively impacting decisions and behavior. Cognitive reappraisal may not reduce the experience of anger as much, but the process may have helped individuals develop more successful methods for responding to the situation with more other-oriented responses. In addition, suppression has been shown to be a cognitively costly strategy compared to cognitive reappraisal (Richards & Gross, 2000), which may have reduced the resources available to engage in EDM, especially when angry.

Limitations

Although this study contributes to the literature in a number of significant ways, there are a number of limitations that should be considered. First, the current efforts employed an undergraduate student sample. Although the students had, on average, over three years of work experience, the results of this study may be limited in workforce generalizability. However, since the participants were asked to play a role in a topic domain they are comfortable with (i.e., marketing) and have had no issues understanding in other research (e.g., Johnson & Connelly, 2014), the underlying properties of emotions, cognition, and EDM could easily translate to other studies, samples, and scenarios. A second and related limitation is the use of a low-fidelity simulation. Participants were not actually experiencing this ethical case first-hand, and our measures were mostly of their intentions and not actual behavior. Intentions and behavior are oftentimes highly aligned (Ajzen, 2005), though, and our findings would arguably still hold and perhaps be even augmented in a workplace setting given a) the participant engagement indicated through self-report and the moderate amount of

emotional reactions to the scenario by the comparison group and b) the findings for retaliation, which underscore that our method replicates what others have found (Fitness, 2000; Lerner & Tiedens, 2006). Third, in building on point A above, ethical problems are oftentimes inherently emotional, and participants reported experiencing guilt and anger at a moderate level even when it was not explicitly evoked. As a result, the comparison condition of the study is not a purely emotionally "neutral" condition. However, the open-ended coding checks indicated responses mostly lacking reactions of anger and guilt. Therefore, the neutral group still served as a useful comparison group with comparatively low levels of anger and guilt. Last, some of the interrater agreements were modest.

Future Research and Conclusions

The present study underscores the effects that integral emotional reactions and their regulation have on cognitive and behavioral reactions when faced with an ethical problem. A great deal more investigation is needed on the role of specific emotions on cognition and decision making, and discrete emotions such as sadness, anxiety, or emotions varying in other appraisals could be considered in how they impact EDM and its sensemaking processes. Participants in the comparison condition reported higher levels of uneasiness than the guilt or anger conditions, and this general uncertainty or anxiety, which has been shown to help EDM in other studies (Kligyte et al., 2013), may explain why their EDM was similar to the guilt conditions and deserves more attention. Moreover, more research is needed to understand the impact of these emotions at different stages of the EDM process, as this study showed that anger and guilt differentially impacted the sensemaking stages. Going forward, studies could examine

emotions not only in a simulated setting but also using workplace samples, as it is still unclear at this point as to what discrete emotional reactions are actually commonly experienced by workers when encountering ethical problems. More research on the differential effects of integral and incidental emotions could also be beneficial. Another avenue could be investigation into how to improve the impact of ER. Although our participants were told to use the regulation strategies for the remainder of the study, results may have been different if reminders were given when working through the ethical case. Alternatively, it may be more beneficial for training to focus on helping individuals understand how discrete emotions influence their cognition and behavior as opposed to strategies designed to simply regulate away the emotions.

With organizations increasingly recognizing the importance of ethics as a source of competitive advantage, understanding the EDM process and factors that impact it could have important practical implications for training, education, and fostering better decisions in the workplace. Based on ours and others' findings, the affective processes in EDM offer a fruitful and needed area of research to better understand and potentially improve EDM in the workplace.

References

Agnihotri, R., Rapp, A., Kothandaraman, P., & Singh, R. K. (2012). An emotion-based model of salesperson ethical behaviors. *Journal of Business Ethics, 109*(2), 243-257. doi:10.1007/s10551-011-1123-3

Ajzen, I. (2005). *Attitudes, personality, and behavior*. Buckingham, MK: Open University Press.

Angie, A. D., Connelly, S., Waples, E. P., & Kligyte, V. (2011). The influence of discrete emotions on judgement and decision-making: A meta-analytic review. *Cognition and Emotion, 25*(8), 1393-1422. doi:10.1080/02699931.2010.550751

Antes, A. L., Brown, R. P., Murphy, S. T., Waples, E. P., Mumford, M. D., Connelly, S., & Devenport, L. D. (2007). Personality and ethical decision-making in research: The role of perceptions of self and others. *Journal of Empirical Research on Human Research Ethics, 2*(4), 15-34. doi:10.1525/jer.2007.2.4.15

Ashkanasy, N. M., & Humphrey, R. H. (2011). Current emotion research in organizational behavior. *Emotion Review, 3*(2), 214-224. doi:10.1177/1754073910391684

Bagdasarov, Z., Johnson, J. F., MacDougall, A. E., Steele, L. M., Connelly, S., & Mumford, M. D. (2015). Mental models and ethical decision making: The mediating role of sensemaking. *Journal of Business Ethics*. doi:10.1007/s10551-015-2620-6

Barrett, K. C. (1995). A functionalist approach to shame and guilt. In J. P. Tangney, K. W. Fischer (Eds.), *Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride* (pp. 25-63). New York, NY: Guilford Press.

Barsade, S. G., & Gibson, D. E. (2007). Why does affect matter in organizations? *The Academy of Management Perspectives, 21*(1), 36-59. doi:10.5465/AMP.2007.24286163

Basch, J., & Fisher, C. D. (2000). Affective events–emotions matrix: A classification of work events and associated emotions. In N. M. Ashkanasy, C. E. J. Härtel, & W. J. Zerbe (Eds.), *Emotions in the workplace: Research, theory, and practice* (pp. 36-48). Westport, CT: Quorum Books/Greenwood Publishing Group.

Baumeister, R. F., Stillwell, A. M., & Heatherton, T. F. (1994). Guilt: An interpersonal approach. *Psychological Bulletin, 115*(2), 243-267. doi:10.1037/0033-2909.115.2.243

Bernardin, H. J., & Buckley, M. R. (1981). Strategies in rater training. *Academy of Management Review, 6*(2), 205-212. doi:10.5465/AMR.1981.4287782

Blanchette, I., & Richards, A. (2010). The influence of affect on higher level cognition: A review of research on interpretation, judgement, decision making and reasoning. *Cognition and Emotion, 24*(4), 561-595. doi:10.1080/02699930903132496

Bodenhausen, G. V., Sheppard, L. A., & Kramer, G. P. (1994). Negative affect and social judgment: The differential impact of anger and sadness. *European Journal of Social Psychology, 24*(1), 45-62. doi:10.1002/ejsp.2420240104

Boudens, C. J. (2005). The story of work: A narrative analysis of workplace emotion. *Organization Studies, 26*(9), 1285-1306. doi:10.1177/0170840605055264

Brown, T. A., Sautter, J. A., Littvay, L., Sautter, A. C., & Bearnes, B. (2010). Ethics and personality: Empathy and narcissism as moderators of ethical decision

making in business students. *Journal of Education for Business, 85*(4), 203-208. doi:10.1080/08832320903449501

Butler, E. A., Egloff, B., Wlhelm, F. H., Smith, N. C., Erickson, E. A., & Gross, J. J. (2003). The social consequences of expressive suppression. *Emotion, 3*(1), 48-67. doi:10.1037/1528-3542.3.1.48

Caughron, J. J., Antes, A. L., Stenmark, C. K., Thiel, C. E., Wang, X., & Mumford, M. D. (2011). Sensemaking strategies for ethical decision making. *Ethics & Behavior, 21*(5), 351-366. doi:10.1080/10508422.2011.604293

Cohen, T. R. (2010). Moral emotions and unethical bargaining: The differential effects of empathy and perspective taking in deterring deceitful negotiation. *Journal of Business Ethics, 94*(4), 569-579. doi:10.1007/s10551-009-0338-z

Cohen, T. R., Panter, A. T., & Turan, N. (2013). Predicting counterproductive work behavior from guilt proneness. *Journal of Business Ethics, 114*(1), 45-53. doi:10.1007/s10551-012-1326-2

Cohen, T. R., Wolf, S. T., Panter, A. T., & Insko, C. A. (2011). Introducing the GASP scale: A new measure of guilt and shame proneness. *Journal of Personality and Social Psychology, 100*(5), 947-966. doi:10.1037/a0022641

Connelly, S., Helton-Fauth, W., & Mumford, M. D. (2004). A managerial in-basket study of the impact of trait emotions on ethical choice. *Journal of Business Ethics, 51*(3), 245-267. doi: 10.1023/B:BUSI.0000032494.51162.d3

Cristea, I. A., Tatar, A. S., Nagy, D., & David, D. (2012). The bottle is half empty and that's bad, but not tragic: Differential effects of negative functional reappraisal. *Motivation and Emotion, 36*(4), 550-563. doi:10.1007/s11031-012-9277-6

Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology*, *24*(4), 349-354. doi:10.1037/h0047358

Damasio, A. (1994). *Descartes' error: Emotion, reason, and the human brain*. New York, NY: Penguin Books.

Dedeke, A. (2015). A cognitive–intuitionist model of moral judgment. *Journal of Business Ethics, 126*(3), 437-457. doi:10.1007/s10551-013-1965-y

Deshpande, S. P., & Joseph, J. (2009). Impact of emotional intelligence, ethical climate, and behavior of peers on ethical behavior of nurses. *Journal of Business Ethics, 85*(3), 403-410. doi:10.1007/s10551-008-9779-z

DeSteno, D., Petty, R. E., Rucker, D. D., Wegener, D. T., & Braverman, J. (2004). Discrete emotions and persuasion: The role of emotion-induced expectancies. *Journal of Personality and Social Psychology*, *86*(1), 43-56. doi:10.1037/0022-3514.86.1.43

Diefendorff, J. M., Richard, E. M., & Yang, J. (2008). Linking emotion regulation strategies to affective events and negative emotions at work. *Journal of Vocational Behavior*, *73*(3), 498-508. doi:10.1016/j.jvb.2008.09.006

Dickerson, S. S., Kemeny, M. E., Aziz, N., Kim, K. H., & Fahey, J. L. (2004). Immunological effects of induced shame and guilt. *Psychosomatic Medicine, 66*(1), 124-131. doi:10.1097/01.PSY.0000097338.75454.29

Dunn, J. R., & Schweitzer, M. E. (2005). Feeling and believing: The influence of emotion on trust. *Journal of Personality and Social Psychology, 88*(5), 736-748. doi:10.1037/0022-3514.88.5.736

Eisenberg, N. (2000). Emotion, regulation, and moral development. *Annual Review of Psychology, 51,* 665-697. doi:10.1146/annurev.psych.51.1.665

Ekman, P., Levenson, R. W., & Friesen, W. V. (1983). Autonomic nervous system activity distinguishes among emotions. *Science, 221*(4616), 1208-1210. doi: 10.1126/science.6612338

Elfenbein, H. A. (2007). Emotion in organizations: A review and theoretical integration. *The Academy of Management Annals, 1*(1), 315-386. doi: 10.1080/078559812

Ethics Research Center (2015). *The state of ethics in large companies.* Retrieved from http://www.ethics.org/nbes/wp-content/uploads/2015/03/LargeCompaniesExecSummary.pdf

Fitness, J. (2000). Anger in the workplace: An emotion script approach to anger episodes between workers and their superiors, co-workers and subordinates. *Journal of Organizational Behavior, 21,* 147-162. doi:10.1002/(SICI)1099-1379(200003)21:2<147::AID-JOB35>3.0.CO;2-T

Forgas, J. P. (2013). Don't worry, be sad! On the cognitive, motivational, and interpersonal benefits of negative mood. *Current Directions in Psychological Science, 22*(3), 225-232. doi:10.1177/0963721412474458

Forgas, J. P., & Locke, J. (2005). Affective influences on causal inferences: The effects of mood on attributions for positive and negative interpersonal episodes. *Cognition and Emotion, 19*(7), 1071-1081. doi:10.1080/02699930541000093

Frijda, N. H. (1986). *Emotions.* New York: Cambridge University Press.

Frijda, N. H., Kuipers, P., & ter Schure, E. (1989). Relations among emotion, appraisal, and emotional action readiness. *Journal of Personality and Social Psychology, 57*(2), 212-228. doi:10.1037/0022-3514.57.2.212

Gangemi, A., & Mancini, F. (2007). Guilt and focusing in decision-making. *Journal of Behavioral Decision Making, 20*(1), 1-20. doi:10.1002/bdm.536

Garnefski, N., & Kraaij, V. (2007). The Cognitive Emotion Regulation Questionnaire: Psychometric features and prospective relationships with depression and anxiety in adults. *European Journal of Psychological Assessment*, *23*(3), 141-149. doi:10.1027/1015-5759.23.3.141

Gaudine, A., & Thorne, L. (2001). Emotion and ethical decision-making in organizations. *Journal of Business Ethics*, *31*(2), 175-187. doi:10.1023/A:1010711413444

Gibson, D. E., & Callister, R. R. (2010). Anger in organizations: Review and integration. *Journal of Management*, *36*(1), 66-93. doi:10.1177/0149206309348060

Grandey, A. A. (2000). Emotional regulation in the workplace: A new way to conceptualize emotional labor. *Journal of Occupational Health Psychology, 5*(1), 95-110. doi:10.1037/1076-8998.5.1.95

Grandey, A. A. (2003). When "the show must go on": Surface acting and deep acting as determinants of emotional exhaustion and peer-rated service delivery. *Academy of Management Journal, 46*(1), 86-96. doi:10.2307/30040678

Grandey, A. A., Dickter, D. N., & Sin, H. (2004). The customer is *not* always right: Customer aggression and emotion regulation of service employees. *Journal of Organizational Behavior, 25*(3), 397-418. doi:10.1002/job.252

Griffith, J. A., Connelly, S., & Thiel, C. E. (2014). Emotion regulation and intragroup conflict: When more distracted minds prevail. *International Journal of Conflict Management, 25*(2), 148-170. doi:10.1108/IJCMA-04-2012-0036

Grisham, J. R., Flower, K. N., Williams, A. D., & Moulds, M. L. (2011). Reappraisal and rumination during recall of a sad memory. *Cognitive Therapy and Research, 35*(3), 276-283. doi:10.1007/s10608-009-9288-0

Gross, J. J. (1998a). Antecedent- and response-focused emotion regulation: Divergent consequences for experience, expression, and physiology. *Journal of Personality and Social Psychology, 74*(1), 224-237. doi:10.1037/0022-3514.74.1.224

Gross, J. J. (1998b). The emerging field of emotion regulation: An integrative review. *Review of General Psychology, 2*(3), 271-299. doi:10.1037/1089-2680.2.3.271

Gross, J. J. (2002). Emotion regulation: Affective, cognitive, and social consequences. *Psychophysiology, 39*(3), 281-291. doi:10.1017/S0048577201393198

Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology, 85*(2), 348-362. doi:10.1037/0022-3514.85.2.348

Gross, J. J., & Levenson, R. W. (1993). Emotional suppression: Physiology, self-report, and expressive behavior. *Journal of Personality and Social Psychology, 64*(6), 970-986. doi:10.1037/0022-3514.64.6.970

Gross, J. J., & Thompson, R. A. (2007). Emotion regulation: Conceptual foundations. *Handbook of emotion regulation* (pp. 3-24). New York, NY: Guilford Press.

Haidt, J. (2001). The emotional dog and its rational tail: A social intuitionist approach to moral judgment. *Psychological Review, 108*(4), 814-834. doi:10.1037/0033-295X.108.4.814

Haidt, J. (2003). The moral emotions. In R. J. Davidson, K. R. Scherer, & H. H. Goldsmith (Eds.), *Handbook of Affective Sciences* (pp. 852–870). Oxford: Oxford University Press.

Harder, D. W., & Zalma, A. (1990). Two promising shame and guilt scales: A construct validity comparison. *Journal of Personality Assessment, 55*(3-4), 729-745.

Hayes, A. F., & Preacher, K. J. (2014). Statistical mediation analysis with a multicategorical independent variable. *British Journal of Mathematical and Statistical Psychology, 67*(3), 451-470. doi:10.1111/bmsp.12028

Hayes, A. F. (2012). PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling [White paper]. Retrieved from http://www.afhayes.com/public/process2012.pdf

Helton-Fauth, W., Gaddis, B., Scott, G., Mumford, M., Devenport, L., Connelly, S., & Brown, R. (2003). A new approach to assessing ethical conduct in scientific work. *Accountability in Research: Policies and Quality Assurance, 10*(4), 205-228. doi: 10.1080/08989620390263708

Hochschild, A. R. (1979). Emotion work, feeling rules, and social structure. *American Journal of Sociology, 85*(3), 551-575. doi:10.1086/227049

John, O. P., & Gross, J. J. (2007). Individual differences in emotion regulation. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 351-372). New York, NY: Guilford Press.

John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (2nd ed., pp. 102–138). New York, NY: Guilford Press.

Johnson, G., & Connelly, S. (2014). Negative emotions in informal feedback: The benefits of disappointment and drawbacks of anger. *Human Relations, 67*(10), 1265-1290. doi:10.1177/0018726714532856

Ketelaar, T., & Au, W. T. (2003). The effects of feelings of guilt on the behaviour of uncooperative individuals in repeated social bargaining games: An affect-as-information interpretation of the role of emotion in social interaction. *Cognition and Emotion, 17*(3), 429-453. doi:10.1080/02699930143000662

Kish-Gephart, J., Harrison, D. A., & Treviño, L. K. (2010). Bad apples, bad cases, and bad barrels: Meta-analytic evidence about sources of unethical decisions at work. *Journal of Applied Psychology, 95*(1), 1-31. doi:10.1037/a0017103

Kligyte, V., Connelly, S., Thiel, C., & Devenport, L. (2013). The influence of anger, fear, and emotion regulation on ethical decision making. *Human Performance, 26*(4), 297-326. doi:10.1080/08959285.2013.814655

Kligyte, V., Marcy, R. T., Waples, E. P., Sevier, S. T., Godfrey, E. S., Mumford, M. D., & Hougen, D. F. (2008). A sensemaking approach to ethics training for physical sciences and engineering. *Science and Engineering Ethics, 14*(2), 251–278.doi:10.1007/s11948-007-9048-z

Kohlberg, L. (1984). *Philosophy of moral development: The nature and validity of moral stages.* San Francisco, CA: Harper & Row.

Koole, S. L. (2009). The psychology of emotion regulation: An integrative review. *Cognition and Emotion, 23*(1), 4-41. doi:10.1080/02699930802619031

Krishnakumar, S., & Rymph, D. (2012). Uncomfortable ethical decisions: The role of negative emotions and emotional intelligence in ethical decision-making. *Journal of Managerial Issues, 24*(3), 321-344.

Kuppens, P., Van Mechelen, I., Smits, D. J. M., De Boeck, P., & Ceulemans, E. (2007). Individual differences in patterns of appraisal and anger experience. *Cognition and Emotion, 21*(4), 689-713. doi:10.1080/02699930600859219

Lazarus, R. S. (1991). *Emotion and adaptation.* New York, NY: Oxford University Press.

Leary, M. R. (2007). How the self became involved in affective experience: Three sources of self-reflective emotions. In J. L. Tracy, R. W. Robins, & J. P. Tangney (Eds.), *The self-conscious emotions: Theory and research* (pp. 38-52). New York, NY: Guilford Press.

Lench, H. C., Flores, S. A., & Bench, S. W. (2011). Discrete emotions predict changes in cognition, judgment, experience, behavior, and physiology: A meta-analysis of experimental emotion elicitations. *Psychological Bulletin, 137*(5), 834-855. doi:10.1037/a0024244

Lerner, J. S., Goldberg, J. H., & Tetlock, P. E. (1998). Sober second thought: The effects of accountability, anger, and authoritarianism on attributions of responsibility. *Personality and Social Psychology Bulletin, 24*(6), 563-574. doi:10.1177/0146167298246001

Lerner, J. S., & Keltner, D. (2000). Beyond valence: Toward a model of emotion-specific influences on judgement and choice. *Cognition and Emotion, 14*(4), 473-493. doi:10.1080/026999300402763

Lerner, J. S., Li, Y., Valdesolo, P., & Kassam, K. S. (2015). Emotion and decision making. *Annual Review of Psychology, 66,* 799-823. doi:10.1146/annurev-psych-010213-115043

Lerner, J. S., & Tiedens, L. Z. (2006). Portrait of the angry decision maker: How appraisal tendencies shape anger's influence on cognition. *Journal of Behavioral Decision Making, 19*(2), 115-137. doi:10.1002/bdm.515

Liu, Y., Prati, L. M., Perrewé, P. L., & Brymer, R. A. (2010). Individual differences in emotion regulation, emotional experiences at work, and work-related outcomes: A two-study investigation. *Journal of Applied Social Psychology, 40*(6), 1515-1538. doi:10.1111/j.1559-1816.2010.00627.x

Lochman, J. E., & Wells, K. C. (2004). The coping power program for preadolescent aggressive boys and their parents: Outcome effects at the 1-year follow-up. *Journal of Consulting and Clinical Psychology*, *72*(4), 571-578. doi:10.1037/0022-006X.72.4.571

López-Pérez, B., & Ambrona, T. (2015). The role of cognitive emotion regulation on the vicarious emotional response. *Motivation and Emotion, 39*(2), 299-308. doi:10.1007/s11031-014-9452-z

MacDougall, A. E., Bagdasarov, Z., Johnson, J. F., & Mumford, M. D. (in press). Managing workplace ethics: An extended conceptualization of ethical sensemaking and the facilitative role of human resources. *Research in Personnel and Human Resource Management.*

MacKinnon, D. P., Fairchild, A. J., & Fritz, M. S. (2007). Mediation analysis. *Annual Review of Psychology*, *58*, 593–614. doi:10.1146/annurev.psych.58.110405.085542

Markman, K. D. & Tetlock, P. E. (2000). 'I couldn't have known': Accountability, foreseeability and counterfactual denials of responsibility. *British Journal of Social Psychology*, *39*(3), 313–325. doi: 10.1348/014466600164499

Martin, A., Bagdasarov, Z., & Connelly, S. (2015). The capacity for ethical decisions: The relationship between working memory and ethical decision making. *Science and Engineering Ethics, 21*(2), 271-292. doi:10.1007/s11948-014-9544-x

Mancini, F., & Gangemi, A. (2006). The role of responsibility and fear of guilt in hypothesis-testing. *Journal of Behavior Therapy and Experimental Psychiatry, 37*(4), 333-346. doi:10.1016/j.jbtep.2006.03.004

Mickel, A. E., & Ozcelik, H. (2008). When executives get angry: The importance of anger and its triggers to ethical awareness and sensitivity. In W. J. Zerbe, N. M. Ashkanasy, & C. E. J. Härtel (Eds.), *Research on Emotion in Organizations*

Volume 4: Emotions, ethics, and decision-making (pp. 131-154). Bingly, UK: Emerald Group.

Miu, A. C., & Crişan, L. G. (2011). Cognitive reappraisal reduces the susceptibility to the framing effect in economic decision making. *Personality and Individual Differences, 51*(4), 478-482. doi:10.1016/j.paid.2011.04.020

Mumford, M. D., Connelly, S., Brown, R. P., Murphy, S. T., Hill, J. H., Antes, A. L., Waples, E. P, & Devenport, L. D. (2008). A sensemaking approach to ethics training for scientists: Preliminary evidence of training effectiveness. *Ethics & Behavior, 18*(4), 315-339. doi:10.1080/10508420802487815

Mumford, M. D., Devenport, L. D., Brown, R. P., Connelly, S., Murphy, S. T., Hill, J. H., & Antes, A. L. (2006). Validation of ethical decision making measures: Evidence for a new set of measures. *Ethics & Behavior, 16*(4), 319-345. doi:10.1207/s15327019eb1604_4

Mumford, M. D., Mecca, J. T., & Watts, L. L. (in press). Planning processes: Cognitive operations impacting performance. In M. D. Mumford & M. R. Frese (Eds.) *Planning in organizations: The psychology of performance*. New York, NY: Taylor & Francis.

Nabi, R. L. (2002). Anger, fear, uncertainty, and attitudes: A test of the cognitive-functional model. *Communication Monographs, 69*(3), 204-216. doi:10.1080/03637750216541

Nabi, R. L. (2003). Exploring the framing effects of emotion: Do discrete emotions differentially influence information accessibility, information seeking, and

policy preference? *Communication Research, 30*(2), 224-247. doi:10.1177/0093650202250881

Neumann, R. (2000). The causal influences of attributions on emotions: A procedural priming approach. *Psychological Science, 11*(3), 179-182. doi:10.1111/1467-9280.00238

O'Fallon, M. J., & Butterfield, K. D. (2005). A review of the empirical ethical decision-making literature: 1996–2003. *Journal of Business Ethics, 59*(4), 375-413. doi:10.1007/s10551-005-2929-7

Ortner, C. N. M., Zelazo, P. D., & Anderson, A. K. (2013). Effects of emotion regulation on concurrent attentional performance. *Motivation and Emotion, 37*(2), 346-354. doi:10.1007/s11031-012-9310-9

Penney, L. M., & Spector, P. E. (2002). Narcissism and counterproductive work behavior: Do bigger egos mean bigger problems? *International Journal of Selection and Assessment, 10*(1-2), 126-134. doi:10.1111/1468-2389.00199

Quartana, P. J., & Burns, J. W. (2007). Painful consequences of anger suppression. *Emotion, 7*(2), 400-414. doi:10.1037/1528-3542.7.2.400

Rest, J. R. (1986). *Moral development: Advances in research and theory.* New York, NY: Praeger.

Richards, J. M., & Gross, J. J. (2000). Emotion regulation and memory: The cognitive costs of keeping one's cool. *Journal of Personality and Social Psychology, 79*(3), 410-424. doi:10.1037/0022-3514.79.3.410

Rivers, S. E., Brackett, M. A., Katulak, N. A., & Salovey, P. (2007). Regulating anger and sadness: An exploration of discrete emotions in emotion regulation. *Journal of Happiness Studies, 8*(3), 393-427. doi:10.1007/s10902-006-9017-2

Rood, L., Roelofs, J., Bögels, S. M., & Arntz, A. (2012). The effects of experimentally induced rumination, positive reappraisal, acceptance, and distancing when thinking about a stressful event on affect states in adolescents. *Journal of Abnormal Child Psychology, 40*(1), 73-84. doi:10.1007/s10802-011-9544-0

Roseman, I. J. (1996). Appraisal determinants of emotions: Constructing a more accurate and comprehensive theory. *Cognition and Emotion, 10*(3), 241-278. doi:10.1080/026999396380240

Roseman, I. J., Spindel, M. S., & Jose, P. E. (1990). Appraisals of emotion-eliciting events: Testing a theory of discrete emotions. *Journal of Personality and Social Psychology, 59*(5), 899-915. doi:10.1037/0022-3514.59.5.899

Rosenberg, M. (1965). *Society and the adolescent self-image.* Princeton, NJ: Princeton University Press.

Ruch, F., & Ruch, W. W. (1983). *Employee Aptitude Survey technical report*. Chicago, IL: Psychological Services, Incorporated.

Russell, J. A. (1980). A circumplex model of affect. *Journal of Personality and Social Psychology, 39*(6), 1161-1178. doi:10.1037/h0077714

Rusting, C. L., & DeHart, T. (2000). Retrieving positive memories to regulate negative mood: Consequences for mood-congruent memory. *Journal of Personality and Social Psychology, 78*(4), 737-752. doi:10.1037/0022-3514.78.4.737

Scherer, K. R. (1993). Studying the emotion-antecedent appraisal process: An expert system approach. *Cognition and Emotion, 7*(3-4), 325-355. doi:10.1080/02699939308409192

Schmidt, S., Tinti, C., Levine, L. J., & Testa, S. (2010). Appraisals, emotions and emotion regulation: An integrative approach. *Motivation and Emotion, 34*(1), 63-72. doi:10.1007/s11031-010-9155-z

Schwarz, N. (1990). Feelings as information: Informational and motivational functions of affective states. In E. T. Higgins & R. M. Sorrentino (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (Vol. 2, pp. 527-561). New York, NY: Guilford Press.

Schwarz, N., & Clore, G. L. (1983). Mood, misattribution, and judgments of well-being: Informative and directive functions of affective states. *Journal of Personality and Social Psychology, 45*(3), 513-523. doi:10.1037/0022-3514.45.3.513

Sheppes, G., & Meiran, N. (2007). Better late than never? On the dynamics of online regulation of sadness using distraction and cognitive reappraisal. *Personality and Social Psychology Bulletin, 33*(11), 1518-1532. doi:10.1177/0146167207305537

Shiota, M. N., & Levenson, R. W. (2009). Effects of aging on experimentally instructed detached reappraisal, positive reappraisal, and emotional behavior suppression. *Psychology and Aging, 24*(4), 890-900. doi:10.1037/a0017896

Smith, C. A., & Ellsworth, P. C. (1985). Patterns of cognitive appraisal in emotion. *Journal of Personality and Social Psychology, 48*(4), 813-838. doi:10.1037/0022-3514.48.4.813

Smith, C. A., & Pope, L. K. (1992). Appraisal and emotion: The interactional contributions of dispositional and situational factors. In M. S. Clark (Ed.), *Emotion and social behavior. Review of personality and social psychology* (Vol. 14, pp. 32-62). Thousand Oaks, CA: Sage Publications.

Sommer, K. L., & Baumeister, R. F. (1997). Making someone feel guilty: Causes, strategies, and consequences. In R. M. Kowalski (Ed.), *Aversive interpersonal behaviors* (pp. 31-55). New York, NY: Plenum Press.

Sonenshein, S. (2007). The role of construction, intuition, and justification in responding to ethical issues at work: The sensemaking-intuition model. *The Academy of Management Review, 32*(4), 1022-1040. doi:10.2307/20159354

Spector, P. E. (2011). The relationship of personality to counterproductive work behavior (CWB): An integration of perspectives. *Human Resource Management Review, 21*(4), 342-352. doi:10.1016/j.hrmr.2010.10.002

Stenmark, C. K., Antes, A. L., Thiel, C. E., Caughron, J. J., Wang, X., & Mumford, M. D. (2011). Consequences identification in forecasting and ethical decision-making. *Journal of Empirical Research on Human Research Ethics: An International Journal, 6*(1), 25-32. doi:10.1525/jer.2011.6.1.25

Stenmark, C. K., Antes, A. L., Wang, X., Caughron, J. J., Thiel, C. E., & Mumford, M. D. (2010). Strategies in forecasting outcomes in ethical decision-making:

Identifying and analyzing the causes of the problem. *Ethics & Behavior, 20*(2), 110-127. doi:10.1080/10508421003595935

Szasz, P. L., Szentagotai, A., & Hofmann, S. G. (2011). The effect of emotion regulation strategies on anger. *Behaviour Research and Therapy, 49*(2), 114-119. doi:10.1016/j.brat.2010.11.011

Tangney, J. P. (1991). Moral affect: The good, the bad, and the ugly. *Journal of Personality and Social Psychology, 61*(4), 598-607. doi:10.1037/0022-3514.61.4.598

Tangney, J. P. (1995). Shame and guilt in interpersonal relationships. In J. P. Tangney, K. W. Fischer (Eds.), *Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride* (pp. 114-139). New York, NY US: Guilford Press.

Tangney J. P., & Dearing R. (2002). *Shame and guilt*. New York, NY: Guilford Press.

Tangney, J.P., Dearing, R., Wagner, P.E., & Gramzow, R. (2000). The Test of Self-Conscious Affect – 3 (TOSCA-3). Fairfax, VA: George Mason University.

Tangney, J. P., Stuewig, J., & Mashek, D. J. (2007). Moral emotions and moral behavior. *Annual Review of Psychology, 58*, 345-372. doi:10.1146/annurev.psych.56.091103.070145

Tangney, J. P., Wagner, P. E., Marschall, D., & Gramzow, R. (1991). The Anger Response Inventory (ARI). Fairfax, VA: George Mason University.

Tenbrunsel, A., & Smith-Crowe, K. (2008). Ethical decision making: Where we've been and where we're going. *The Academy of Management Annals, 2*(1), 545-607. doi:10.1080/19416520802211677

Thiel, C. E., Bagdasarov, Z., Harkrider, L., Johnson, J. F., & Mumford, M. D. (2012). Leader ethical decision-making in organizations: Strategies for sensemaking. *Journal of Business Ethics, 107*(1), 49-64. doi:10.1007/s10551-012-1299-1

Thiel, C. E., Connelly, S., & Griffith, J. (2011). The influence of anger on ethical decision making: Comparison of a primary and secondary appraisal. *Ethics & Behavior, 21*(5), 380-403.

Thiel, C. E., Connelly, S., Harkrider, L., Devenport, L. D., Bagdasarov, Z., Johnson, J. F., & Mumford, M. D. (2013). Case-based knowledge and ethics education: Improving learning and transfer through emotionally rich cases. *Science and Engineering Ethics, 19*(1), 265-286. doi:10.1007/s11948-011-9318-7

Tiedens, L. Z., & Linton, S. (2001). Judgment under emotional certainty and uncertainty: The effects of specific emotions on information processing. *Journal of Personality and Social Psychology, 81*(6), 973-988. doi:10.1037/0022-3514.81.6.973

Totterdell, P., & Holman, D. (2003). Emotion regulation in customer service roles: Testing a model of emotional labor. *Journal of Occupational Health Psychology, 8*(1), 55-73. doi:10.1037/1076-8998.8.1.55

Treviño, L. K., den Nieuwenboer, N. A., & Kish-Gephart, J. (2014). (Un)ethical behavior in organizations. *Annual Review of Psychology, 65*, 635-660. doi:10.1146/annurev-psych-113011-143745

Treviño, L. K., Weaver, G. R., & Reynolds, S. J. (2006). Behavioral ethics in organizations: A review. *Journal of Management, 32*(6), 951-990. doi:10.1177/0149206306294258

Umphress, E. E., Ren, L. R., Bingham, J. B., & Gogus, C. I. (2009). The influence of distributive justice on lying for and stealing from a supervisor. *Journal of Business Ethics, 86*(4), 507-518. doi:10.1007/s10551-008-9861-6

Victor, B. & Cullen, J.B. (1988). The organizational bases of ethical work climates. *Administrative Science Quarterly, 33*(1), 101-125.

Vitell, S. J., King, R. A., & Singh, J. J. (2013). A special emphasis and look at the emotional side of ethical decision-making. *Academy of Marketing Science Review, 3*(2), 74-85. doi: 10.1007/s13162-013-0042-0

Webb, T. L., Miles, E., & Sheeran, P. (2012). Dealing with feeling: A meta-analysis of the effectiveness of strategies derived from the process model of emotion regulation. *Psychological Bulletin, 138*(4), 775-808. doi:10.1037/a0027600

Weick, K. E. (1995). *Sensemaking in organizations*. Thousand Oaks, CA: Sage Publications.

Weick, K. E. (1988). Enacted sensemaking in crisis situations. *Journal of Management Studies, 25*(4), 305–317. doi:10.1111/j.1467-6486.1988.tb00039.x

Weiss, H. M., & Cropanzano, R. (1996). Affective Events Theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior: An annual series of analytical essays and critical reviews* (Vol. 18, pp. 1-74). US: Elsevier Science/JAI Press.

Werhane, P. H. (2002). Moral imagination and systems thinking. *Journal of Business Ethics, 38*(1), 33–42. doi:10.1023/A:1015737431300

Westen, D. (1994). Toward an integrative model of affect regulation: Applications to social-psychological research. *Journal of Personality, 62*(4), 641-667. doi:10.1111/j.1467-6494.1994.tb00312.x

Wrightsman, L. S., Jr. (1964). Measurement of philosophies of human nature. *Psychological Reports, 14*(3), 743-751. doi:10.2466/pr0.1964.14.3.743

Zerbe, W. J., Ashkanasy, N. M., & Härtel, C. E. J. (2008). *Research on Emotion in Organizations Volume 4: Emotions, ethics, and decision-making.* Bingly, UK: Emerald Group.

Table 1

Operational Definitions of Sensemaking Processes

Sensemaking Process	Operational Definition
Metacognitive Strategies	
Recognizing Circumstances	Thinking about how one's position in one's workgroup, organization, and society relate to the origins of the problem, individuals involved, and relevant principles, goals, and values.
Questioning One's Judgment	Considering the problems, or reasoning errors, that are often involved in making ethical decisions, acknowledging that decisions are seldom perfect because judgment is not perfect.
Consideration of Others	Being mindful of others' perceptions, concerns, and the impact of one's actions on others, both socially and professionally.
Analyzing Personal Motivations	Reflecting on underlying motives and desires regarding the situation by considering one's own biases, the effects of one's values and goals, and questioning one's ability to make ethical decisions.
Anticipating Consequences	Considering all of the potential short- and long-term outcomes for both the self and others that can come from attempts to solve the dilemma.
Asking for Help	Understanding a lack of sufficient knowledge, information, or expertise to make a decision, resulting in asking others for help or referring to guidelines or past situations.
Social Psychological Behaviors	
Retaliation	The degree to which the response is directly aggressive, vengeful, or spiteful in response to the situation.
Deception	The degree to which the response is misleading such as lying to oneself or others, including hiding the truth.
Avoidance of Responsibility	The degree to which the response involves diffusing, avoiding, or deflecting responsibility for actions or decisions.
Selfishness	The degree to which the response is oriented toward personal gain or aggrandizement, including saving face or avoiding costs.
Cognitive Processes	
Problem Recognition	The extent to which the critical aspects of the ethical dilemma were identified.
Number of Causes	A numerical count of the distinct causes listed.
Criticality of Causes	The importance or relevance of the causes identified to the ethical dilemma.
Number of Constraints	A numerical count of the distinct constraints identified in the response.
Criticality of Constraints	The importance or relevance of the constraints identified to the ethical dilemma.
Forecast Timeframe	The timeframe considered in the forecast, considered to be on a continuum with short-term at one end and long-term at the other end.
Forecast Quality	The extent to which the forecasted outcomes display detail, relevance to the scenario, consider critical aspects of the scenario, and are realistic.

Table 2

Means, Standard Deviations and Correlations among Study Variables: Covariates, Metacognitive Strategies, and Social Psychological Behaviors

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Gender	1.67	0.47																			
2. Age	19.39	1.97	-.07																		
3. Marketing Experience	1.86	0.35	.07	-.11																	
4. Agreeableness	4.04	0.57	.10	.05	.01	(.78)															
5. Guilt-Proneness	4.18	0.43	.21**	.06	-.03	.38**	(.73)														
6. Shame-Proneness	3.03	0.58	.29**	-.13*	.03	-.09	.30**	(.75)													
7. Anger-Proneness	3.77	0.51	.11	.05	.07	-.16*	-.11	.15*	(.88)												
8. Trait Reappraisal	5.22	0.88	.09	.01	.03	.38**	.31**	-.05	-.13*	(.80)											
9. Trusting Nature	4.15	0.72	.11	.07	.01	.21**	.05	-.07	-.08	.20**	(.72)										
10. Intelligence	27.20	6.71	-.13*	.01	.05	-.15*	.09	-.03	-.05	-.07	-.04										
11. Recognizing Circumstances	1.75	0.57	.02	.12	-.07	-.10	.05	-.00	-.02	.06	-.04	.06									
12. Questioning Judgment	1.21	0.34	.15*	.18**	-.04	-.02	-.01	.03	.07	-.16**	.03	-.09	.21**								
13. Considering Others	1.70	0.63	-.02	.03	.07	.01	.06	-.03	.03	.08	-.07	.03	.39**	.18**							
14. Analyzing Motivations	1.41	0.67	-.08	.06	-.02	-.12	.04	-.13*	-.09	-.05	-.09	.11	.16*	.27**	.19**						
15. Anticipating Consequences	2.12	0.94	.00	.06	.08	-.11	.03	-.02	-.04	-.05	-.14*	.21**	.34**	.12	.38**	.21**					
16. Asking for Help	1.60	0.81	.02	.08	-.18**	-.04	.04	.05	.07	.12	.06	-.02	-.07	.18**	-.11	.01	-.19**				
17. Retaliation	1.05	0.21	-.08	.01	-.09	-.06	-.01	.01	-.01	.03	-.10	.07	-.05	-.10	-.11	-.01	-.09	-.02			
18. Deception	1.11	0.34	-.18**	-.01	.04	.15*	-.08	-.07	-.01	.00	.00	-.01	-.06	-.12	-.02	-.05	-.01	-.17**	-.01		
19. Avoiding Responsibility	1.19	0.47	-.04	.06	.08	.10	-.01	-.05	.08	.02	.04	-.04	-.11	-.12	.02	-.05	-.05	-.02	-.00	.32**	
20. Selfishness	1.19	0.53	-.11	.05	.05	-.05	-.16*	.00	.13*	-.08	-.13*	-.03	-.09	-.08	-.11	.11	-.03	-.13*	.08	.25**	.10

Note. $N = 247$. *$p \leq .05$, **$p \leq .01$. For gender, 1 = male, 2 = female. For marketing experience, 1 = yes, 2 = no. Applicable internal consistency reliabilities are in parentheses on the diagonal.

Table 3

Means, Standard Deviations and Correlations among Study Variables: Covariates, Cognitive Processes, and Decision Ethicality

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Gender	1.67	0.47																	
2. Age	19.39	1.97	-.07																
3. Marketing Experience	1.86	0.35	.07	-.11															
4. Agreeableness	4.04	0.57	.10	.05	.01	(.78)													
5. Guilt-Proneness	4.18	0.43	.21**	.06	-.03	.38**	(.73)												
6. Shame-Proneness	3.03	0.58	.29**	-.13*	.03	-.09	.30**	(.75)											
7. Anger-Proneness	3.77	0.51	.11	.05	.07	-.16*	-.11	.15*	(.88)										
8. Trait Reappraisal	5.22	0.88	.09	.01	.03	.38**	.31**	-.05	-.13*	(.80)									
9. Trusting Nature	4.15	0.72	.11	.07	.01	.21**	.05	-.07	-.08	.20**	(.72)								
10. Intelligence	27.20	6.71	-.13*	.01	.05	-.15*	.09	-.03	-.05	-.07	-.04								
11. Problem Recognition	2.97	0.66	-.08	.13*	.00	-.02	.09	-.05	-.09	.07	-.15*	.19**							
12. Number of Causes	1.83	0.81	.02	.05	-.04	-.14*	-.01	.11	-.04	-.22**	-.21**	.07	.17**						
13. Criticality of Causes	2.76	0.63	.01	.07	.01	-.02	.13*	.08	-.12	.01	-.26**	.18**	.49**	.63**					
14. Number of Constraints	1.82	0.80	-.04	.17**	.06	-.01	.06	.04	-.02	-.05	-.23**	.11	.26**	.41**	.39**				
15. Criticality of Constraints	2.78	0.72	-.03	.20**	.05	-.03	.07	-.01	-.09	.00	-.22**	.17**	.42**	.27**	.52**	.65**			
16. Forecast Timeframe	2.13	0.79	-.07	.07	.02	-.04	.04	-.14*	-.04	-.02	-.21**	.15*	.36**	.13*	.32**	.36**	.45**		
17. Forecast Quality	2.72	0.75	-.02	.15*	.01	-.04	.11	-.10	-.15*	.10	-.18**	.21**	.48**	.19**	.49**	.45**	.54**	.70**	
18. Decision Ethicality	2.93	0.70	.15*	.09	-.02	-.14*	.17**	.05	-.11	.08	-.07	.13*	.32**	.13*	.37**	.35**	.38**	.29**	.50**

Note. $N = 247$. *$p \leq .05$, **$p \leq .01$. For gender, 1 = male, 2 = female. For marketing experience, 1 = yes, 2 = no. Applicable internal consistency reliabilities are in parentheses on the diagonal.

Table 4

Means, Standard Deviations and Correlations among Study Variables: Sensemaking Processes and Decision Ethicality

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Recognizing Circumstances	1.75	0.57																	
2. Questioning Judgment	1.21	0.34	.21**																
3. Considering Others	1.70	0.63	.39**	.18**															
4. Analyzing Motivations	1.41	0.67	.16*	.27**	.19**														
5. Anticipating Consequences	2.12	0.94	.34**	.12	.38**	.21**													
6. Asking for Help	1.60	0.81	-.07	.18**	-.11	.01	-.19**												
7. Retaliation	1.05	0.21	-.05	-.10	-.11	-.01	-.09	-.02											
8. Deception	1.11	0.34	-.06	-.12	-.02	-.05	-.01	-.17**	-.01										
9. Avoiding Responsibility	1.19	0.47	-.11	-.12	.02	-.05	-.05	-.02	.00	.32**									
10. Selfishness	1.19	0.53	-.09	-.08	-.11	.11	-.03	-.13*	.08	.25**	.10								
11. Problem Recognition	2.97	0.66	.25**	.12	.20**	.17**	.37**	.11	.08	-.07	-.09	-.04							
12. Number of Causes	1.83	0.81	.30**	.18**	.22**	.24**	.19**	-.06	.02	-.02	-.10	.07	.17**						
13. Criticality of Causes	2.76	0.63	.31**	.18**	.22**	.33**	.37**	.03	.04	-.15*	-.17**	.05	.49**	.63**					
14. Number of Constraints	1.82	0.80	.34**	.23**	.26**	.23**	.38**	-.02	.09	.04	-.04	.02	.26**	.41**	.39**				
15. Criticality of Constraints	2.78	0.72	.34**	.15*	.25**	.32**	.40**	-.06	.06	-.04	-.06	.00	.42**	.27**	.52**	.65**			
16. Forecast Timeframe	2.13	0.79	.30**	.14*	.23**	.20**	.42**	-.06	.00	.03	.01	-.04	.36**	.13*	.32**	.36**	.45**		
17. Forecast Quality	2.72	0.75	.35**	.17**	.28**	.31**	.51**	.00	.04	-.09	-.08	-.14*	.48**	.19**	.49**	.45**	.54**	.70**	
18. Decision Ethicality	2.93	0.70	.33**	.28**	.17**	.24**	.32**	.17**	-.08	-.53**	-.48**	-.36**	.32**	.13*	.37**	.35**	.38**	.29**	.50**

Note. $N = 247$. *$p \leq .05$, **$p \leq .01$.

Table 5

Means and Standard Deviations for Metacognitive Strategies

Emotion Evoked	Emotion Regulation	Recognizing Circumstances		Questioning Judgment		Considering Others		Analyzing Motivations		Anticipating Consequences		Asking for Help	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Neutral	None	1.78	0.56	1.23	0.34	1.73	0.72	1.44	0.62	2.17	1.00	1.76	0.96
Anger	None	1.81	0.71	1.20	0.40	1.64	0.64	1.41	0.75	1.84	0.85	1.74	0.86
	Suppress	1.69	0.46	1.16	0.26	1.62	0.70	1.33	0.58	1.78	0.83	1.53	0.76
	Reappraise	1.67	0.60	1.20	0.36	1.65	0.67	1.61	0.96	2.10	0.99	1.65	0.80
Guilt	None	1.82	0.69	1.25	0.41	1.74	0.54	1.54	0.76	2.23	1.00	1.47	0.72
	Suppress	1.63	0.49	1.20	0.32	1.68	0.56	1.30	0.42	2.22	0.87	1.44	0.60
	Reappraise	1.78	0.44	1.22	0.30	1.77	0.44	1.23	0.40	2.47	0.88	1.40	0.64

Note. $N = 247$. Not adjusted for covariates.

Table 6

Means and Standard Deviations for Social Psychological Behaviors and Decision Ethicality

Emotion Evoked	Emotion Regulation	Retaliation		Deception		Avoiding Responsibility		Selfishness		Ethicality	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Neutral	None	1.00	0.00	1.08	0.29	1.22	0.56	1.09	0.28	3.06	0.59
Anger	None	1.15	0.35	1.00	0.00	1.30	0.60	1.27	0.55	2.89	0.62
	Suppress	1.11	0.32	1.19	0.47	1.19	0.37	1.64	1.07	2.57	0.74
	Reappraise	1.12	0.32	1.23	0.47	1.24	0.59	1.23	0.45	2.72	0.81
Guilt	None	1.02	0.12	1.05	0.21	1.10	0.23	1.14	0.41	2.99	0.76
	Suppress	1.00	0.00	1.14	0.42	1.14	0.35	1.06	0.16	3.05	0.68
	Reappraise	1.00	0.00	1.10	0.35	1.12	0.35	1.03	0.13	3.10	0.66

Note. $N = 247$. Not adjusted for covariates.

Table 7

Means and Standard Deviations for Cognitive Processes

Emotion Evoked	Emotion Regulation	Problem Recognition		Number of Causes		Criticality of Causes		Number of Constraints		Criticality of Constraints		Forecast Timeframe		Forecast Quality	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Neutral	None	2.95	0.72	1.76	0.84	2.75	0.70	1.89	0.85	2.92	0.71	2.33	0.85	2.69	0.83
Anger	None	2.96	0.65	1.99	0.84	2.85	0.66	1.73	0.86	2.84	0.73	2.03	0.78	2.75	0.68
	Suppress	3.00	0.57	2.00	0.87	2.71	0.66	1.83	0.75	2.61	0.78	2.02	0.68	2.58	0.79
	Reappraise	2.86	0.84	2.02	0.95	2.77	0.70	1.73	0.86	2.66	0.83	1.95	0.70	2.56	0.81
Guilt	None	2.91	0.62	1.87	0.77	2.86	0.67	1.86	0.83	2.61	0.74	1.97	0.80	2.84	0.79
	Suppress	3.09	0.60	1.68	0.70	2.74	0.50	1.89	0.82	2.94	0.67	2.30	0.78	2.94	0.59
	Reappraise	3.02	0.58	1.57	0.55	2.66	0.33	1.75	0.55	2.77	0.51	2.11	0.82	2.71	0.58

Note. $N = 247$. Not adjusted for covariates.

Table 8

Mediational Effects of Metacognitive Strategies and Social Psychological Behaviors on Decision Ethicality

Sensemaking Category	Mediator	Conditions	Indirect Effect	*SE*	95% CI
Metacognitive Strategies	Recognizing Circumstances	Anger v. Comparison	-.02	.02	[-.078, .024]
		Guilt v. Comparison	-.01	.02	[-.057, .039]
		Guilt v. Anger	.01	.02	[-.027, .062]
	Questioning One's Judgment	Anger v. Comparison	-.01	.02	[-.068, .026]
		Guilt v. Comparison	.00	.02	[-.045, .044]
		Guilt v. Anger	.02	.02	[-.019, .061]
	Consideration of Others	Anger v. Comparison	.01	.01	[-.007, .052]
		Guilt v. Comparison	-.00	.01	[-.025, .018]
		Guilt v. Anger	-.01	.01	[-044, .007]
	Analyzing Personal Motivations	Anger v. Comparison	-.00	.01	[-.033, .023]
		Guilt v. Comparison	-.01	.01	[-.051, .008]
		Guilt v. Anger	-.01	.01	[-.048, .009]
	Anticipating Consequences	Anger v. Comparison[+]	-.04	.03	[-.113, -.005]
		Guilt v. Comparison	.02	.02	[-.020, .075]
		Guilt v. Anger[+]	.06	.03	[.014, .131]
	Asking for Help	Anger v. Comparison	-.02	.02	[-.076, .018]
		Guilt v. Comparison[+]	-.05	.03	[-.120, -.008]
		Guilt v. Anger[+]	-.03	.02	[-.079, -.001]
Social Psychological Behaviors[a]	Deception	Anger v. Comparison	-.03	.04	[-.104, .038]
		Guilt v. Comparison	-.01	.03	[-.080, .058]
		Guilt v. Anger	.03	.04	[-.049, .093]
	Avoidance of Responsibility	Anger v. Comparison	-.01	.04	[-.100, .075]
		Guilt v. Comparison	.05	.04	[-.017, .130]
		Guilt v. Anger[+]	.07	.03	[.005, .135]
	Selfishness[b]	Anger v. Comparison	-.06	.05	[-.230, .004]
		Guilt v. Comparison	.02	.01	[-.001, .058]
		Guilt v. Anger[+]	.07	.03	[.023, .139]

Note. [+] denotes partial mediation. All indirect effects are bias corrected and relative to the reference group. [a]Retaliation was not included in the model. [b]Selfishness estimates are adjusted for the inclusion of the IV*mediator interactions.

Table 9

Mediational Effects of Cognitive Processes on Decision Ethicality

Sensemaking Category	Mediator	Conditions	Indirect Effect	*SE*	95% CI
Cognitive Processes	Problem Recognition	Anger v. Comparison	-.00	.01	[-.043, .008]
		Guilt v. Comparison	.00	.01	[-.013, .026]
		Guilt v. Anger	.00	.01	[-.006, .038]
	Number of Causes	Anger v. Comparison	-.02	.02	[-.088, .006]
		Guilt v. Comparison	.01	.02	[-.012, .067]
		Guilt v. Anger	.03	.02	[-.003, .095]
	Criticality of Causes	Anger v. Comparison	-.01	.03	[-.076, .038]
		Guilt v. Comparison	-.01	.03	[-.069, .039]
		Guilt v. Anger	.00	.02	[-.036, .052]
	Number of Constraints	Anger v. Comparison	-.03	.03	[-.118, .001]
		Guilt v. Comparison	-.02	.02	[-.086, .012]
		Guilt v. Anger	.02	.02	[-.009, .074]
	Criticality of Constraints	Anger v. Comparison	-.01	.02	[-.056, .039]
		Guilt v. Comparison	-.00	.02	[-.047, .026]
		Guilt v. Anger	.00	.01	[-.012, .035]
	Forecast Timeframe	Anger v. Comparison	.04	.03	[-.007, .129]
		Guilt v. Comparison	.03	.03	[-.004, .111]
		Guilt v. Anger	-.01	.02	[-.065, .009]
	Forecast Quality	Anger v. Comparison	-.04	.05	[-.147, .041]
		Guilt v. Comparison	.03	.04	[-.045, .131]
		Guilt v. Anger^{+}	.07	.04	[.008, .174]

Note. $^{+}$ denotes partial mediation. All indirect effects are bias corrected and relative to the reference group.

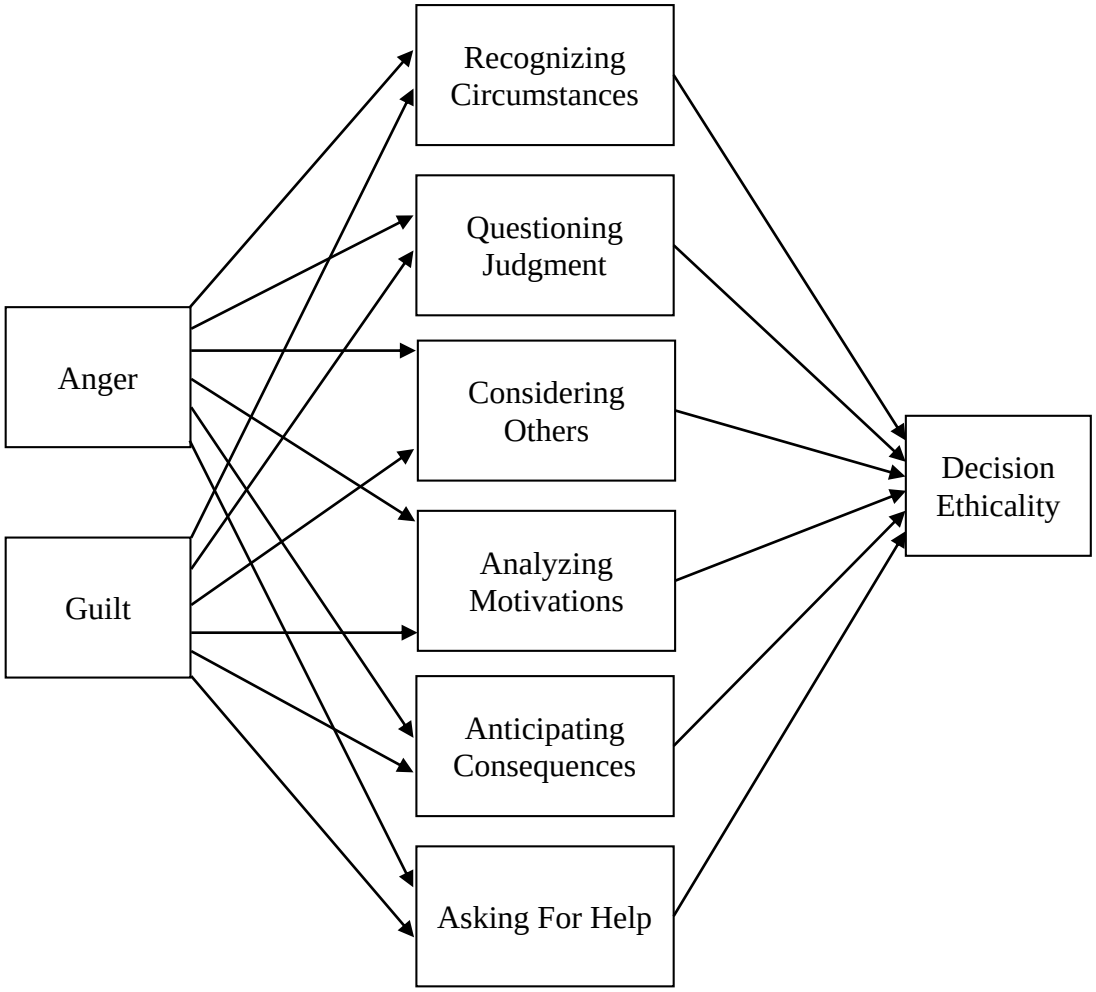

Figure 1. Example multiple mediation model. Covariates are included in analyses but are not shown in the figure.

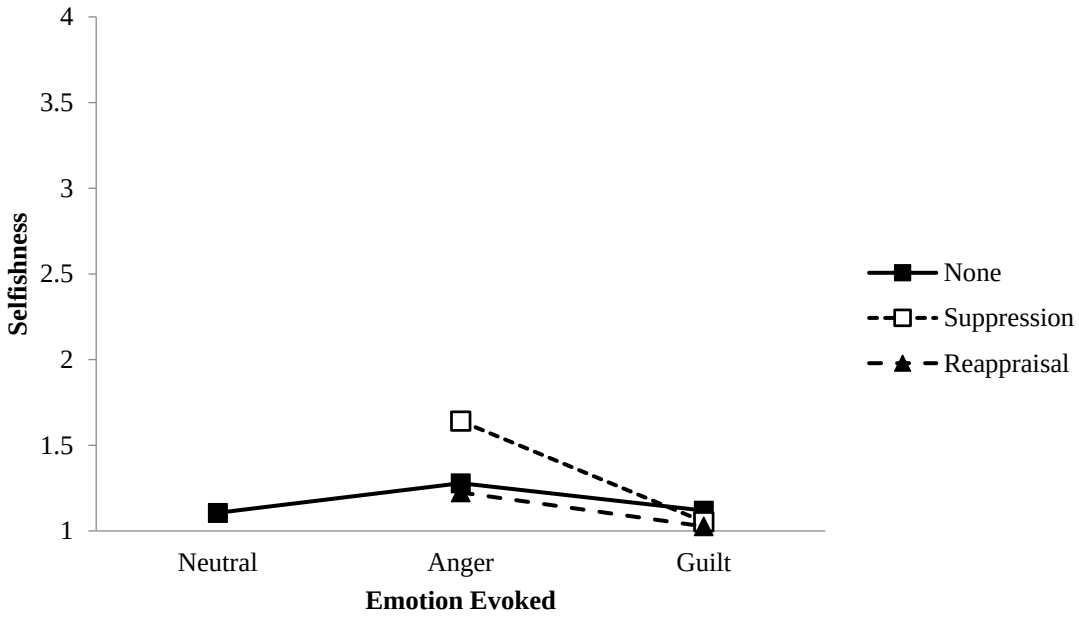

Figure 2. Three-way interaction for the impact of manipulations on selfishness.

Appendix A

InnoMark Inc. Case

Organizational Background

You work for **InnoMark Inc**., a nation-wide organization based in Houston, Texas that specializes in marketing and advertising research. Within InnoMark, there are a number of market research departments, each focusing on different types of industries such as automobiles, telecommunications, travel, and pharmaceuticals.

Your job is an entry-level position within one of the pharmaceutical market research groups. This position involves tasks such as collecting and analyzing data on customers' buying habits and product needs and on competitors' use of sales and marketing approaches. In addition, your job involves using this information and other data to determine the potential success of a marketing campaign and to measure the effectiveness of advertising campaigns once they are launched. You have been in this position with InnoMark for a little less than a year.

The two main individuals you work with in your research group are **Jason** and **Davis**. Jason is in his second year at InnoMark, and you have a good working relationship with him. Davis is the manager of your market research group. Both you and Jason have generous salaries and commission opportunities thanks mostly to your manager's connections with the pharmaceutical industry.

You recently found yourself in the following situation.

Appendix B

InnoMark Inc. Case with Manipulations

Manipulations key: Guilt (self-blame) is underlined, anger (other blame) is **boldfaced**, and neutral is [bracketed].

Case:

Davis, the group's market research manager, generates reports on drugs' safety and side effects to be included in any marketing research endeavors, and the work requires review and approval by industry scientists before it can be submitted for advertising consideration. InnoMark objects to this and has offered to negotiate with the drug companies for better terms. So far, Davis has refused on the grounds that he has no problem with the policy and does not want to compromise his reputation with the industry. Plus, it provides funding for his team of first-rate marketing staff and researchers, including you.

You and Jason are assigned with gathering data to determine the potential success of a marketing campaign for a new drug through focus groups and competitor evaluations in a local market. You know that tests of this drug have shown it could be groundbreaking in saving cancer patients' lives - plus, the entire group stands to profit greatly from this project. Before developing the marketing analysis materials, you were (**Jason was**) [the research group was] tasked with reviewing Davis's approved report, which is usually long and technical, to create a summary of the drug's risks for you and Jason to include when developing your research materials. Although this usually takes several days, you have (**Jason has**) [the group has] done this numerous times in the past, so you skimmed (**Jason skimmed**) the report [was skimmed] quickly to generate the shortened document to allow the group to move forward quickly on the marketing research.

A few months later, the data from the market analyses are presented to Davis and representatives of the pharmaceutical company who developed the drug. Everyone is thrilled with the results. The positive reactions to the upcoming availability of the drug, in addition to the drug being a first of its kind in the market, position the drug to be a highly successful, well-received product. Based on this information, the pharmaceutical company decides to develop and launch a nation-wide campaign within the next several months. As you are writing up the final reports of the marketing analyses, you realize that one of the most critical risks was left off the list that you (**Jason**) [the research group] generated when developing the original focus group studies. You cannot believe that you (**Jason**) [the group] did this and realize that the focus groups and competitor comparisons could be successful at least partly due to [your (**his**) mistake of] leaving off an important piece of information. Any actual advertising campaigns would have to include this risk, greatly impacting the potential reception to and success of the drug. In short, the marketing analyses you and Jason did may be highly flawed [- you are (**Jason is)** obviously accountable for this oversight. (removed in no evocation)].

You confide in (**confront**) [talk to] your friend about this issue, and Jason replies candidly about what he learned in his first year—that the industry's emphasis is on getting results. He points out that if the Davis group does not produce, the project will be turned over to another team that will, and the jobs will follow the money. Plus, he reiterates that Davis has said in the past that marketing research is just as much an art as it is a science, especially in pharmaceuticals, when risks are usually made to sound much more serious by drug companies than they actually are.

You walk away from the conversation unsure how to proceed. Inclusion of the risk in the advertisements may or may not result in a different outcome than the analyses suggest. However, you are not sure about moving forward with a highly inaccurate market analysis that, if discovered, could result in halting the marketing campaign, stopping the sales of the beneficial drug and losing millions in revenue.

Anger Condition Email

A couple days later, you receive an email from Jason:

From : Jason Baker <jbaker@innomark.com>
Subject : **Need Write-up ASAP**

Hey,

I just talked to Davis, and he really needs the final report you have been working on for the recent market analyses we completed. Apparently our research group is depending on the revenue from this project – Davis hinted that since you are the last hired, it is likely that **you** will be let go if the rest of this project does not go smoothly. **I know you can't afford to lose this job**. Plus, it would be hard to find another job in this industry after being fired from working with a person as prestigious as Davis.

As you can see, there's a lot at stake here. Please make sure the report is on Davis's desk by the end of the week.

Jason

When you read this email, you are in disbelief that Jason has put you in this dilemma. If he had just paid attention to the report the first time around, this whole situation could have been easily avoided. And now Jason's one mistake could cost you your job! You realize how unfair the entire situation is. How could he do this do you? You feel your face get hot and your hands clench into fists. You begin to experience waves of intense anger.

Guilt Condition Email

A couple days later, you receive an email from Jason:

From : Jason Baker <jbaker@innomark.com>
Subject : **Need Write-up ASAP**

Hey,

I just talked to Davis, and we really need to get the final report you have been working on for the recent market analyses we completed. Apparently our research group is depending on the revenue from this project – Davis hinted that even though you are the last hired, it is likely that I will be let go if the rest of this project does not go smoothly. I can't afford to lose this job. Plus, it would be hard to find another job in this industry after being fired from working with a person as prestigious as Davis.

As you can see, there's a lot at stake here. Please make sure the report is on Davis's desk by the end of the week.

Jason

When you read this email, you are in disbelief that you have put Jason in this situation. If you had just paid attention to the report the first time around, this whole situation could have been easily avoided. And now your one mistake could cost Jason his job. You realize how unfair the entire situation is for him. How could you let this happen? You feel a knot form in the pit of your stomach, and you become overwhelmed with intense feelings of guilt.

Neutral Condition Email

A couple days later, you receive an email from Jason:

From : Jason Baker <jbaker@innomark.com>
Subject : **Need Write-up ASAP**

Hey,

I just talked to Davis, and we really need to get the final report you have been working on for the recent market analyses we completed. The project is an important one for our research group. Please make sure the report is on Davis's desk by the end of the week.

Jason

Appendix C

InnoMark Inc. Case Questions

Now we would like you to think through the problem you have encountered and possible solutions for it. Please answer the following questions fully and to the best of your ability.

1. What is the problem in this situation?
2. List and describe the causes of the problem.
3. What are the key factors and challenges of this problem?
4. What should you consider in solving this problem?
5. What are some possible outcomes of this situation?
6. What is your final decision and your next steps?
7. What was your rationale for making this decision?

Appendix D

Cognitive Reappraisal Manipulation

Situations such as the one you are in usually elicit a broad range of feelings. People tend to deal with these feelings in different ways. One of the ways of doing this is to reflect on the situation in several different ways.

There are a number of strategies people use to reflect and think through the situation in different ways. Please work through the following questions fully and to the best of your ability.

1. Sometimes even when bad things happen, they ultimately have positive consequences. We would like you to list some good things that could occur as a result of experiencing this negative event. In other words, what are some possible positive consequences of this negative event?
2. What are some of the lessons you could learn from this situation that would benefit you in the future?
3. In what ways could experiencing this situation help you grow as a person?
4. How might any reactions you have in this situation help you handle the situation?
5. What are some things you might think that would help you lessen the negative aspects of the situation?

As you move forward in this study, it is very important that you try use these reflection strategies and keep applying these questions when thinking through any other situations.

Appendix E

Suppression Manipulation

Situations such as the one you are in usually elicit a broad range of feelings. People tend to deal with these feelings in different ways. One of the ways of doing this is to try to remain emotionally neutral.

Please read through the following instructions and answer the following questions fully and to the best of your ability.

As you move forward in this study, it is very important that you try to remain completely neutral on the inside and out. Try your best not to let any feelings or responses you may have show on your face, and, to the best of your ability, try to keep all of your internal reactions about this situation suppressed.

There are some strategies that could help you suppress your emotional feelings and expressions. You could imagine that someone watching you would be unable to tell what you are feeling or would think you are not feeling anything at all. Another may be to not think about your feelings and to push them out of your mind. You could also visualize bottling up your emotions or pressing weights onto any emotions that start to rise at any time during the rest of the study.

My goal for the rest of the study with regards to my feelings is:

A strategy I plan to use to suppress my emotions is:

Before moving on, practice suppressing any emotions you are feeling right now. Try to neutralize your facial expressions and feelings. After a minute or two, feel free to move on to the next task.