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Affect and Decision Making in Troubled Information Technology Projects

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AFFECT AND DECISION MAKING IN TROUBLED INFORMATION TECHNOLOGY PROJECTS

BY

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ACCEPTANCE

This dissertation was prepared under the direction of the Hyung Koo Lee's Dissertation Committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Business Administration in the J. Mack Robinson College of Business of Georgia State University.

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ABSTRACT

AFFECT AND DECISION MAKING IN TROUBLED INFORMATION TECHNOLOGY PROJECTS

BY

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Major Academic Unit: Computer Information Systems

IT project failure is an enduring problem which has often been associated with bad news reporting and escalation of commitment. The literature in bad news reporting has focused on identifying factors (e.g., organizational climate of silence) that could influence one's reporting decision. Similarly, the de-escalation literature has primarily investigated conditions or activities (e.g., changes in top management) which promote de-escalation. Nonetheless, what is missing in our understanding is how affect can influence bad news reporting and de-escalation decisions within IT projects. This represents a significant gap in bad news reporting and de-escalation research, as affect (i.e., mood and emotions) is recognized as a fundamental aspect of human life which strongly influences individual perceptions, judgment, and decision making. The aim of this dissertation to provide new insights regarding how affect can influence bad news reporting decisions and de-escalation of commitment within the context of troubled IT projects.

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Chapter 1

Introduction

1.1. Motivation

Information technology (IT) project failure remains a significant challenge to organizations. According to the Standish Group's (2013) CHAOS Manifesto 2013 report of approximately 50,000 IT projects conducted from 2003 to 2012, only 39% of the projects were successful, while 43% were challenged (i.e., either late, over budget, or delivered with less than required features) and 18% failed completely (i.e., never used or canceled prior to completion). Often, such failure can be attributed to the poor decisions made during the project life cycle (Chen et al. 2009; Standish Group 2013). In this dissertation, I focus on two critical domains of decision making that have often be associated with IT project failure: bad news reporting and escalation of commitment.

In IT projects, accurate status reporting serves as a key mechanism for successfully controlling IT projects (Kirsch et al. 2002). However, the intangible nature of software (Reel 1999), together with the low task observability involved with software development make it easier to conceal negative information about the project compared to other types of projects. Such characteristics can often lead to difficulties in obtaining accurate status information and further, can contribute to project failure. A classic example is the case of CONFIRM, which involved the development of a reservation system integrating airlines, hotels, and car rentals. During the development of CONFIRM, appropriate actions were not taken because important technical and performance issues were deliberately concealed by project members, which eventually led the project to be scrapped after investing $125 million (Oz 1994).

IT project failure can also result from escalation of commitment, a phenomenon in which decision makers continue to commit to a failing course of action (Staw 1976). Prior research suggests that escalation of commitment is exhibited in approximately 30-40% of IT projects, and is associated with significantly worse project outcomes (Keil et al. 2000a), as illustrated in the UK National Health Service's (NHS) IT project for adopting electronic health records (EHR). Despite technical difficulties and delays in the case of the NHS EHR project, the continued commitment of stakeholders and managers led to $10 billion of investment over 9 years, only to end in the original project being abandoned (UK Department of Health 2011).

Due to the implications that bad news reporting and escalation have on IT project failure, most studies in the information systems (IS) literature have investigated how such decisions can be influenced. For instance, the literature on bad news reporting in IT projects has focused on identifying personal, situational, or organizational factors that influence one's reporting decisions. On the other hand, while much work has been done in identifying factors that cause projects to escalate, comparatively less work has been done in identifying how to promote de-escalation in troubled IT projects. Research in the de-escalation stream has mainly investigated tactics (e.g., changes in top management (Keil 1995)) which support breaking the cycle of escalation. Both streams have a focus on cognitive factors while assuming rational behavior of decision makers, and neglect the importance of how affect can influence such decisions. This represents an important theoretical gap that I seek to address in this dissertation.

Prior studies on individual judgment and decision making have focused on the cognitive factors that influence individual decision making (Quartz 2009). However, the affective factors have received more attention in recent studies, and has put it on a footing equal to cognitive factors (Weber and Johnson 2009). Affect (i.e., mood and emotions) is recognized as a

fundamental aspect of human life (Forgas 1995), and evidence in many disciplines suggest that it can strongly influence perceptions, judgment, and decision making behavior in organizational settings (Mittal and Ross 1998; Schwarz and Clore 1996). Only recently has the IS literature investigated the role of affect with limited attention on how it may influence IT use behaviors (e.g., Beaudry and Pinsonneault (2010)). Further research is warranted to enhance our understanding of decision making in bad news reporting and de-escalation from an affect perspective. The objective of this dissertation is to investigate the different roles of affect in bad news reporting and de-escalation decision making.

1.2. Overview of Dissertation and Two Essays

This dissertation follows a multi-paper model, and consists of two independent essays under the overarching theme of affect and decision making within IT projects. The overall conceptual model for this dissertation is shown in Figure 1-1.

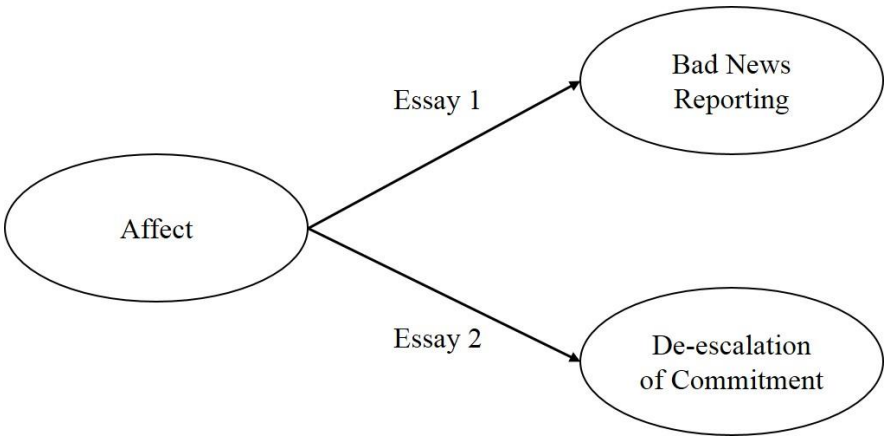


Figure 1-1. Overall Conceptual Model of Dissertation

In Essay 1, I investigate how one's mood state influences the reporting of bad news on IT projects. In Essay 2, I investigate the mediating role of a specific emotion, namely anticipated guilt, in the context of using perspective taking as a tactic for promoting de-escalation.

1.3. Relevant Literature and Research Questions

1.3.1. Bad News Reporting in IT Projects (Essay 1)

In troubled IT projects, individuals often become reluctant to report negative status information to those with authority to take corrective actions. Grounded in whistleblowing theory, prior research in IS bad news reporting has investigated a variety of factors that can influence one's assessment of the project status, reporting responsibilities, and willingness to report bad news. Table 1-1 provides a summary of the factors identified from empirical studies in the IS literature. Most notable factors influencing one's willingness to report negative status information include personal responsibility of reporting (Park et al. 2008), concerns of negative consequences (Smith et al. 2001), and organizational climate of silence (Park and Keil 2009).

Table 1-1. Factors that Influence Bad News Reporting in IT Projects

Factor	Direction of Influence[1]	References
Blame shifting opportunity	(+)	Keil et al. (2007b); Park et al. (2008)
Concerns of personal negative consequences	(–)	Keil and Robey (2001); Smith et al. (2001)
Information asymmetry	(–)	Keil et al. (2010); Tan et al. (2003)
Management responsiveness	(+)	Keil et al. (2010); Park and Keil (2009)
Organizational climate (i.e., climate of silence/not conducive climate)	(–)	Keil and Robey (2001) Park and Keil (2009); Tan et al. (2003)

1. (+) indicates positive influence (i.e., increased willingness to report), and (–) indicates negative influence (i.e., decreased willingness to report)

Table 1-1. Factors that Influence Bad News Reporting in IT Projects (Continued)

Factor	Direction of Influence[1]	References
Perceived impact of project failure	(+)	Park et al. (2009); Smith et al. (2001)
Perceived time urgency	(+)	Park et al. (2008)
Personal morality	(+)	Park et al. (2009)
Personal responsibility of reporting	(+)	Keil et al. (2010); Park et al. (2008); Park et al. (2009); Park and Keil (2009); Smith et al. (2001)
Reporting anonymity	(+)	Keil et al. (2010)
Senior management's attachment to project	(+)	Keil et al. (2010)
Trust in supervisor	(+)	Keil et al. (2010)
Willingness to communicate	(+)	Park et al. (2009)

1. (+) indicates positive influence (i.e., increased willingness to report), and (–) indicates negative influence (i.e., decreased willingness to report)

While these studies have contributed much to our understanding of bad news reporting in IT projects, it has generally been assumed that the negative status information can be attributed to other's actions. In fact, most studies investigating bad news reporting have either left the source on negative information either unspecified (e.g., Keil et al. (2004)) or have attributed it to an external software vendor (e.g., Park et al. (2008)). In this dissertation, I further extend the stream of bad news reporting research by taking into account the reporting of negative information that can be attributed to the self (i.e., the reporting of self-committed errors) (Zhao and Olivera 2006).

In the bad news reporting literature, it has been suggested that affective factors and individual traits may play a crucial role in influencing reporting decisions (Smith and Keil 2003). A few prior studies have investigated individual traits such as willingness to communicate (Park

et al. 2009), risk propensity (Smith et al. 2001), and personal morality (Park et al. 2009). However, to date, there are no empirical studies that have investigated how affect and the big five personality traits may influence reporting decisions. In Essay 1 of this dissertation, I address this theoretical gap by focusing on one of the most fundamental affective states, namely mood (i.e., positive vs. negative) and its influence on one's decision to report a self-committed error in a troubled IT project. Individual mood states are known to play a crucial role in organizations and work settings, mainly because of the pervasiveness and influence they have on work-related behaviors (Forgas and George 2001; George and Jones 1997). Such mood states may also have important implications on reporting behaviors. Additionally, I take into account how conscientiousness (known as one of the "big five" personality traits (Goldberg 1981)) influences reporting decisions. Conscientiousness has often been related with organizational deviance and harmful behaviors in the workplace (Barrick and Mount 2000). Because reluctance to report negative project status information could be considered as a form of organization deviance or harmful behavior, conscientiousness may be considered as most relevant in this context. Thus, I address the following research question in Essay 1 of this dissertation:

RQ1: How do mood and conscientiousness influence the reporting of self-committed errors in troubled IT projects?

1.3.2. De-escalation of Commitment (Essay 2)

In the context of project management, de-escalation of commitment has been conceptualized as either redirecting or terminating troubled projects (Keil and Robey 1999; Montealegre and Keil 2000). Prior research on de-escalation of commitment in IT projects is comparatively limited, and most studies have focused on identifying tactics that promote de-escalation. For instance, Montealegre and Keil (2000, p. 434) found in the Denver International

Airport (DIA) case that de-escalation was promoted by redefining the problem from "completing the automated baggage system as originally planned" to "making the airport operational." This shift of reference led DIA to focus more on finding an alternative for the automated baggage system to open the airport rather than continuing their commitment towards the already delayed baggage system. Another classic example involves changing managers or project champions after escalation occurs. In the new product development context, Boulding et al. (1997) found in an experiment that managers who were not responsible for the initial product launch tended to withdraw a failing product from the market more than those managers who were responsible.

While several de-escalation tactics have been identified in the literature, many of them require support at the organizational level (e.g., changing corporate culture to tolerate failure or reducing the threat of negative outcomes) which are often impractical and costly (Kavanagh and Ashkanasy 2006). Some tactics (e.g., changes in top management or project championship) are often impractical in the sense that they require extraordinary measures (Offermann and Gowing 1990) after the occurrence of project escalation. Therefore, there is the need for a practical – less costly and easier to implement – tactic for promoting de-escalation of commitment. In Essay 2 of this dissertation, I propose perspective taking as a practical tactic promoting de-escalation, and investigate its effectiveness in the context of software projects facing a premature product launch.

Perspective taking is a cognitive activity that involves "imagining the world from another's vantage point or imagining oneself in another's shoes" (Galinsky et al. 2005, p. 110). Parker and Axtell (2001) suggest that when individuals adopt a target's perspective as an attempt to understand the target's values and needs, it can lead to altered behaviors towards the target. Studies have demonstrated that perspective taking can be leveraged within organizational contexts to promote organizational citizenship behaviors (Kamdar et al. 2006) or improve

creativity at work (Grant and Berry 2011). In essay 2, I posit that when the target of perspective taking involves an individual who can be negatively affected by a premature product launch, perspective taking can be used as an effective tactic for promoting de-escalation.

Furthermore, perspective taking has implications on individual attitudes and behavior, but can also impact the affective experiences of individuals (Batson 1991). Eisenberg (1991) suggests individuals understand others' cognitive and emotional state through perspective taking which results in emotional reactions such as empathy and sympathy. Drawing from Coke et al.'s (1978) two-stage model of perspective taking (which suggests that emotions mediate the relationship between perspective taking and behavior), I investigate the mediating role of an anticipatory emotion, namely anticipated guilt. Although known as an unpleasant emotion, anticipated guilt is a proactive emotion that inspires people to prevent anticipated bad situations in organizational contexts (Bohns and Flynn 2013; Grant and Wrzesniewski 2010). To date, however, there are no empirical studies in the literature investigating the relationships between de-escalation, perspective taking, and anticipated guilt. Thus, I address the following research questions in Essay 2 of this dissertation:

RQ2-1: How does perspective taking influence de-escalation of commitment in the launch of a premature software-driven product?

RQ2-2: How does anticipated guilt influence the relationship between perspective taking and de-escalation of commitment in the launch of a premature software-driven product?

1.4. Overview of Two Essays

In this section, I present a brief introduction of the research model and the constructs involved in each essay.

1.4.1. Essay One

Essay 1 is based on a single laboratory experiment with student subjects. Grounded in the literature on mood, personality, and IS bad news reporting, Essay 1 investigates how mood and conscientiousness influences one's decision to report a self-committed error in the context of a troubled IT project. Additionally, I take into account cost-benefit differential (i.e., the perceived benefits of reporting relative to the costs). Keil et al. (2010) has shown that cost-benefit differential is an important mediator for various factors influencing bad news reporting, but it has not been empirically tested in the context of self-committed error-reporting. In Essay 1, I consider cost-benefit differential as a mediating mechanism through which conscientiousness influences willingness to report error. Further, I examine the interaction between mood and conscientiousness when making reporting decisions of self-committed errors. The research model and construct definitions for Essay 1 are shown in Figure 1-2 and Table 1-2, respectively.

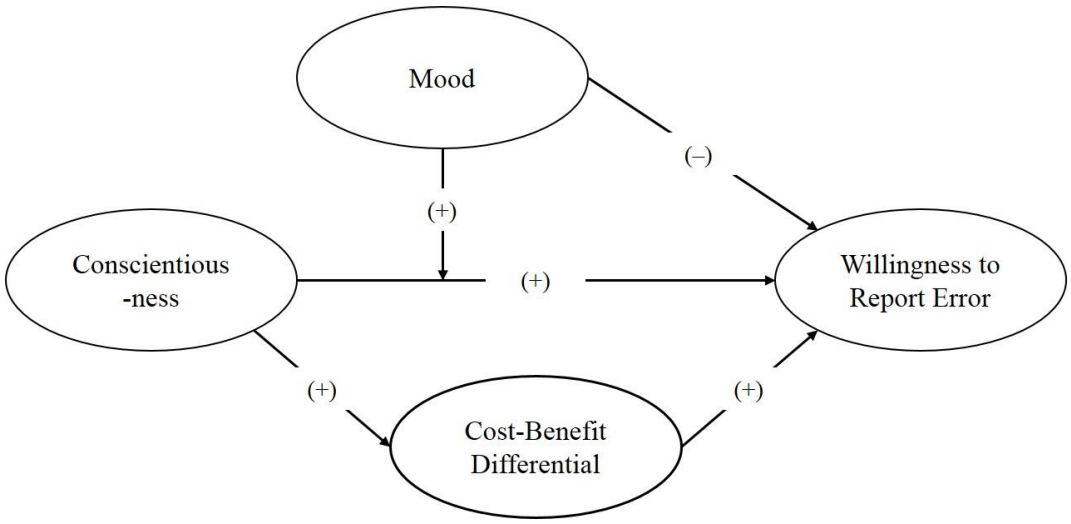


Figure 1-2. Research Model (Essay 1)

Table 1-2. Definitions of Constructs (Essay 1)

Construct	Definition	References
Willingness to report error	An individual's willingness to report a self-committed error	Zhao and Olivera (2006); Park et al. (2008)
Mood[1]	An individual's affective state which is of low intensity, enduring, and valenced (i.e., either positive or negative)	Schwarz and Clore (1996); Sanna et al. (1999)
Conscientiousness	The degree to which an individual's personality reflects being organized, thorough, self-disciplined, and dependable	Barrick and Mount (1991); Donnellan et al.(2006)
Cost-benefit differential	The degree to which an individual perceives the benefits relative to the costs	Keil et al. (2010)

1. Experimentally manipulated.

1.4.2. Essay Two

Essay 2 is based on two laboratory experiments investigating the relationship between perspective taking and de-escalation of commitment in the context of the launch of a premature software-driven product. In Experiment 1, I investigate how perspective taking (i.e., taking the perspective of an individual who can be negatively affected by the outcomes of a premature product launch) reduces decision makers' willingness to launch a premature product as scheduled. I consider anticipated guilt as a mediating mechanism through which perspective taking influences willingness to launch product as scheduled. Furthermore, I take into account the personal cost of de-escalation when using perspective taking as a de-escalation tactic. The decision to de-escalate often involves some type of personal cost (e.g., loss of financial incentives or promotion (Pan et al. 2006)) for the decision maker. Such costs can make de-escalation decisions self-centered, which may influence the decision maker's feelings of anticipated guilt. In Experiment 1, I suggest that the personal cost of de-escalation will strengthen both the influence of perspective taking on anticipated guilt and the indirect effect of

perspective taking on de-escalation through anticipated guilt (i.e. first stage moderated mediation model (Edwards and Lambert 2007; Hayes 2015)). The research model and construct definitions for Experiment 1 of Essay 2 are shown in Figure 1-3 and Table 1-3, respectively.

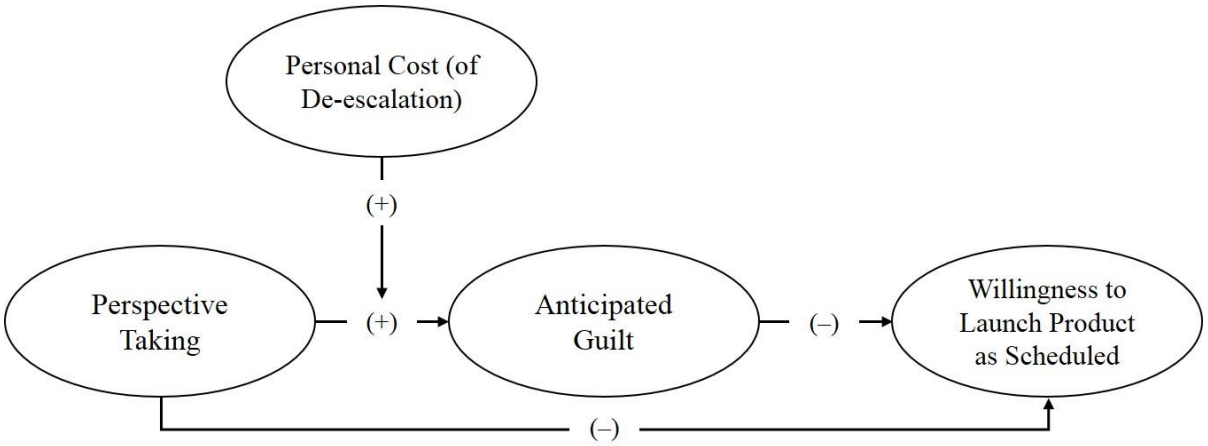


Figure 1-3. Research Model (Essay 2 – Experiment 1)

Table 1-3. Definition of Constructs (Essay 2 - Experiment 1)

Construct	Definition	References
Willingness to launch product as scheduled	An individual's willingness to launch a premature product as scheduled (i.e., decrease in willingness reflects de-escalation of commitment)	Garland et al. (1990); Keil and Robey (1999); Lee et al. (2012)
Perspective Taking[1]	Taking the perspective on an individual who can be negatively affected by a premature product launch	Hoever et al. (2012)
Anticipated guilt	The anticipatory negative feeling about the adverse consequences of one's action on others	Lindsey (2005); Grant and Wrzesniewski (2010)
Personal cost[1]	The personal cost (e.g., damage to one's career) associated with delaying a premature product launch	Pan et al. (2006); Rubin and Brockner (1975)

1. Experimentally manipulated.

In Experiment 2, I extend Experiment 1 by taking into account two key perspectives involved in a premature product launch (i.e., shareholder perspective vs. victim perspective), and their relative influence on de-escalation of commitment. Consistent with Experiment 1, I consider anticipated guilt as the mediating mechanism between the relationship of perspective taking and de-escalation. However, I also take into consideration the decision maker's customer orientation as a value orientation that can impact the relationship between anticipated guilt and de-escalation. Value orientation refers to the principles and values that individuals espouse in guiding their actions (Sommers and Scioli 1986), and may interact with one's affective experiences in influencing decision making (Korsgaard et al. 1996; Van Kleef et al. 2006). Among the different value orientations that guide decision makers, I identify customer orientation (i.e., the extent to which an employee's attitudes and behaviors are driven by the importance of customer satisfaction (Zablah et al. 2012)) as one that may play a critical role in the context of troubled product launch situations. I suggest customer orientation as a moderator influencing the relationship between anticipated guilt and de-escalation, and further examine how customer orientation moderates the indirect effect of perspective taking on de-escalation through anticipated guilt (i.e., second stage moderated mediation (Edwards and Lambert 2007; Hayes 2015)). The research model and construct definitions for Experiment 2 of Essay 2 are shown in Figure 1-4 and Table 1-4, respectively.

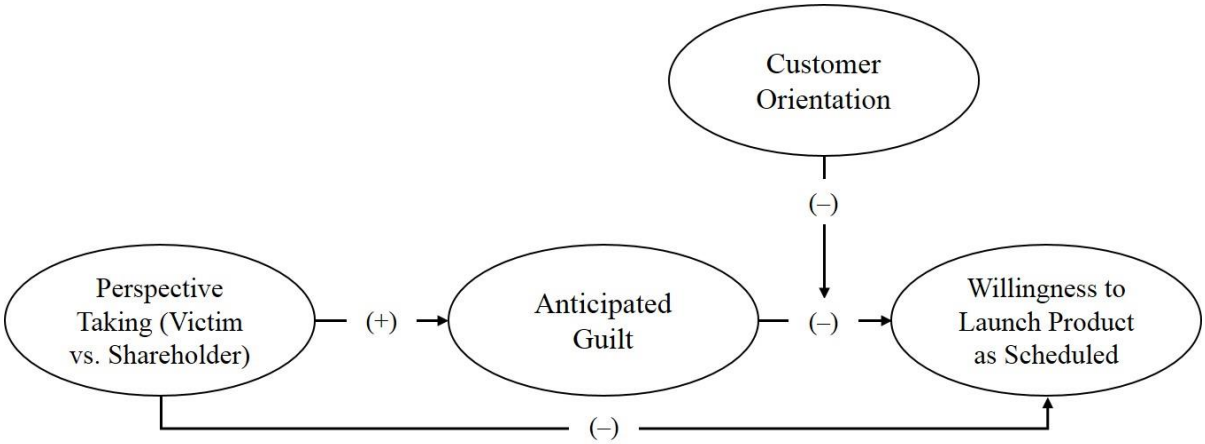


Figure 1-4. Research Model (Essay 2 – Experiment 2)

Table 1-4. Definition of Constructs (Essay 2 - Experiment 2)

Construct	Definition	References
Willingness to launch product as scheduled	An individual's willingness to launch a premature product as scheduled (i.e., decrease in willingness reflects de-escalation of commitment)	Garland et al. (1990); Keil and Robey (1999); Lee et al. (2012)
Perspective Taking (Victim vs. Shareholder)[1]	Taking the perspective on an individual who can be negatively affected by a premature product launch (i.e., victim perspective) vs. Taking the perspective of a shareholder who can experience financial losses by delaying a premature product launch (i.e., shareholder perspective)	Galinsky and Ku (2004); Jensen (2002); Ku et al. (2010); Talke and Hultink (2010)
Anticipated guilt	The anticipatory negative feeling about the adverse consequences of one's action on others	Lindsey (2005); Grant and Wrzesniewski (2010)
Customer orientation	The degree to which individuals' work values are driven by the importance of customer satisfaction	Rindfleisch and Moorman (2003); Zablah et al. (2012)

1. Experimentally manipulated.

1.5. Methodology

Given the objectives of this dissertation, which is to investigate the causal relationships between a variety of factors and reporting/de-escalation behavior, I considered laboratory

experiments to be appropriate. Laboratory experiments enable the manipulation and control of different factors (Stone 1978) which may have influence on the dependent variables of this study. All experiments involve the subjects participating in a scenario-based role-playing experiment. With regard to the measures for constructs used in this dissertation, I followed Straub's (1989) suggestion of using measures that have demonstrated sufficient validity and reliability in previous studies. For all three experiments, several pilot tests were conducted in order to: (1) test the effectiveness of manipulations, (2) refine the scenario, and (3) statistically validate the measures.

1.5.1. Essay One

In Essay 1, a 1 x 2 factorial design was employed with mood being experimentally manipulated as the between-subjects factor. Subjects were randomly assigned to either the positive or negative mood treatment group, in which the film mood induction procedure (Martin 1990) was used to manipulate the respective moods states. In the positive mood condition, subjects watched a humorous clip from the film *Planes, Trains, and Automobiles* which lasted approximately six minutes. In the negative mood condition, subjects watched a sad clip from the film *The Champ* which lasted approximately seven minutes. After the mood induction procedures, the subjects proceeded to completing the manipulation checks and the experimental task, which consisted of a reading a short scenario and responding to a series of questions measuring the willingness to report, conscientiousness, and cost-benefit differential. Data was collected from undergraduate students in a southeastern US university.

Partial Least Squares (PLS) with SmartPLS 2.0 (Ringle et al. 2005) was used as the main analysis tool to validate the psychometric properties of the measures and to test the research

model. Additionally, mediation analysis was conducted using Shrout and Bolger's (2002) bootstrapping approach to assess the strength of the direct and indirect effect of conscientiousness on willingness to report error.

1.5.2. Essay Two

In Experiment 1 of Essay 2, I employed a mixed 2 x 2 factorial design with perspective taking (i.e., perspective taking vs. no perspective taking) and personal cost (i.e., high cost vs. low cost) as between-subject factors. Subjects were randomly assigned to either one of the four treatment groups. The experimental task consisted of two phases. In each phase, the subjects were instructed to read a short scenario and complete a questionnaire measuring anticipated guilt and willingness to launch product as scheduled. Both perspective taking and personal cost treatments were provided in the form of a short narrative at the beginning of phase 2. Data was collected from undergraduate students taking junior/senior information systems courses in a southeastern US university.

In Experiment 2 of Essay 2, a 1 x 2 factorial design was employed with perspective taking (i.e., shareholder perspective vs. victim perspective) as the between-subjects factor. All subjects were randomly assigned to one of the two treatment groups. The experimental task involved reading a short scenario and conducting a short thought exercise (i.e., perspective taking manipulation), then completing a questionnaire measuring willingness to launch a product as scheduled, anticipated guilt, and customer orientation. For the perspective taking manipulation, subjects were instructed to take the perspective of a shareholder (or victim) involved in a premature product launch, and write down a few sentences of how they would think or feel about the situation. The data for Experiment 2 were collected from practitioners

working in the IT industry who had product management experience, and collection was administered online through Qualtrics.

In Essay 2, Hayes' (2015) PROCESS macro for SPSS was used as the main tool for data analysis. Based on Ordinary Least Squares (OLS) regression and bootstrapping, PROCESS provides capabilities for testing models that integrate moderation and mediation (Hayes 2015). Furthermore, PROCESS provides a direct test of moderated mediation (i.e., the index of moderated mediation (Hayes 2015)). Since Essay 2 involved moderated mediation models, PROCESS was deemed appropriate. The analysis for Experiment 1 and 2 were configured with model 7 (i.e., first stage moderated mediation) and model 14 (i.e., second stage moderated mediation) respectively, with bootstrapping using 5000 resamples.

1.6. Contributions

This dissertation makes several contributions to the body of knowledge in the areas of IT bad news reporting and de-escalation of commitment. First, this dissertation provides empirical evidence that affect can play a significant role on influencing bad news reporting/de-escalation decisions in the context of troubled IT projects. Second, Essay 1 is the first study to consider factors that have been overlooked in the bad news reporting literature such as mood and conscientiousness, and contributes to improving our understanding of how they can influence reporting decisions. Third, Essay 1 provides empirical evidence that mood not only has a direct influence, but also can interact with conscientiousness in making reporting decisions. Fourth, Essay 2 contributes to the literature of de-escalation of commitment by identifying and providing empirical evidence that perspective taking can be an effective tactic for promoting de-escalation of commitment in troubled IT projects. Furthermore, Essay 2 identifies two factors that can

amplify the effect of either perspective taking (i.e., personal cost) or anticipated guilt (i.e., customer orientation) when using utilizing perspective taking as a de-escalation tactic. Lastly, this dissertation provides practitioners' with new insights regarding the role of affect on decision making. Practitioners should recognize mood and emotions have a significant influence on decision making, and that affective factors should not be neglected in troubled IT projects.

Chapter 2

The Roles of Mood and Conscientiousness in Reporting of Self-Committed Errors on IT Projects

Abstract

Over the past two decades, several studies have investigated the factors that lead to and away from individuals' reporting of truthful status information on IT projects. These studies have typically considered the reporting decisions of an individual who is aware of negative status information that is attributed to others' errors. These previous studies have seldom examined the situation in which the individual is considering whether to report information about his or her own self-committed error on the project. In this study, we consider this largely unexamined phenomenon. In this context, we focus on the influences that different affective states and a personality trait (conscientiousness) can have on error reporting decisions. Specifically, we investigate how different moods (i.e., positive vs. negative) and conscientiousness can influence error reporting decisions in the context of an IT project. Based on the results from a controlled laboratory experiment, we find that individuals in a negative mood are more willing to report their errors compared to individuals in a positive mood. Conscientiousness also positively influences individuals' willingness to report errors, and it also has an indirect effect through cost-benefit differential (i.e., one's perceptions of benefits relative to costs). Additionally, mood is found to moderate the relationship between conscientiousness and willingness to report. We discuss the implication of our findings and directions for future research and for practice.

Keywords: Error Reporting; Bad News Reporting; Affect; Mood; Conscientiousness

2.1. Introduction

"I messed up, and once I realized it, I should have acted immediately. I lost my wits because we were celebrating, and it nearly cost me my job." – A project manager at one of the world's "Top 10" software companies

"Donald,"[1] the project manager (PM) in question, had been in charge of one of his firm's large development teams in India, and a crucial software package release was due the next evening. The coding and testing had been completed several days earlier, and all appeared to be in order. However, while examining the package after office hours, Donald realized that he had not assigned an important coding task – an error recovery routine that would address a certain type of buffer overflow – to any of the team members.

The module had been estimated to require four programmer-days' worth of work. However, those hours would be almost impossible to divide so that they could be addressed by more than one worker simultaneously in order to meet the deadline. Donald had noted the task on a hardcopy printout but had neglected to enter it into the project management software's work breakdown list. As the buffer overflow error was a rare one, it was conceivable that the package release would work correctly in most situations, even if the module were not added. However, in those rare situations in which users encountered the buffer overflow without the error recovery routine being in place, the consequences could be disastrous: loss of data and a corrupted database structure.

Donald slept fitfully that night. Early the next morning, he tried to perform a contingency analysis to assess his best option for dealing with his oversight. However, the day

[1] Although based on a composite of actual occurrences, this scenario has been anonymized, and several facts have been changed to simplify the discussion.

was filled with meetings and conference calls that demanded Donald's attention. Late in the evening, when the meetings ended and he came back to his office, Donald tried again to focus on the exposure. His first inclination was to call his superiors in the U.S., to tell them about his oversight and to ask for a delay in the rollout so that he could have a team member tackle the error recovery routine.

However, before he could even settle into his office, he was pulled into the cafeteria. The team was celebrating the completion of the project with a small party. He was the guest-of-honor. Everyone was in a celebratory mood, and -- in the spirit of the moment -- Donald decided to go ahead with the rollout. He did not notify the U.S. corporate office about his oversight. The release shipped without the error recovery routine.

Just a few days later, one of the firm's large customers and early adopters of the new release encountered the buffer overflow problem, which was quickly traced back to Donald and his team. At that point, Donald reluctantly revealed that he had discovered his oversight before the ship date but had not reported it. He was severely reprimanded, but he was not fired. His superior initiated a backup plan of a patch to be released very soon, and Donald was assigned to another less important project. Donald claims that he learned this lesson: "priorities are priorities, and nothing in the world – even a celebration - should be able to shake them."

As the above scenario suggests, PMs and other reporters often face "pitfalls" associated with reporting "bad news" on IT projects (e.g., Keil et al. 2014). Reluctance to transmit bad news on IT projects is apparently systemic: one study found that project managers are more than twice as likely to report the status of a project as being better than it really is (versus worse) (Snow et al. 2007). Indeed, this phenomenon has received much research attention during the

past two decades (e.g., Keil et al. 2007b; Keil et al. 2004; Keil et al. 2010; Park et al. 2008; Park and Keil 2009; Park et al. 2009; Smith and Keil 2003; Smith et al. 2001). However, this prior research stream has by and large focused on reporting problems associated with others' actions, and it has assumed that decision-makers were engaging in a rational calculus in deciding whether or not to report some heretofore unknown information about an IT project. This study breaks new ground by considering a) reporting of errors that were committed by the decision-maker *himself* or *herself* and b) the fact that some factors associated with *affective states* may influence decisions that are made about bad news reporting on IT projects. Additionally, we examine the association between a heretofore unexamined individual trait – *conscientiousness* – and reporting decisions.

In this paper, we focus on error reporting, by which we mean an individual's willingness to report his/her *own* error(s) on an IT project. Individuals who commit errors are often reluctant to report them, and this poses a challenge for organizations (Tucker and Edmondson 2003). One reason for the reluctance to report one's error(s) may be that the costs associated with reporting outweigh the benefits from the perspective of the individual and act as barriers to error reporting. For instance, if one believes that reporting his/her error will result in personal reputational damage (i.e., a cost), then it is not surprising that there would be some reluctance to report the error. Barriers to error reporting may include reprisal, legal actions, an organizational culture of silence, concerns about damage to one's reputation, and many other contextual/situational factors.

As was noted by Goes (2013), most information systems (IS) research has relied on an assumption of rational behavior by decision-makers (sometimes referred to as a "high effort" or "central route" cognitive process), and the bad news reporting stream is no exception. However, the disciplines of behavioral economics and psychology remind us that many factors associated

with “low effort” (or “peripheral route”) cognitive processes (Petty and Cacioppo 1986) can have significant impacts on individuals’ decision-making. Such “central” and “peripheral” routes are not mutually exclusive; in fact, as a person considers a particular decision, (s)he will embrace some combination of the two, with the proportions varying based on a number of factors and interactions (Petty and Cacioppo 1986). Because they are always present (even if sometimes shunted to the background) and may actually dominate in some situations, it is reasonable to consider the extent to which such “low effort” processes may impact decisions about the reporting of errors on IT projects. Therefore, as we consider the manner in which individuals make decisions about reporting their own errors, we also investigate how different moods (i.e., positive vs. negative) influence error reporting decisions in the context of an IT project.

Additionally, we extend the IT bad news reporting research stream by examining the impacts of an innate personality characteristic – conscientiousness – that has heretofore not been considered. This characteristic has been noted as being particularly salient in predicting job performance and, in particular, individuals’ proclivities towards, and away from, counter-productive workplace behaviors (Barrick and Mount 2000).

While reporting errors occur in a wide variety of situations, and while the results of our research may be extended beyond the IT project environment, we chose to situate our study in this context for several reasons. First, IT has become ubiquitous, and many of the devices we use every day, as well as the organizations for which we work, could not function without it; it is a context that matters and to which everyone can relate in some way. Second, because of the complexity and low observability of tasks/behaviors involved with software development, accurate status reporting plays a key role in controlling IT projects (Kirsch 1996; Kirsch et al. 2002). However, IT projects are particularly prone to information asymmetry. The intangible

nature of software (Reel 1999) makes it easier to conceal bad news about the project than would be the case for many other types of projects. Since software errors cannot typically be observed in any physical sense, it is possible for many such errors to go unnoticed for a lengthy period of time before being discovered. Further, since it is common to observe more senior executives in the reporting chain who have only limited familiarity with the nature of software development and implementation, it is more likely that quandaries about error reporting would occur in the IT project domain than in many others.

We therefore attempt to answer the following research questions, none of which has received attention in prior IS research:

1) How do individuals decide whether or not to report their own errors on IT projects?
2) In what way do affective states (one driver of low-effort processing) impact individuals' decision-making regarding reporting of their own errors on IT projects?
3) How does the innate personality trait of conscientiousness impact individuals' decision-making regarding reporting of their own errors on IT projects?

The remainder of the paper is organized as follows. First, we offer a brief review of the IS bad news reporting literature and the contribution of our study to that literature stream. Next, we discuss the foundations of our research model and hypotheses. Then, we discuss the experimental procedures and results of this study. Finally, we conclude with a discussion of the implications for research and practice.

2.2. Background

Since the early 2000s, a substantial body of research has considered factors associated with bad news reporting on IT projects. Especially on troubled IT projects, individuals often

become reluctant to transmit bad news to key decision makers with authority to redirect the project; by remaining silent, these individuals contribute to project failure (Smith and Keil 2003). Much of this work has been grounded in whistleblowing theory (Miceli and Near 1992), and most studies investigated a variety of organizational and situational factors that may influence an individual's assessment of the project status, reporting responsibilities, and willingness to report status information. For example, in the organizational context, Park and Keil (2009) found that when organizations exhibited a climate of inhibiting the transmission of negative information through its structure and practices, individuals were more reluctant to report bad news. In a situational context, Keil et al. (2007b) showed that when opportunities to attribute problems to an external software vendor existed (i.e., blame-shifting), such opportunities positively influenced individuals' willingness to report bad news.

However, in these studies focused on bad news reporting in IT projects, it has not usually been assumed that the *reporting individual* is responsible for the bad news; rather, it has been assumed that the individual is reporting bad news that is attributed to *others'* actions. Although a few empirical studies in the domain have left the source of bad news unspecified (e.g., Keil et al. 2004), most have attributed the source of negative information to outside entities such as external software vendors (e.g., Park et al. 2008) or fellow employees of the same organization (e.g., Smith et al. 2001). In this study, we further extend research in this domain by considering the reporting of *self-committed* errors (Zhao and Olivera 2006).

Additionally, while prior research on bad news reporting in IT projects has contributed much to our understanding of the factors that may influence reporting decisions, most studies have been conducted under the (usually hidden) assumption of rationality in decision-making. This assumption is one that is also a common characteristic of much of the broader body of IS

research (Goes 2013). To date, the limited number of studies in the IS literature that consider affective factors have mostly focused on how affect can influence the use of technology (e.g., Beaudry and Pinsonneault 2010) and human-computer interaction (e.g., Yin et al. 2014) rather than how it can influence critical decision making in IT environments. Even so, the role of some affective factors was noted as a contributing factor to individuals' reporting decisions on IT projects as early as 2003 (Smith and Keil 2003), although researchers did not pursue that path.

It was also suggested as early as 2003 that personality traits of reporters could impact their reporting decisions (Smith and Keil 2003), and a few prior studies have investigated some factors. For example, willingness to communicate (Park et al. 2009), risk propensity (Smith et al. 2001), cultural values (Keil et al. 2007b), and personal morality (Park et al. 2009) have each been included in a decision-making model within the literature stream. Even so, advancements made through what is emerging as a predominate model of innate personality traits, the "Big Five" (Goldberg 1981), have been neglected in the bad news reporting literature. In this study, we consider one of the traits that should arguably exhibit a theoretical linkage with an individual's decision to report his or her own error: conscientiousness. Among the "Big Five," conscientiousness is considered a particularly important personality trait that predicts employee performance across almost all general job categories (Barrick and Mount 1991; Barrick and Mount 2000; Barrick et al. 2001). More importantly, this factor has been shown to predict (in a converse relationship) "counterproductive work behaviors" (Barrick and Mount 2000, p. 21) and "intentional harmful behaviors at work," (Barrick and Mount 2000, p. 22). Further, it is linked to organizational deviance (Berry et al. 2007). Since an individual's decision to avoid reporting his or her error on an IT project could well fall into such categories as "harmful behaviors" and

"organizational deviance," conscientiousness appears to be a quite salient trait for consideration in this context.

We note one boundary on the concept of "errors": while three different types of errors have been identified in the literature (Zhao and Olivera 2006), for reasons of parsimony we limit our focus here to *slips* that are self-committed. Slips occur when individuals intend to accomplish a desired goal, but the task at hand is not carried out as planned (Rizzo et al. 1987; Zhao and Olivera 2006). Slips are generally caused by internal or external distractions and commonly occur in everyday life and in the workplace (Zhao and Olivera 2006). Although we are unaware of any research assessing the frequency and severity of errors in IT projects, it has been noted that, in general, slips occur more frequently and are more likely to be detected by the individual committing the error than are other types of errors (i.e., rule-based errors or knowledge-based errors) (Rizzo et al. 1987). Therefore, since this is the first study to examine self-committed error reporting, it makes sense to focus on them. Further, we argue that the complexity of IT projects makes them particularly susceptible to such slips, since team members and PMs may frequently be overwhelmed by large and small "to do" items and may simply overlook some important ones. Consequently, in this initial study of error reporting on IT projects, we have limited our focus to slips.

2.3. Research Model

As explained above, while many factors have been identified in the literature as potentially influencing an individual's willingness to report an error, we specifically focus on the impacts of mood and conscientiousness. Our research model is depicted in Figure 2-1 and is

grounded in the literature on affect, personality, error reporting, and bad news reporting on IT projects.

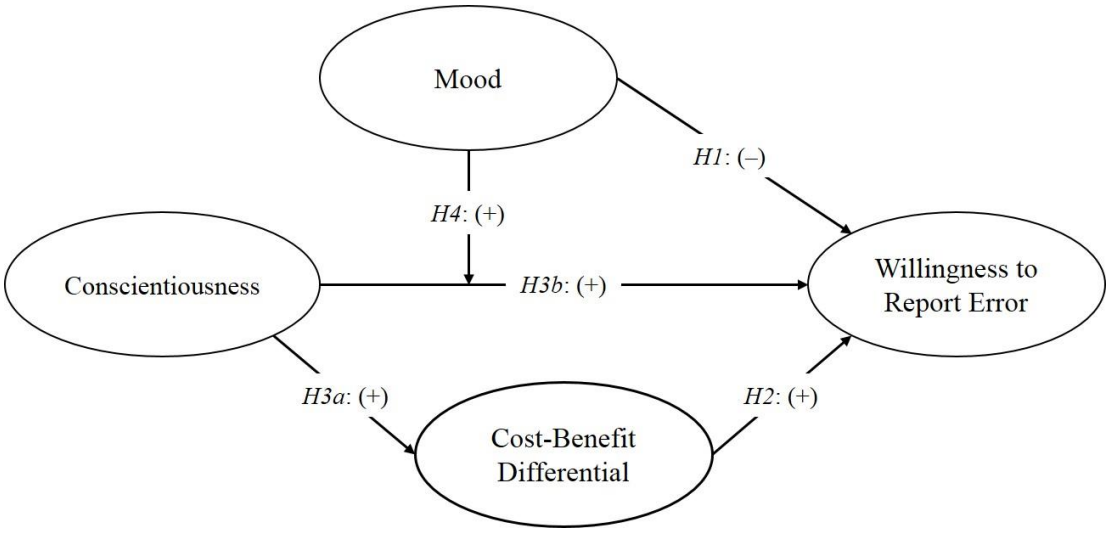


Figure 2-1. Research Model

2.3.1. Influencing Factor - Mood

Moods are positively or negatively valenced affective states that are of low intensity, enduring, and without a clear referent (i.e., what the mood is about) (Forgas 1992; Schwarz and Clore 1996). Research has shown that moods can impact the perceptions, judgments, and decisions of individuals (Isen et al. 1988; Schwarz and Clore 1996). Not only are they an essential component of social life, but they also play a crucial role in organizations and work settings, mainly because of the pervasiveness and influence they have on work-related behaviors (Forgas and George 2001).

According to the mood-behavior model (MBM), moods can impact behavior by influencing one's behavioral preferences (Gendolla 2000). These behavioral preferences are guided by one's hedonic motive–that is, individuals are oriented to prefer behaviors that result in

more positive or less negative mood states and to avoid behaviors that result in less positive or more negative mood states (Gendolla 2000; Higgins 1997; Taylor 1991). When behaviors involve hedonic consequences, individuals will behave in the direction that maximizes positive affect and minimizes negative affect. However, the consideration of hedonic consequences may differ depending on one's mood state. Wegener and Petty (1994) suggest that, relative to individuals in a negative mood, individuals in a positive mood are more sensitive to hedonic consequences of behavior when making behavioral decisions (i.e., hedonic contingency hypothesis). Through a series of experiments, they found that individuals in a positive mood expressed more preference towards choosing subsequent activities (i.e., choosing a video to view) based on its affective quality (i.e., whether the video would be pleasant or not) relative to those in a negative or neutral mood (Wegener and Petty 1994).

Based on the above, we posit that an individual's mood will have influence on his or her willingness to report a self-committed error–more specifically, individuals in a positive mood will be less willing to report a self-committed error relative to individuals in a negative mood. Error reporting may result in severe negative consequences (e.g., damage to one's reputation, legal actions, or even job loss) to the reporter (Zhao and Olivera 2006). The anticipated negative consequences associated with error reporting may put the reporter in a more negative affective state. Because individuals in a positive mood (relative to individuals in a negative mood) are more sensitive to the affective qualities of their actions, they will be more concerned about the unpleasant feelings derived from the anticipated negative consequences of error reporting, which in turn may lead to greater reluctance to report a self-committed error. Thus:

H1: Individuals in a positive mood will be less willing to report a self-committed error relative to individuals in a negative mood.

2.3.2. Cost/Benefits and Reporting

Keil et al. (2010) found that when individuals perceived more benefits than costs associated with bad news reporting, they were more willing to report. Although the impact of perceived costs and benefits has not been empirically tested in the context of self-committed error reporting, Zhao and Olivera (2006) suggest that the decision to report one's error will involve a careful evaluation of the costs and benefits. That is, individuals will weigh the perceived benefits and costs associated with error reporting and will make their decision accordingly. Thus, we state the following hypothesis:

H2: Individuals who perceive more benefits relative to the costs of error reporting will be more willing to report their error.

2.3.3. Individual Trait – Conscientiousness

Personality traits are well known for affecting employee performance and workplace behaviors, and they have been studied by researchers in psychology (Costa et al. 1987; Tett and Burnett 2003), organizational behavior (Heller et al. 2002), management (Segal 2012), and IS. Considerable attention has been placed on the "Big Five" personality traits, and–as noted earlier–we focus on one of these in our study: conscientiousness. Highly conscientious Individuals tend to be persistent, hardworking, achievement striving, dependable, careful, thorough, and organized (Barrick and Mount 1991). Conscientiousness has been shown to be significantly related to better employee performance (Barrick and Mount 1991). We derive hypotheses predicting conscientiousness will be associated with individuals' assessments of cost/benefits and willingness to report their own errors on an IT project.

Cost/benefits. One major aspect of conscientiousness is a sense of duty that tends to make highly conscientious individuals act on behalf of others rather than maintain a self-centered

focus (Moon 2001). Podsakoff et al. (2000) observed that highly conscientious individuals demonstrate altruism, which is positively related to organizational citizenship, and Van Dyne et al. (1995) argue that conscientious individuals will tend to be more inclined to show selfless behaviors. Therefore, we expect that highly conscientious individuals will perceive more benefits relative to the costs associated with error reporting. Because of their sense of duty and their selfless nature, highly conscientiousness individuals will be more sensitized to the organizational benefits of error reporting and less sensitive to the costs, which likely accrue only to themselves. Hence, we hypothesize:

H3a: Individuals who are highly conscientious will perceive more benefits relative to costs of reporting a self-committed error.

Error reporting. Barrick and Mount (1991) posit that highly conscientious individuals have a strong sense of purpose and obligation, and they usually follow the rules: they have a "tendency to adhere to standards and principles" (Junglas et al. 2008, p. 392), to comply with existing rules (Barrick and Mount 2000), and they strive to be "team player[s]" (Barrick and Mount 2000, p. 22).

High conscientiousness is closely correlated with organizational citizenship (Konovsky and Organ 1996), which is defined as "behavior that contributes to the goals of the organization" (Barrick and Mount 2000, p. 21). (For an overview of organizational citizenship and its dimensions, see Borman et al. 2001.) At the same time, high conscientiousness is negatively correlated with "intentional harmful behaviors at work" (Barrick and Mount 2000, p. 21), and with organizational deviance, defined as "deviant behaviors targeted towards the organization" (Berry et al. 2007, p. 410). Examples of such deviant behaviors are given in the literature as "intentionally working slowly" and "damaging company property" (Berry et al. 2007, p. 410).

Looking across these depictions of highly consicentious individuals, we find a profile of employees who follow the rules, who attempt to further the goals of the organization, and who avoid behaviors that are inconsistent with organizational expectations. Thus, in addition to their calculus regarding cost/benefits (as in H3a), highly conscientious individuals will likely view organizational expectations as trumping any other factors. They will therefore comply with what can reasonably be assumed to be the action that will best further their organization's objective: reporting their own error. Thus, we hypothesize:

H3b: Individuals who are highly conscientious will be more willing to report a self-committed error.

2.3.4. Interaction between Mood and Conscientiousness

In Section 3.1, we argued that an individual's mood would have a direct effect on his or her willingness to report a self-committed error by relying on the association between current and future affective states. While such a theory addresses the direct effect, it is inadequate to explain the more complex moderating effect of mood on the relationship between conscientiousness and willingness to report. To explain that moderating effect, we turn to a concept from psychology known as the elaboration likelihood model (ELM) (Petty and Cacioppo 1986).

The ELM posits that an individual makes decisions about his or her actions through a mixture of high-effort (highly engaged cognitive) and low-effort (less engaged cognitive) processes.[2] Many of the factors that drive low-effort processing are of an affective nature – that is, they are grounded in either strong emotions (e.g., anger) or mood (e.g., happy or sad). Several studies examining positive moods found evidence that individuals in a positive mood

[2] Although some researchers have referred to the low-effort route as "irrational," this is not strictly accurate, since some decisions on the low-effort path can be rational, even if affective factors play a role.

relied more on simplistic, heuristic processing of information relative to individuals in a negative mood (Isen and Means 1983; Mackie and Worth 1989; Schwarz and Bless 1991). It has been generally found that a positive mood reduces an individual's cognitive processing capacity (i.e., capacity reduction hypothesis) or processing motivation due to intruding positive thoughts (Bless and Schwarz 1999; Schwarz and Clore 1996). On the other hand, negative moods are generally associated with a more substantial, systematic processing of information (Schwarz and Clore 1996). In situations of uncertainty and risk, negative moods may "trigger increased focus" to reduce the uncertainty (Blay et al. 2012, p. 81), thus motivating the decision maker to engage in more effortful, systematic processing of information (Blanchette and Richards 2010). In short, individuals in sad moods tend to engage in high-effort cognitive processing, whereas individuals in happy moods rely more on heuristics and biases.

Based on the perspective that an individual's mood state can influence his or her information processing strategy, we theorize that mood will moderate the effect that conscientiousness has on an individual's willingness to report a self-committed error. In error reporting situations, individuals in a negative mood are more likely to adopt a thorough, effortful information processing strategy for making error reporting decisions, thus limiting the effect of their own innate personality traits. Accordingly, we expect that a negative mood will weaken the influence of conscientiousness on willingness to report error. On the other hand, because individuals in a positive mood rely on less effortful, simplistic information processing strategies for assessing the error reporting situation, we expect that a positive mood will strengthen the influence of conscientiousness, since such individuals will expend less cognitive energy implying that their decision will be driven more by their innate personality traits. Thus, we hypothesize:

H4: Mood moderates the relationship between conscientiousness and willingness to report error such that the effects of conscientiousness are stronger when individuals are in a positive mood than when they are in a negative mood.

2.4. Research Methodology

In order to test our research model, we conducted a scenario-based laboratory experiment. Internal validity was our primary concern as we sought to test the causal relationships depicted in our research model. By examining the hypothesized relationships in a controlled experimental setting, we were able to achieve high internal validity. The experiment involved a one-factor, two-cell design with mood being manipulated at two levels (i.e., positive or negative). A series of pilot tests were conducted to refine the experimental treatments and measures and to test the laboratory environment used in this study. More specifically, the first pilot was focused on testing the set of candidate film clips for our mood manipulation and identifying the most effective film clip for inducing positive/negative moods. During the second pilot, we focused on: (1) refining the scenario to ensure that subjects found it understandable, (2) validating the measures used in this study to ensure they demonstrated sufficient construct validity and reliability, and (3) integrating the mood manipulation into the experimental instrument. Finally, the third pilot was conducted with a focus on creating a laboratory environment in which distractions caused by other subjects were minimized while administering the film mood induction procedure.

It was possible that the mood manipulations might be weakened because of different reactions to the two film clips (e.g., laughing out loud for the positive mood induction vs. crying out loud for the negative mood induction). Furthermore, subjects' reactions were different in

terms of intensity while watching the *same* film clip (e.g., laughing out loud vs. giggling quietly for the positive mood induction), which might influence the mood manipulation of other subjects. Therefore, we unified the treatment for each lab session, and chose a laboratory environment with individual cubicles, workstations, and headphones to minimize distractions caused by other subjects. Students from a university in the southeastern U.S. were recruited to participate in the pilot testing and the final experiment.

2.4.1. Mood Manipulation and Manipulation Checks

We manipulated the subjects' mood using the film mood induction procedure (MIP). Among the various MIPs (e.g., Velten MIP (Velten 1968), which involves reading aloud statements progressing from a relatively neutral mood to a negative mood), imagination MIP (Schwarz and Clore 1983), music MIP (Sutherland et al. 1982), the film MIP is considered to be reliable and particularly successful in mood induction (Martin 1990; Westermann et al. 1996) and has been adopted in many studies (Forgas 2011; Sanna et al. 1999; Sy et al. 2005; Wegener and Petty 1994). In the positive mood condition, subjects watched a humorous clip from the film *Planes, Trains, and Automobiles*, which lasted for approximately six minutes. In the negative mood condition, subjects watched a sad clip from the film *The Champ*, which lasted for approximately seven minutes.

For manipulation checks, we followed the approach of Watson (1988) by asking the subjects to indicate their current feelings through rating a series of positive and negative adjectives. More specifically, we used seven positive and seven negative adjectives from Sanna et al. (1999) which had been adapted from Watson (1988). The positive adjectives used were *happy, glad, satisfied, pleased, relieved, content*, and *delighted*. The negative adjectives were *sad, depressed, gloomy, disappointed, annoyed, miserable*, and *frustrated*. Each adjective was rated

by the subjects using a semantic differential scale, which was partially anchored from "not at all" (1) to "very much" (7). All subjects received both the positive and negative adjectives as mood manipulation checks. Furthermore, we randomized the order in which the positive and negative adjectives were presented in order to minimize any potential framing effects (Levin et al. 2002).

2.4.2. Scenario and Measures

The experimental instrument consisted of a short scenario describing a troubled IT project involving the implementation of an electronic health record (EHR) software product. Subjects were asked to assume the role of an IT staff member in a community health center (see Appendix 2-A) who is responsible for developing code for the integration of the EHR product and the existing billing system. Two days before the EHR product is turned on and the old system is shut down, the subject discovers that (s)he has neglected an essential piece of code (i.e., the error), which will affect the system's performance. To ensure the error reflected a slip (Zhao and Olivera 2006), the scenario described the code as being neglected because of several unexpected distractions on the day the subject was scheduled to complete the task.

With regards to the measures, we adapted three measures for willingness to report error from Park et al. (2008). To capture the perceived benefits relative to costs, we followed Keil et al.'s (2010, p. 791) approach by adapting their cost-benefit differential construct (which is defined as "the net difference between the perceived costs and expected benefits" of error reporting). Four items were used to measure cost-benefit differential. For the conscientiousness measures, we adopted four items from the Mini-International Personality Item Pool (Mini-IPIP) (Donnellan et al. 2006), which is considered to be psychometrically acceptable and has been successfully used in several studies (Grant and Berry 2011; Grant et al. 2011; Richards and Schat 2011). All items were based on semantic differential scales, with willingness to report error

measures partially anchored from "very unlikely" (1) to "very likely" (7), and conscientiousness measures partially anchored from "very inaccurate" (1) to "very accurate" (7). The measures for conscientiousness, cost/benefit differential, and willingness to report error are shown in Appendix 2-B, along with the descriptive statistics.

2.4.3. Procedure

Subjects arrived at the laboratory and each subject was directed to sit in a cubicle that was equipped with an individual workstation and a headphone for the film MIP. A group of 15-25 subjects participated in each experiment session. At the beginning of each session, subjects were told that this was an experimental study on business decision making and that they would be rewarded $10 for their participation. While subjects were randomly assigned to the two treatment conditions, each session focused on one of the two treatments (i.e., positive or negative mood). This was done to prevent any possible distractions that might have arisen from subjects who received a different treatment.

The experimental procedure consisted of two parts. In the first part, subjects were asked to watch a film clip corresponding to their respective treatment group. The playback of the film clip was controlled by a central workstation for two reasons: (1) to ensure that subjects started and finished watching the film at the same time and (2) to ensure that subjects did not skip portions of the film. After watching the film clip, subjects were asked to rate a series of adjectives as a mood manipulation check. In the second part, subjects were asked to read the experimental scenario (shown in Appendix 2-A) carefully and to complete a questionnaire that measured their willingness to report the error, their perceptions of the cost-benefit differential associated with reporting the error, and their self-assessment of conscientiousness. They were

also asked to provide basic demographic information. After all subjects completed the experimental procedure, they were rewarded with $10 as they left the laboratory.

2.4.4. Subjects

A total of 102 undergraduate students enrolled at a large urban university in the southeastern U.S. were recruited for this experiment. The average age of the subjects was 20.9 years, and the average work experience was 1.6 years. Approximately 42% of the subjects were male (43), and 58% were female (59).

Attention has been focused recently on student subjects in the overall IS research domain (e.g., Compeau et al. 2012). Keil, Im, and Mähring (2007b) provided an extensive discussion of the appropriateness of student subjects in the immediate domain of experiments involving bad news reporting on IT projects. As argued by Keil, et al. (2007b), a key question in assessing whether student subjects are acceptable in a given study is the following: is the objective of the research "effects application" (findings that can be applied directly to a situation in the real world) and/or "theory application" (scientific theory that provides a general understanding of the real world)? For studies that focus solely on "effects application," student subjects are usually inappropriate. For those that focus on "theory application," "data from student subjects are acceptable, even if they would differ from non-student responses" (Keil et al. 2007b, p. 70). In this study, the objective is furtherance of theoretical development regarding willingness to report self-committed errors on IT projects, specifically in the context of varying mood states and in consideration of an individual trait. Therefore, based on the argument proffered by Keil, et al. (2007b), student subjects are appropriate for this study.

It is worth noting, in addition, that the use of university students as subjects in IS bad news reporting experiments has many precedents (e.g., Keil et al. 2007b; Park et al. 2008; Smith et al. 2001). It is also important to note that when studies (including this one) include experimental manipulations (in this case, of mood), the composition of the subject pool is of less importance than for pure surveys, in which generalization beyond the subject population can be more of an issue. Further, any differences attributed to individual traits (in this case, conscientiousness) should generally hold in spite of the subjects' backgrounds, as long as the subjects are capable of processing the task within the experiment.

To that latter point, we note that a previous study (Remus 1986) found that students without managerial experience performed similarly to experienced managers in decision-making behavioral tasks. Since that is the context of the task in this experiment, a similar generalization should apply. This is especially true since–based on our pilot testing--the decision being faced by the protagonist in our experimental scenario is understandable by subjects with little to no background in project management or software development.

2.5. Results

2.5.1. Manipulation Checks and Descriptive Statistics

We conducted manipulation checks following Sanna et al.'s (1999) approach to ensure that the mood manipulation was effective. A mood index was created by reverse coding the ratings of the seven negative adjectives (Cronbach's α = 0.927) and averaging them with the ratings of the seven positive adjectives (Cronbach's α = 0.834). The mean difference between the positive mood (n = 52, M = 5.22, SD = 1.08) and the negative mood (n = 50, M = 3.30, SD =

0.75) condition was significant and in the expected direction (F (1, 100) = 107.40, $p < 0.001$), indicating that the mood manipulations were effective (Perdue and Summers 1986).

Table 2-1 shows the means, standard deviations, and zero-order correlation of all variables in this study. Willingness to report error was found to be significantly correlated with mood, conscientiousness, and cost-benefit differential. Additionally, conscientiousness was significantly correlated with cost-benefit differential.

Table 2-1. Means, Standard Deviations, and Zero-Order Correlations

Variable	Mean	SD	1	2	3	4
1. Mood[1]	-	-	-			
2. Conscientiousness	5.142	1.204	-0.088	-		
3. Cost-Benefit Differential	4.647	1.346	-0.035	.209*	-	
4. Willingness to Report Error	5.503	0.994	-0.354**	.282**	.301**	-

Note: SD = Standard Deviation; [1]Experimetally manipulated between subjects – Mean and SD shown for the manipulation checks; *: $p < 0.05$, **: $p < 0.01$.

2.5.2. Partial Least Squares Analyses

Partial Least Squares (PLS) analysis with SmartPLS 2.0 (Ringle et al. 2005) was used to validate the psychometric properties of our measures and to test the paths hypothesized in Figure 2-1. We chose PLS because it permits the modeling of latent variables and the simultaneous assessment of the measurement and structural models, while placing minimal demands on sample size and distributional assumptions (Chin 1998; Hair et al. 2013). Additionally, we chose PLS to accommodate the mediating and moderating relationships in our research model. We first examined the psychometric properties of our measures through the measurement model, and we then tested our hypotheses through the structural model. To examine the interaction between

mood and conscientiousness, we modeled the interaction term in SmartPLS using the product indicator approach as recommended by Chin et al. (2003).

2.5.2.1. Measurement Model

We examined standardized loadings to assess convergent validity of our reflective constructs. To ensure that the variance between each item and the associated construct exceeds the error variance, it is suggested that the standardized loadings (shown in Table 2-2) should exceed 0.707 (Chin 1998). However, it is still acceptable for a measure to have a loading of 0.6 or higher if all other measures associated to the same construct have high loadings (Chin 1998). With the exception of two measurement items—CON1 and WTR2—all of our measures exceeded the 0.707 threshold. While the loadings associated with CON1 and WTR2 were 0.637 and 0.674, respectively, we decided to retain both items for reasons of content validity (MacCallum and Austin 2000).

Table 2-2. Item Loadings and Construct Measurement Properties

Construct	Item	Standardized Loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
Conscientiousness	CON1	0.637	0.758	0.839	0.569
	CON2	0.792			
	CON3	0.717			
	CON4	0.854			
Cost-Benefit Differential	CBD1	0.849	0.837	0.888	0.665
	CBD2	0.785			
	CBD3	0.853			
	CBD4	0.772			
Willingness to Report Error	WTR1	0.815	0.663	0.810	0.588
	WTR2	0.674			
	WTR3	0.805			

In order to assess the internal consistency of our measures for each construct, we examined Cronbach's alpha, composite reliability, and average variance extracted for each construct. For Cronbach's alpha and composite reliability, it is suggested that values of 0.7 or higher are adequate (Nunnally et al. 1967) As seen in Table 2-2, with the exception of willingness to report error (Cronbach's α = 0.663), all values were above 0.758. With regard to AVE, Fornell and Larcker (1981) suggest that values should exceed 0.50 to ensure that more variance is captured by the measures relative to measurement error. AVEs for all constructs were 0.569 or higher. Given the assessment of convergent validity, all measures were retained for subsequent analysis.

To assess discriminant validity, we first examined the item loadings and cross-loadings on each construct. As shown in Table 2-3, all measures had higher loadings for the intended construct than other constructs, providing evidence of discriminant validity. Additionally, we calculated the squared correlation of all construct pairs and compared it with the AVE of each construct to ensure that more variance associated with each construct is captured by its indicators rather than the indicators of other constructs (Fornell and Larcker 1981). As shown in Table 2-4, the AVE for each construct exceeded the squared correlation of all construct pairs, providing further evidence of discriminant validity.

Based on the assessment of convergent and discriminant validity, we concluded that the measurement model was sufficiently robust to allow us to proceed to evaluation of the structural model.

Table 2-3. Item Loadings and Cross-Loadings

Construct	Item	1	2	3
1. Conscientiousness (CON)	CON1	**0.637**	0.076	0.103
	CON2	**0.792**	0.215	0.231
	CON3	**0.717**	0.205	0.214
	CON4	**0.854**	0.197	0.34
2. Cost-Benefit Differential (CBD)	CBD1	0.324	**0.849**	0.3
	CBD2	0.115	**0.785**	0.278
	CBD3	0.202	**0.853**	0.3
	CBD4	0.072	**0.772**	0.212
3. Willingness to Report (WTR)	WTR1	0.279	0.294	**0.815**
	WTR2	0.162	0.089	**0.674**
	WTR3	0.273	0.342	**0.805**

Table 2-4. AVEs versus Squares of Correlations between Constructs[1]

Construct	CON	CBD	WTR
CON	0.569		
CBD	0.060	0.665	
WTR	0.103	0.116	0.588

[1] AVE values shown on the diagonal

2.5.2.2. Common Method Bias Analyses

Because conscientiousness, cost-benefit differential, and willingness to report error were obtained using the same experimental instrument, we conducted two separate tests to examine common method bias in our data.[3] The first test we conducted was Harmon's single factor test (Podsakoff et al. 2003), which involved an exploratory factor analysis with all items used to

[3] Mood is not susceptible to common method bias because it was experimentally manipulated in this study. Therefore, it was excluded from the tests of common method bias.

measure the main variables in our study. The unrotated factor solution produced three factors with eigenvalues greater than 1, and together they explained 63.5% of the variance in the data. The first extracted factor accounted for 32.2% of the variance in the data. These results suggest that common method bias is unlikely to be a significant problem in our data, given that more than one factor emerged from the factor analysis and that the first factor did not account for the majority of the variance in our data.

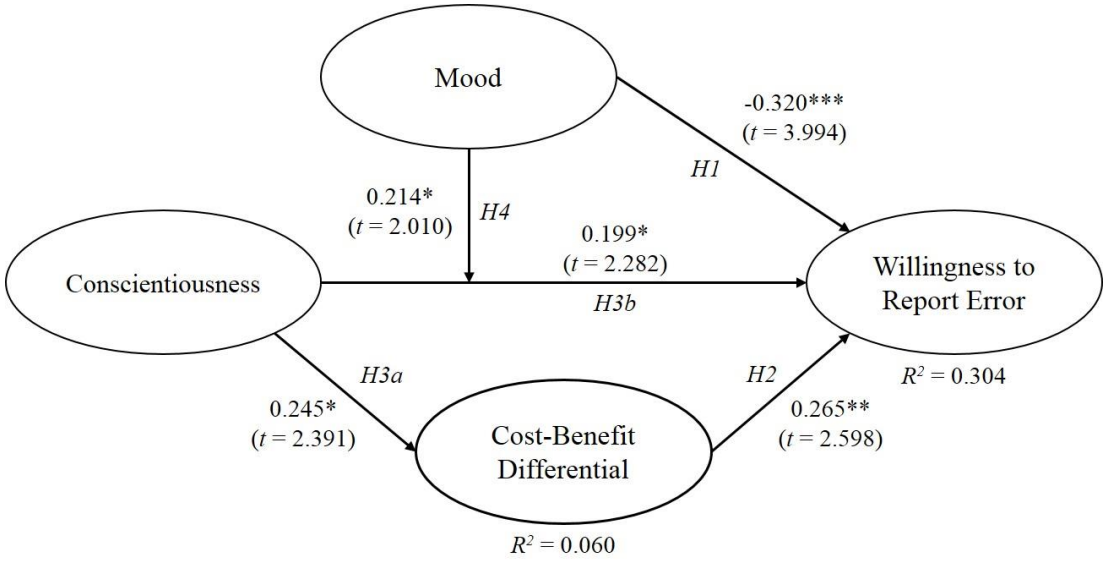
The second test we conducted was based on the unmeasured latent method factor approach suggested by Podsakoff et al. (2003) and Liang et al. (2007), which involved converting all observed indicators into single-indicator constructs and linking them to a method factor associated with all indicators in the PLS measurement model. We compared the variance explained by the substantive constructs versus the variance explained by the method factor. The results (shown in Appendix 2-C) indicated that the average variance explained by substantive constructs was 0.633, while the average variance explained by the method factor was 0.024 (i.e., a ratio of 26:1). Moreover, most of the factor loadings for the method factor were insignificant. Given the small magnitude of the method variance in addition to the insignificant factor loadings, we concluded that common method bias was not a significant concern in this study.

2.5.2.3. Structural Model

Before testing our hypotheses, we assessed the explanatory power of our structural model by examining the R^2 value of the final dependent variable. The R^2 for willingness to report error was 0.3, indicating that approximately 30% of the variance was accounted for. This is comparable to some prior studies that have used similar methods to examine willingness to report bad news. For example, R^2 values reported by Smith et al. (2001) and Park et al. (2008) for willingness to report bad news were 0.24 and 0.34, respectively. The R^2 for cost-benefit

differential was 0.06, which indicates that only 6% of the variance has been explained by conscientiousness. While this percentage appears small, it must be remembered that our objective was not to provide an exhaustive explanation of factors affecting individuals' assessments of costs and benefits; rather, cost-benefit differential is included as an intermediate variable as our model's ultimate dependent variable is willingness to report. It is quite likely that a large number of other factors combine to explain individuals' assessments of costs and benefits (for example, other personality traits, as well as many situational and contextual factors).

To test *H1-H4*, we assessed the structural model by examining the path coefficients and their significance levels. First, we computed the path coefficients using the entire sample. Next, to obtain the *t*-values associated with each path, we applied the bootstrapping method with 1000 resamples (results shown in Figure 2-2). During these processes, we controlled for gender for willingness to report error but did not find any significant effect. As shown in Figure 2-2, mood had a significant negative effect on willingness to report error (β = -0.32, $p < 0.001$). Specifically, individuals in a positive mood were less willing to report their error than individuals in a negative mood, thus supporting *H1*. There was a significant positive effect of cost-benefit differential on willingness to report error (β = 0.27, $p < 0.01$), supporting *H2*. Individuals who perceived the benefits of reporting to outweigh the costs were more willing to report their error. *H3a* was also supported, as conscientiousness had a significant positive effect on cost-benefit differential (β = 0.25, $p < 0.05$). Individuals who are more conscientious perceived the benefits to be greater than the costs associated with reporting an error. Conscientiousness had a significant positive effect on willingness to report error (β = 0.20, $p < 0.05$). Specifically, individuals with high conscientiousness were more willing to report their error than individuals with low conscientiousness, thus supporting *H3b*.



Note: *: $p < 0.05$, **: $p < 0.01$, ***: $p < 0.001$.

Figure 2-2. Structural Model Results

Finally, *H4* concerned the moderating role of mood on the relationship between conscientiousness and willingness to report error. We found that the interaction term between mood and conscientiousness was significant ($\beta = 0.21$, $p < 0.05$), thus providing support for *H4*. Figure 2-3 illustrates the moderating effects of mood on the relationship between conscientiousness and willingness to report error, while holding the effects of cost-benefit differential at its mean value. Following the approach suggested by Aiken and West (1991), we tested whether the simple slopes differed from zero. The results (as shown in Table 2-5) indicated that when individuals were in a positive mood, there was significant positive relationship between conscientiousness and willingness to report error ($\beta = 0.27$, $p < 0.01$). On the contrary, there was no significant relationship between conscientiousness and willingness to report error when individuals were in a negative mood ($\beta = 0.16$, $p < 0.05$). The findings suggest that conscientiousness has a greater effect on willingness to report error when individuals are in a

positive mood. In other words, individuals who are in a positive mood are more strongly affected by how conscientious they are as compared to individuals who are in a negative mood. Because individuals in a negative mood are more likely to engage in effortful systematic assessments of the error reporting situation, the influence of conscientiousness on error reporting decisions may be lessened.

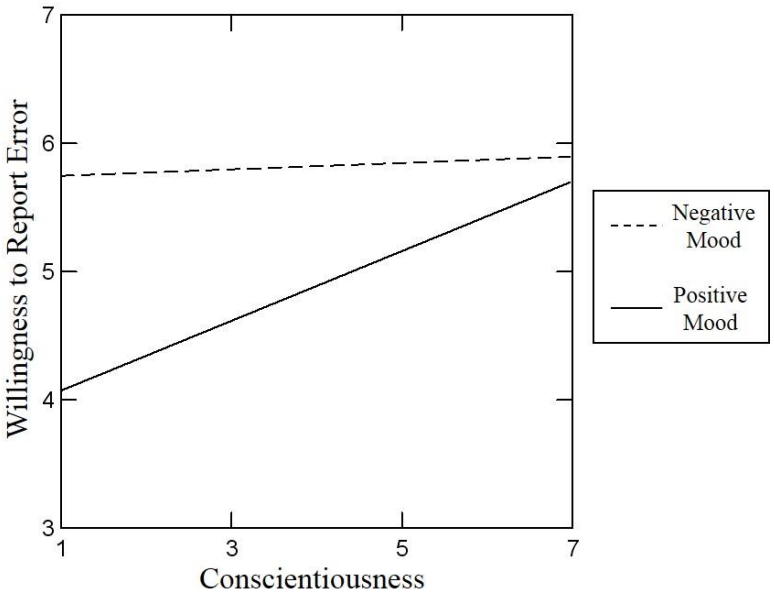


Figure 2-3. Interaction Plot Showing the Moderating Effect of Mood on the Relationship between Conscientiousness and Willingness to Report Error

Table 2-5. Test of Simple Slopes

	Conscientiousness	***SE***	***t*-value**	**95% Confidence Interval**	
				Lower	**Upper**
Positive Mood	0.272**	0.096	2.817	0.080	0.463
Negative Mood	0.025	0.111	0.222	-0.196	0.246

Note: **: $p < 0.01$

2.5.3. Mediation Analysis

Since conscientiousness appeared to have an indirect effect on willingness to report error through cost-benefit differential, we conducted a mediation test using the Shrout and Bolger (2002) approach to test whether a significant amount of the influence of the independent variable (IV) (i.e., conscientiousness) on the final dependent variable (DV) (i.e., willingness to report error) was expressed through the mediator (i.e., cost-benefit differential). As shown in Table 2-6, conscientiousness has a significant total effect on willingness to report error (β_{total} = 0.233, p < 0.01). When the mediator (i.e., cost-benefit differential) is introduced, conscientiousness still remains significant (β_{direct} = 0.189, p < 0.05), indicating partial mediation (Baron and Kenny 1986). The indirect effect (i.e., described by the product of point estimates for the CON-CBD and CBD-WTR paths) mediated through cost-benefit differential was 0.044, with a bias corrected 95% confidence interval (CI) of 0.006 to 0.109. Since the CI does not contain zero, this indicates that cost-benefit differential plays a significant mediating role (Shrout and Bolger 2002). We also calculated the proportion of the effect that was expressed through the mediator as suggested by Shrout and Bolger (2002) by computing the ratio of the indirect effect over the total effect. We obtained a value of 0.19, which indicates that 19 percent of the effect of conscientiousness is mediated through cost-benefit differential, while 81 percent is captured through the direct effect.

Table 2-6. Mediation Analysis following Shrout and Bolger's (2002) Approach

Total Effect of IV on DV		Direct Effect of IV on DV		Indirect Effect		
Coefficient	*t*-value	Coefficient	*t*-value	Product of Point Estimates[2] (a x b)	BC[1] 95% Confidence Interval	
					Lower	Upper
0.233**	2.937	0.189*	2.402	0.044	0.006	0.109

Note: [1] Bias Corrected Confidence Interval; *: $p < 0.05$, **: $p < 0.01$.

[2] a and b indicate the point estimate for the CON -> CBD and the CBD -> WTR path, respectively

2.6. Discussion

Having presented the results of our analysis, we now consider implications for research and for practice. We also discuss some limitations of this study and how they might also inform future research initiatives.

2.6.1. Implications for Research

Prior research on bad news reporting has focused on errors committed by *others*. This study breaks new ground by examining the factors that influence reporting of *self-committed* errors. To the best of our knowledge this is also the first attempt to investigate the role of affective states and conscientiousness in either of these contexts. The main contributions of our study are: (1) providing and testing a model for explaining individuals' decisions regarding the reporting of self-committed errors on an IT project; (2) empirically demonstrating that an individual's mood influences such reporting decisions; (3) showing that conscientiousness affects willingness to report error both directly and indirectly (through the assessment of costs and benefits associated with error reporting); and (4) providing evidence that mood moderates the relationship between conscientiousness and willingness to report errors.

We found that people in a positive mood were less willing to report their errors, while highly conscientious people were more willing to report theirs. The effect of conscientiousness was partially mediated through cost-benefit differential. Additionally, we found mood to moderate the relationship between conscientiousness and willingness to report error.

Our model does not purport to be an exhaustive one, however, and this study is best viewed as the first step on a path that seeks greater understanding of the linkages between various factors and decisions associated with reporting self-committed errors on IT projects. Other researchers can build upon the findings and extend the model by considering other affective states and other impacts, other factors that may influence error reporting, and other mediating/moderating mechanisms that may lend additional insight into the cognitive processes through which such decisions are made. Also, some researchers may choose to examine the processes through which such reporting decisions are made. We highlight some potential avenues in each of these categories.

Other affective states and other affective impacts. As we noted earlier, moods are only one form of affect, with emotions constituting the other major category. Moods have no immediate referent, but emotions do (e.g., one is angry at *someone* or *something*). Obviously, one extension of this study would be the incorporation of emotions as an alternative form of affect. Although mood induction is usually viewed as fairly simple, induction of emotions is often more complex (e.g., Lobbestael et al. 2008). There is also some evidence that the effects of moods and emotions on individuals' information processing and decision-making may not always be strictly symmetric (e.g., Mitchell et al. 2001; Nabi 2002), so researchers are cautioned to explore other induction methods carefully.

In this study, we bounded the model by assuming that a subject had committed an error and was now confronting a reporting decision. The model may well be extended by considering the impacts of various factors (affective, trait-based, or situational) on individuals' error detection processes themselves. For example, it might be conjectured that individuals who are in a sad mood state would more readily detect their own errors or others' reporting mistakes. To the best of our knowledge, little prior research has been conducted in this domain, but it does appear to be a fruitful avenue for future work. Relatedly, future research might also consider the affective responses that could result from error detection or from the process of making an error reporting decision. For instance, error detection may arouse an individual's feelings of guilt because his/her error can lead to system failure. One avenue for future research may involve taking into consideration the affective responses from post-error detection and investigating how this interacts with pre-error detection moods in influencing error reporting decisions. Furthermore, the literature on IS bad news reporting suggests that not only the affective responses of the *reporter* but also those of the *recipient* may influence reporting decisions (Smith and Keil 2003). Future research may take into account the potential affective responses of the recipients in error reporting situations.

Also, as the first such study to be conducted in this domain, we focused on slips— which occur more frequently and are more likely to be detected than are other types of errors (Rizzo et al. 1987). However, there are two other types of errors that could conceivably be observed on IT projects: rules-based mistakes, which "happen when well-known rules or procedures are wrongly applied in familiar, or so presumed, situations" (Zhao and Olivera 2006, p. 1014) and knowledge-based mistakes, which "occur when people are not able to properly analyze a problem or recognize the relations among its elements" (Zhao and Olivera 2006, p. 1014).

Although it is likely that these types of errors occur less frequently on IT projects than do slips, it would nevertheless behoove researchers to expand the model to consider these distinct types of errors in future studies.

Other influencing factors. As the first study to consider factors that may influence the reporting of self-committed errors on IT projects, the present initiative obviously faced a research domain that lacks strong theory. Consequently, we were forced to rely on related bases of research theory and to engage in our own logical argumentation in choosing the factors to include in our initial model.

Of course, many other factors could be included in expansions of our model. Obviously, a large number of additional personality traits might also be considered. Conscientiousness, considered in this study, is only one of the "Big Five" personality traits; four others (neuroticism,[4] extraversion, openness to experience, and agreeableness) are often considered by psychologists (Judge et al. 2002). Although one might be able to interpret some conjectures by other authors regarding neuroticism (e.g., Barrick and Mount 2000) as providing some insight into individuals' decisions regarding error reporting, we are unaware of previous theory that would provide any guidance regarding hypotheses for the other three traits. Even so, enterprising researchers may wish to include more of the "Big Five" traits in future models.

Additionally, other personality factors that go beyond the "Big Five" might also be included. For example, paranoia (Fenigstein 1994) could well be associated with individuals' assessments of probable blame for self-committed errors, and it could therefore influence cost/benefit calculations as well as reporting decisions. An individual trait known as need for cognition has also been postulated to drive individuals towards high-level cognitive processing

[4] Neuroticism is sometimes called emotional stability.

(Cacioppo and Petty 1982). It has also been suggested—albeit for a different but related domain (Miceli and Near 1992)--that other personality traits such as tolerance for ambiguity (MacDonald 1970), level of moral judgment development (Kohlberg 1969), self-esteem (Graham 1986), and locus of control (Rotter 1966; Spector 1982) could impact reporting decisions. While additional theoretical development would be required prior to inserting these traits into a model associated with self-committed errors, they stand as viable constructs meriting additional consideration.

Other mediating/moderating mechanisms. While this study considered mood as an affective factor that can cause greater or lesser cognitive effort to be expended in decision-making, the ELM (Petty and Cacioppo 1986) considers many other factors that could similarly impact the level of effort and, hence, the ultimate reporting decision. For example, it has been argued that distraction will have a much more pronounced effect in high-effort cognitive processing situations than in low-effort situations (Petty and Brock 1981). Relatedly, time pressure—a subject believing that (s)he must make a decision quickly—is likely to lead to low-effort cognitive processing (Bitner and Obermiller 1985). This list of factors is obviously not an exhaustive one, but it does suggest that many other factors may mediate or moderate the relationships in the model.

Process models. As have almost all the previous studies on bad news reporting in IT projects, topics, this study tested a *variance* model. Variance models explore relationships between certain constructs in a cross-sectional sense. They do not examine the passage of time or focus on events that lead to changes of state.

Yet another entire domain of research awaits interested researchers: *process* models of error reporting behavior on IT projects. Process modelling could provide a rich understanding of

the changes, over time, that lead to and away from reporting of self-committed errors (or, in a broader sense, any type of bad news on an IT project).

In general, process modelling requires a long-term research commitment to data gathering. Often through interviews, researchers attempt to clarify the trigger events that lead to different states or behaviors. One might imagine, for example, a study that tracked different events over the course of an IT project, with a special focus on those events that led to errors along with other events that moved individuals to report (or not report) errors. While data regarding factors such as personality traits might also be gathered, the real focus of the research would be on the changes that occurred over time, which culminated in reporting (or non-reporting) decisions. Such a study would provide a rich narrative that could conceivably lead to much greater theoretical understanding of reporting dynamics.

2.6.2. Implications for Practice

As noted above, the primary objective of this research was to investigate an initial *theoretical* model that was intended to explain some of the decision-making associated with reporting of self-committed errors on IT projects. Even so, the results of our study suggest several practical implications for practitioners who are involved with IT projects. We first consider some implications both for individuals who may have committed errors and who are deciding whether to report them, and we then consider implications for managers who may be the recipients of such reports. The key concept for both of these entities is that of *awareness* of the importance of various factors in these decisions.

Implications for reporters. Individuals who find themselves in the situation of having committed an error should recognize that their own mood can impact their thinking about the

error and their decision regarding reporting. In particular, individuals may be reluctant to report an error if they are in a positive mood, and they should be especially alert to their decision-making during such situations. At the same time, it is conceivable that an especially negative mood state could lead them to over-examine a decision and/or to report an error that was so trivial as to be meaningless. Thus, the best advice for individuals who recognize they are in either a happy or sad mood state and who face a reporting decision is twofold: 1) If time allows, wait until a more neutral mood state to consider the decision and/or 2) If possible, discuss the matter with a trusted friend or colleague who has a neutral standing in terms of the project outcomes in order to get more objective input and to reduce bias in decision making.

Relatedly, individuals who know themselves to be especially conscientious (or the converse) should consider how that trait may be influencing their decision-making, particularly in positive mood states. Especially for those who are low on the conscientiousness scale (and, in our experience, most individuals in that category are aware of such), particular caution is appropriate during times of elation as that is when reporting tendencies may be especially inhibited.

Implications for managers. For managers who are on the receiving end of the error reporting relationship, it is important to recognize that the decision to report a self-committed error can be influenced by events outside of the project. Managers should be aware of their employees' mood state and realize that being in a positive mood state can impede cognitive processing. Although one might cynically suggest that managers who wish to increase the probability of employees reporting their self-committed errors should artificially induce negative mood states in the workplace, even ignoring the arguably unethical nature of such an action, this would obviously be unwise for two reasons: 1) it is not possible to gauge when an employee will

confront a reporting decision about a self-committed error, so managers would not know when such an action was needed and 2) even if such an action did lead to increased reporting of self-committed errors, there are obviously many dysfunctional dynamics associated with negative mood states in the workplace (e.g., reduced morale and productivity).

In addition, our results suggest that there may be merits to incorporating a personality test into the hiring process so that highly conscientious individuals can be favored for high-risk IT projects for which the consequences of not reporting self-committed errors can be quite high. We acknowledge, however, that managers are often constrained in terms of personnel assignment to project teams, so it is quite likely that PMs may eventually confront teams with mixtures of more and less conscientious employees.

In such a case of a mixed team, when project members are identified as being less conscientious (either via personality tests or during the project itself), it would be beneficial for managers to be especially aware that these individuals will be susceptible to the influences of mood. Such emphasis on the conscientiousness of project members could be especially critical for IT projects in which the consequences of errors can be severe (e.g., when even a small bug or error in the software could impair system quality and lead to launch delays, project failure, or downstream consequences that could put lives at risk). Also, organizations may consider creating awareness of the impact of moods among employees through various means of communication, or by including coverage of the topic in training seminars.

2.6.3. Limitations

Like any other research, this study is not without its limitations. First, we measured subjects' error reporting intentions rather than their actual behaviors – this does not necessarily

equate to subjects behaving as they have indicated. However, considering the sensitivity of the topic, we believe this was a reasonable substitute for measuring actual behaviors, and also consistent with existing bad news reporting studies in the IS literature (e.g., Keil et al. 2007b; Park et al. 2008; Smith et al. 2001).

Second, while mood was experimentally manipulated and would not be subject to common method bias, there is some potential for common method bias in our non-manipulated constructs which were measured with a survey instrument. The results from Harmon's single-factor test (Podsakoff et al. 2003) and the unmeasured latent method factor approach (Liang et al. 2007; Podsakoff et al. 2003) suggest, however, that common method bias was not a significant threat to our study. However, it is still possible for common method bias to exist as each of these statistical approaches has limitations (Chin et al. 2012; Podsakoff et al. 2003). Further research is warranted to replicate our findings while implementing procedural remedies for controlling common method bias. Because individual personality traits are considered to be stable over time (Vaidya et al. 2002), the temporal (e.g., time-lag) separation technique suggested by Podsakoff et al. (2003) may be utilized to separate the measurement of personality traits and willingness to report error.

Third, we conducted a scenario-based laboratory experiment, which gave us a high degree of internal validity by providing a highly controlled environment. While the scenario was created to be as realistic as possible, the scenario was fairly simple; only essential information was provided to the subjects for the decision making task because our main focus was on the pure impact of moods and conscientiousness on error reporting decisions. Specific costs and benefits were not detailed in the experimental scenario, as subjects were expected to impute their own assessments of each. In future studies, researchers may wish to be more explicit about costs

and benefits, and they may wish to consider granular distinctions, especially in relation to costs. For example, a reporter could face costs as disparate as a career adjustment, reputational damage, a disciplinary procedure, a fine (in cases where the IT project fell within a certain legal category), etc. The magnitude and the consequences of the error could also vary greatly in terms of impact on various stakeholder units (i.e., from inconvenience to more severe consequences including death). Further exploration along these lines could provide fruitful avenues for future research.

Fourth, our measures of cost-benefit differential had a limited focus in that the referent for costs and benefits was the *self* (i.e., the error reporter). Based on some prior theoretical models (e.g., Di Norcia and Tigner 2000; Dozier and Miceli 1985; Jones et al. 2007), there is ample reason to view this "egoistic" perspective on costs and benefits as empirically salient in a large percentage of IT project decision contexts. We acknowledge, however, that error reporting situations in IT projects could be more complex in that there may be potential benefits or costs of reporting an error not only to the reporter, but also to the reporter's team, supervisor, or organization. We did not take these multiple stakeholders into account in this study. Future research may incorporate the various stakeholders involved with the IT project into the error reporting scenario and the cost-benefit differential measures.

Finally, we considered error reporting behavior as a binary response: that is, an individual may either report or not report the error. However, even when one decides to report an error, other options may exist. For example, an individual may report his/her own error as someone else's, thereby shifting blame. Future research may investigate how differences in personal attributes or affective states lead to different behavioral responses.

2.7. Conclusion

Although a growing stream of studies has emerged to examine various factors and contexts associated with bad news reporting in IT projects, most prior research has focused on the reporting of *others'* errors rather than a subject's *own*. Further, little previous attention has been paid to factors associated with affect, and only limited attention has been paid to subjects' individual characteristics. In this study, we investigate how mood and conscientiousness influences one's decision to report a self-committed error. We find that individuals in a negative mood were more willing to report a self-committed error than those in a positive mood. Conscientiousness positively influenced error reporting decisions, both directly and indirectly through the perceptions of the benefits relative to the costs of reporting. Furthermore, we found that mood moderated the direct effect of conscientiousness on error reporting such that the effect of conscientiousness was stronger when individuals were in a positive mood. Overall, we demonstrate that mood states and conscientiousness can play a critical role in the context of reporting self-committed errors in IT projects. We hope that this study will lead to increased exploration of these important contexts of reporting decisions.

Appendix 2-A. Experimental Scenario

CASE INSTRUCTIONS: The business case that follows is part of a study that examines business decision-making. Please take a few minutes to read over the case and to answer the questionnaire that follows. There are no right or wrong answers.

You are a member of the information technology staff in a community health center comprised of 10 sites. Your institution has recently partnered with a big electronic health record (EHR) vendor to implement their product in your organization. Your institution's chief operating officer (COO) has entrusted you and a business manager to be jointly responsible for EHR implementation across the organization. The business manager is responsible for the business process analysis, and you are responsible for developing some custom code to allow the new EHR product to be integrated with your existing billing system.

The project plan is aggressive, and you had been given 3 months for the project to "go live" (i.e., the day when the EHR product is turned on and the old system is shut down). The "go live" date is now just 2 days away. The president of your organization, the vendor, and the news media have been invited for the event when the project goes live.

While preparing for the project "go live", you have just discovered, somewhat by accident, that you have made an error by neglecting to focus on an essential piece of code without which the system's performance will suffer. You now recollect that you had several unexpected interruptions on the day you were scheduled to do that task, and because you let yourself get distracted, you completely forgot to prepare this.

Fixing the above error will take at least 5 days, and it cannot be completed by the project "go live" date.

You are now wondering whether or not to report the error.

Appendix 2-B. Constructs and Measures

Conscientiousness

Measure	Mean	SD	Item Wording (1 = Very Inaccurate; 7 = Very Accurate)
CON1	4.75	1.46	I get chores done right away.
CON2 (reversed)	4.73	1.76	I often forget to put things back in their proper place.
CON3	5.72	1.40	I like order.
CON4 (reversed)	5.38	1.68	I make a mess of things.

Cost-Benefit Differential

Measure	Mean	SD	Item Wording (1)	Item Wording (7)
CBD1	4.72	1.70	The costs to me of reporting the error would exceed the benefits.	The benefits to me of reporting the error would exceed the costs.
CBD2	4.57	1.56	If I report the error, my costs will be substantial compared to my benefits.	If I report the error, my benefits will be substantial compared to my costs.
CBD3 (reversed)	4.76	1.74	The benefits to me of reporting the error would exceed the costs.	The costs to me of reporting the error would exceed the benefits.
CBD4 (reversed)	4.54	1.56	If I report the error, my benefits will be substantial compared to my costs.	If I report the error, my costs will be substantial compared to my benefits.

Willingness to Report Error

Measure	Mean	SD	Item Wording (1 = Very Unlikely; 7 = Very Likely)
WTR1	5.30	1.44	Please indicate your willingness to report the error to your COO.
WTR2	5.48	1.30	At this time, how likely are you to go directly to your COO to report the error?
WTR3 (reversed)	5.73	1.12	Please indicate how likely it is that you would avoid telling your COO about the error.

Appendix 2-C. Construct Loadings (CL) and Method Factor Loadings (MFL) for Common Method Bias Analysis using Unmeasured Latent Method Factor

Construct	Indicator	CL	CL^2	MFL	MFL^2
Conscientiousness	CON1	0.869***	0.755	-0.194	0.038
	CON2	0.734***	0.539	0.058	0.003
	CON3	0.698***	0.487	0.040	0.002
	CON4	0.751***	0.564	0.082	0.007
Cost-Benefit Differential	CBD1	0.595***	0.354	0.246	0.061
	CBD2	0.881***	0.776	-0.080	0.006
	CBD3	0.791***	0.626	0.059	0.003
	CBD4	1.010***	1.020	-0.224	0.050
Willingness to Report	WTR1	0.654***	0.428	0.138	0.019
	WTR2	0.933***	0.870	-0.261*	0.068
	WTR3	0.741***	0.549	0.109	0.012
Average		**0.787**	**0.633**	**-0.002**	**0.024**

Note: *: $p < 0.05$, ***: $p < 0.001$.

Chapter 3

Using Perspective Taking to De-Escalate Commitment to Launching Software-Driven Products

Abstract

In the development of software-driven products when things go awry and the original plan loses credibility, managers often choose to honor the originally announced product launch schedule anyway, in effect launching a product that may be seriously compromised in terms of both functionality and reliability. In this study, we draw on the perspective of escalation of commitment to investigate adherence to original product launch schedules despite negative feedback. Specifically, we use the notion of perspective taking to propose a de-escalation tactic. Based on the results of two laboratory experiments, we found strong support that taking the perspective of individuals that can be negatively influenced by a product launch can effectively promote de-escalation of commitment. Furthermore, we found that the experiences of anticipated guilt mediate the relationship between perspective taking and de-escalation, and this indirect effect is significantly greater when decision makers' personal cost associated with de-escalation is high (rather than low), or when decision makers are more (rather than less) customer oriented.

Keywords: De-escalation of commitment, software-driven product, product launch, perspective taking, anticipated guilt, personal cost of de-escalation, customer orientation

3.1. Introduction

On-time delivery is considered one of the key factors that determine the success of software-driven products (Cooke-Davies 2002). Further, the delivery of software-driven products are often subject to significant time pressure, due to time-to-market considerations or contractually-bound deadlines. For example, tax-preparation software must be rolled out to the market prior to the tax-return season. In the development of new software-driven products when things go awry and the original plan loses credibility, managers often choose to honor the originally announced product launch schedule anyway, in effect launching a product that may be seriously compromised in terms of both functionality and reliability. Such decisions, however, can lead to negative consequences. HealthCare.Gov (the federal online health insurance marketplace) represents one example; while it was launched as scheduled on October 1, 2013, it immediately became an end user nightmare due to many technical problems (Kaplan 2014). It was reported that prior to the launch the Obama administration had been warned of insufficient testing, but they still decided to go ahead with the promised launch date (Somashekhar and Goldstein 2013).

In this study, which consists of two experiments, we draw on the perspective of escalation of commitment (Brockner 1992b; Staw 1976; Staw 1981) to investigate adherence to original product launch schedules despite negative feedback. A handful of studies have shown that individuals can escalate their commitment to a new product development effort despite negative feedback regarding the viability of the product (Biyalogorsky et al. 2006; Boulding et al. 1997; Keil et al. 2007a; Lee et al. 2014). To date, most prior escalation research has focused on identifying factors that promote escalation behavior. In contrast, there has been comparatively

little research on how to reduce escalation once it occurs – i.e., de-escalation of commitment (Keil and Robey 1999).

To date, several de-escalation tactics have been proposed, and they tend to require rather extraordinary measures after escalation occurs (e.g., changes in top management or project championship (Keil 1995; Ross and Staw 1993)), or approaches that either require foresight and planning before the occurrence of escalation (e.g., setting decision rules/target levels for stopping a project (Boulding et al. 1997). While tactics in the de-escalation literature may be effective, most of them require interventions and support at the organizational or project level which make them costly and difficult to implement. Therefore, the objective of this study is to propose a more practical and less costly "psychological" tactic that can be used at the individual level to help bring about de-escalation. In this study, we use the notion of perspective taking to propose a de-escalation tactic in the context of whether or not to launch a premature software-driven product as scheduled. De-escalation of commitment in such a context means delaying the troubled product launch (rather than launching the product as scheduled), and is reflected by the decision maker's reduced willingness to launch the product as scheduled (Keil et al. 2007a).

Perspective taking is a cognitive activity that involves adopting a viewpoint of others and attempting to understand a situation based on others' preferences, values, and needs (Parker and Axtell 2001). Drawing on this notion of perspective taking, we suggest that seeing a decision to launch a troubled product from a different person's perspective provides an opportunity for individuals to evaluate the launch decision from an alternative point of view. Taking the perspective of one who could be negatively affected by the launch of a troubled product may help promote de-escalation of commitment. Further, Batson et al. (1997a) found that taking the perspective of another person as opposed to oneself about a hypothetical event leads to different

emotional consequences (e.g., empathy and distress). These changes in emotional state that are caused by perspective taking can eventually lead to changes in attitudes (e.g., more favorable attitude towards others (Batson et al. 1997b; Vescio et al. 2003)) or even behaviors (e.g., altruistic helping (Coke et al. 1978)). Based on these studies, we suggest that emotions must be considered in order to develop a more nuanced understanding of the relationship between perspective taking and de-escalation. Specifically, we focus on a particular type of emotion, namely anticipated guilt. Anticipated guilt is an important emotion experienced in the workplace that can produce constructive behavior (i.e., behaviors that correct wrongdoings), but its effect has not been examined in the context of de-escalation. In this study, we investigate its mediating effect on the relationship between perspective taking and de-escalation. Additionally, we investigate two understudied factors in the de-escalation literature that may amplify either the effect of perspective taking on anticipated guilt or anticipated guilt on de-escalation. Specifically, we suggest that associating a self-centered motivation with a de-escalation decision (e.g., when delaying a product launch may cost you personally) may strengthen the effect that perspective taking has on anticipated guilt, while having greater customer orientation (e.g., being guided by the beliefs that emphasize the importance of customers) may strengthen the effect that anticipated guilt has on de-escalation of commitment.

In summary, the objectives of this study are to investigate: (1) the impact of perspective taking on de-escalation of commitment, (2) the mediating role of anticipated guilt on the relationship between perspective taking and de-escalation, (3) the moderating role of personal cost on the relationship between perspective taking and anticipated guilt, and (4) the moderating role of customer orientation on the relationship between anticipated guilt and de-escalation. To achieve these objectives, we conduct two laboratory experiments. In Experiment 1, we conduct

a laboratory experiment with students to investigate perspective taking as a de-escalation tactic, the mediating role of anticipated guilt, and the moderating role of personal cost of de-escalation (objectives (1)-(3)). In Experiment 2, we conduct a laboratory experiment while focusing on objectives (1), (2), and (4). In addition to taking into account two different perspectives (i.e., the victim perspective and shareholder perspective) and customer orientation, we further extend Experiment 1 by collecting data from practitioners, employing a different experimental design, and using a different manipulation for perspective taking to demonstrate the robustness of our results.

The remainder of the paper is organized as follows. First, we present a review of the literature on de-escalation of commitment. This is followed by details on the theoretical background, experiment, and results of Experiment 1, which focuses on the fundamental relationships between perspective taking, de-escalation, anticipated guilt and personal cost. Next, we discuss details on the theoretical background, experiment, and results of Experiment 2, which takes into account two important perspectives in product launch contexts and customer orientation of decision makers. We conclude the paper by discussing the implications for research and practice. Before we move to the next section, we present our model for the two experiments in this research in Figure 3-1.

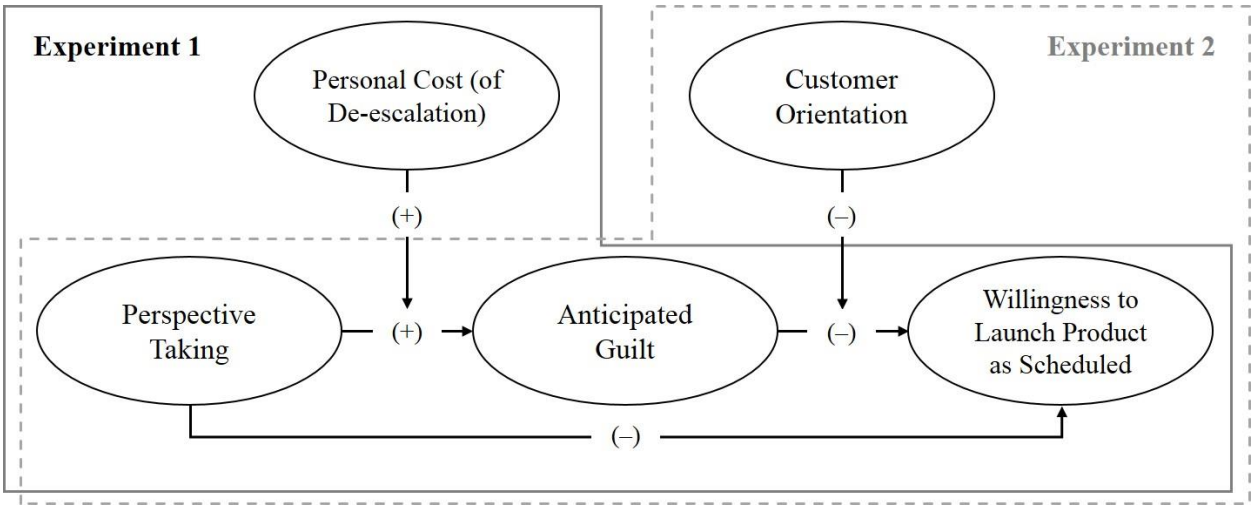


Figure 3-1. Research Model for Experiments 1 & 2

3.2. De-escalation of Commitment

In this section, we discuss tactics that have been empirically shown to cause de-escalation of commitment. De-escalation of commitment is defined as "reduced commitment to a failing course of action" (Montealegre and Keil 2000, p. 418), and in the project management context it has been conceptualized as either redirecting or terminating troubled projects (Keil and Robey 1999; Montealegre and Keil 2000). Our review of the literature on de-escalation of commitment suggests that de-escalation tactics can be classified into three categories as shown in Table 3-1: (1) actions that promote de-escalation after escalation occurs, (2) actions that prevent escalation from occurring, and (3) actions that can both *prevent* escalation and *promote* de-escalation. While useful, some of these tactics have certain limitations, such as requiring that extraordinary measures be taken after escalation occurs (e.g., change in top management or replacing decision makers) or that certain precautions be taken before escalation occurs (e.g., having regular evaluations of projects or setting decision rules/target levels for stopping a project). Furthermore,

most tactics in the de-escalation literature require interventions (and support) at the organizational/project level, often making them costly and difficult to implement.

Table 3-1. Categories of De-Escalation Tactics

Category	Tactic	Level of Action	Description	References
1. Actions that *promote* de-escalation after escalation occurs	Changes in top management	Organizational level	Changes in top management (including loss of key project champion) reduces commitment to a troubled project, thus facilitating de-escalation of commitment.	Keil (1995); Ross and Staw (1993)
	Replacing decision maker who initiated a course of action	Organizational or project level	Replacing the person who initiated a course of action (e.g., project manager) with a new person can reduce personal responsibility associated with a failing course of an action, thus limiting escalation of commitment.	Barton et al. (1989); Boulding et al. (1997); Keil and Robey (1999)
	De-institutionalizing the project	Organizational level	Removing a troubled project from the "core of the firm" (e.g., emphasizing the peripheral nature of the project or physically moving the project to a different location) can promote de-escalation of commitment.	Montealegre and Keil (2000); Ross and Staw (1993)
	Redefining a troubled project	Organizational or project level	Redefining a troubled project can help to shift the organization's framing of the problem, thus highlighting alternative courses of action and thereby helping to bring about de-escalation.	Keil et al. (1995); Keil and Robey (1999); McCain (1986); Northcraft and Neale (1986); Montealegre and Keil (2000); Pan et al. (2004)
	Reducing the ambiguity of negative feedback	Organizational, project, or individual level	Unambiguous negative feedback about a troubled project can make problems more salient, thus causing de-escalation of commitment.	Garland et al. (1990); Keil and Robey (1999);

Table 3-1. Categories of De-Escalation Tactics (Continued)

Category	Tactic	Level of Action	Description	References
1. Actions that *promote* de-escalation after escalation occurs	Making appeals to external stakeholders	Organizational or project level	De-escalation can be promoted by external stakeholders who can "make the economics of withdrawal more favorable."	Montealegre and Keil (2000); Ross and Staw (1993)
	External pressures	Organizational Level	External pressures can trigger a reassessment of a project, thus causing de-escalation of commitment.	Keil (1995); Montealegre and Keil (2000); Ross and Staw (1993)
	Blaming others	Individual level	Decision makers may shift blame to others, making it easier for them to terminate a troubled project without losing face.	Montealegre and Keil (2000)
2. Actions that *prevent* escalation from occurring	Regular evaluations of projects	Organizational or project level	Regular evaluations of projects can help to surface problems, thus helping to prevent escalation of commitment.	Drummond (1995); Drummond (1996); Keil and Robey (1999)
	Having experienced or imagined an escalation situation	Individual level	Having experienced or imagined an escalation situation induces regret about the previous escalation situation, thus limiting future escalation of commitment.	Ku (2008)
3. Actions that can both *prevent* escalation and *promote* de-escalation	Setting decision rules/target levels for stopping a project	Organizational or project level	Establishing decision rules or target levels that determine project success or failure can be used as a basis for stopping a troubled project.	Boulding et al. (1997); Simonson and Staw (1992)
	Setting and announcing a resource limit	Organizational or project level	Setting and publicly announcing a resource limit makes people reluctant to go over the limit, thus facilitating de-escalation of commitment.	Brockner et al. (1979); Heath (1995); Keil and Robey (1999); Simonson and Staw (1992)
	Creating a culture that tolerates failure	Organizational level	Creating a culture that tolerates failure makes it bearable to abandon troubled projects.	Pan et al. (2006); Pan and Pan (2011)

Table 3-1. Categories of De-Escalation Tactics (Continued)

Category	Tactic	Level of Action	Description	References
3. Actions that can both *prevent* escalation and *promote* de-escalation	Reducing the threat of negative outcomes	Organizational or project level	Reducing the threat of negative outcomes (e.g., punishment for project failure) can promote de-escalation.	Keil and Robey (1999); Simonson and Staw (1992)
	Increasing the visibility of project costs	Organizational or project level	Cost information about the troubled project may not be clear or may be concealed within the organization. However when the cost information of the troubled project is made more visible and salient, this may lead decision makers to de-escalate.	Brockner et al. (1979); Montealegre and Keil (2000)

Overall, our review of the literature on de-escalation suggests the need for a less costly and more practical tactic for inducing de-escalation can be implemented at the individual level. Thus, we suggest that a simple "psychological" tactic (i.e., perspective taking) to induce de-escalation of commitment. In the following, we discuss the details of Experiment 1, which investigates the relationship between perspective taking and de-escalation of commitment.

3.3. Experiment 1

The main focus of Experiment 1 was to investigate whether the decision to launch a product can be influenced by taking a different person's perspective, and the mediating role of anticipated guilt in this relationship. Further, we also took into account the moderating role of the personal cost (of de-escalation) on the relationship between perspective taking and de-escalation. Figure 3-2 depicts the research model of Experiment 1.

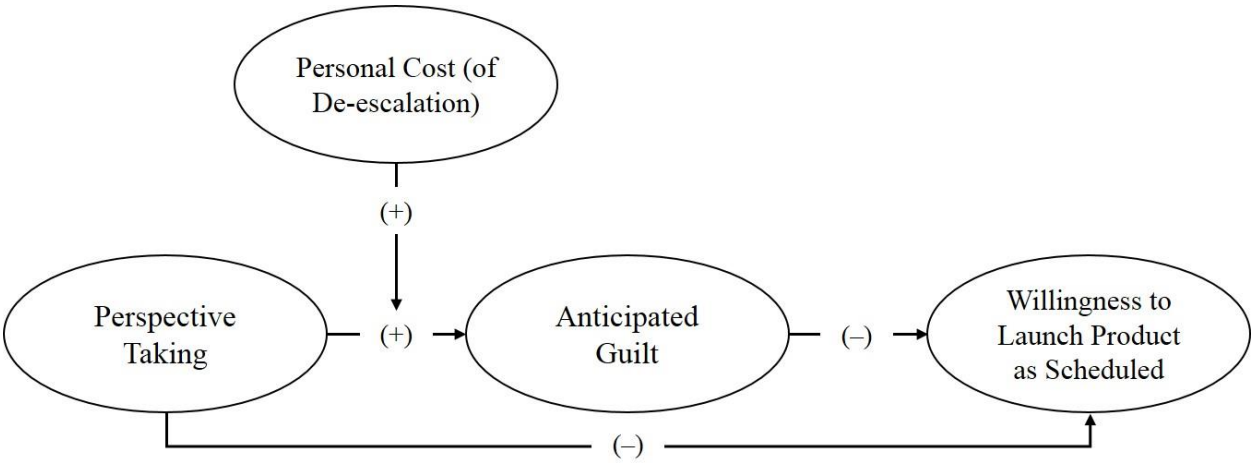


Figure 3-2. Research Model of Experiment 1

3.3.1. Theoretical Background and Hypotheses

3.3.1.1. Perspective Taking and De-escalation of Commitment

The notion of perspective taking originated in the 70's in the psychology literature (Chandler 1973; Mossler et al. 1976). Perspective taking is centered on a psychological connection that can be made between self and others; in other words, perspective taking is known to weaken the self-other boundary and psychologically merges the self and other (Davis et al. 1996). Hence, perspective taking allows people to adopt the thinking, and feelings of others, which in turn can lead people to behave in a way that others might behave (Galinsky et al. 2008).

Perspective taking is known to have many benefits across a variety of contexts, including developing cognitive abilities of children (Piaget and Inhelder 1969), inducing altruistic behavior (Batson 1991; Underwood and Moore 1982), improving employees' performance (Parker and Axtell 2001), designing electronic communication systems for knowledge intensive firms (Boland and Tenkasi 1995), promoting organizational citizenship behavior (Kamdar et al. 2006),

helping price negotiation (Galinsky and Mussweiler 2001), and improving creativity at work (Grant and Berry 2011).

To date, there has been only one study that has investigated perspective taking in an escalation context. In an experiment, Gunia et al. (2009) found that when individuals were asked to take the perspective of a person who initiated a course of action, they became more willing to continue the same course of action despite negative feedback. In explaining their findings, Gunia et al. (2009) suggested that when a second individual takes the perspective of the person who first initiated a course of action, s/he feels "psychologically connected" and "may become vicariously motivated to justify the actions of the first" (p. 1238). This interpretation is based on studies that investigated personal responsibility in escalation situations, and found that people who are responsible for initiating a course of action feel a need to justify their prior decision to embark on a course of action (Staw 1976).

When considering perspective taking, one essential aspect involves the target of the perspective being taken (i.e., whose perspective is invoked). In the experiments conducted by Gunia et al. (2009), the target of perspective taking was an individual who initiated a failing course of action, which led perspective takers to continue investments to the same course of action (i.e., to escalate). Galinsky et al. (2008) found that different targets of perspective taking lead to different results. Specifically, Galinsky et al. (2008) found that individuals who took the perspective of a professor exhibited better performance on an analytic task as compared to individuals who took the perspective of a cheerleader. In the context of product launch decisions, we suggest that de-escalation of commitment can be promoted by taking the perspective of individuals who may be negatively affected by a premature product launch decision. More specifically, when a software-driven product has defects (i.e., bugs) and is prematurely launched,

users may be negatively affected by the product. Taking the perspective of these users would help decision makers to better appreciate how users might be negatively affected by a prematurely launched product, thus promoting de-escalation of commitment to the previously announced product launch schedule. Thus, we propose the following hypothesis:

H1: Decision makers' commitment to launching a product as scheduled will be reduced by taking the perspective of individuals who may be negatively affected by the prematurely launched product.

Prior research on perspective taking has shown that perspective taking has influences on the emotional experiences of individuals (Batson 1991; Parker et al. 2008). What drives such emotional experiences is a psychological connection between an individual and a perspective target, and through this psychological connection the individual is able to better understand an emotional state that the target individual might experience. Ultimately, such an improved understanding of the emotional state of others tends to lead to changes in attitudes (Batson et al. 1997b; Vescio et al. 2003) or behaviors (Coke et al. 1978). For instance, Coke et al. (1978) found in an experiment that an emphatic emotion caused by perspective taking (in this case, taking the perspective of a student who lost her parents in a car accident) led subjects to become willing to volunteer a greater amount of their time (in order to help the student). In this study, we draw on this two-step process caused by perspective taking (perspective taking -> a change in emotional state -> a change in attitude or behavioral intention) and further extend it by considering a different emotion, namely anticipated guilt in the context of de-escalation of commitment. In what follows, we theorize how perspective taking causes a change in anticipated guilt, and subsequently causes de-escalation of commitment.

3.3.1.2. Anticipated Guilt

Guilt is known as an unpleasant emotion (Baumeister et al. 1994; Lindsey 2005), and individuals tend to feel guilty when their actions cause harm to others, or violate justice (Grant and Wrzesniewski 2010; Tangney and Dearing 2003). Anticipated guilt is a "prevention-focused" emotion (Grant and Wrzesniewski 2010, p. 110), because it involves concerns about experiencing guilt over future events (Baumeister et al. 2007; Lindsey 2005). In this study, we suggest that by taking the perspective of individuals who may be negatively affected by a product launch, decision makers will experience greater feelings of anticipated guilt about prematurely launching a product as scheduled because of the potential harm that can be caused to individuals. Thus, we propose the following hypothesis:

H2: Decision makers' anticipated guilt about prematurely launching a product as scheduled will be increased by taking the perspective of individuals who may be negatively affected by the product.

Furthermore, prior research has found that anticipated guilt can result in behavioral change (Grant and Wrzesniewski 2010; Lindsey 2005). For instance, it has been found that anticipated guilt regarding how people may suffer and die from leukemia when help is not provided promotes bone marrow donations (Lindsey 2005; Lindsey et al. 2007). This demonstrates that behavioral changes can arise in response to anticipated guilt. This suggests that decision makers' anticipated guilt about the potential harm that could be caused to product users as a result of launching a product prematurely could influence their behavior. Thus, we propose the following hypothesis:

H3: Decision makers' anticipated guilt about potential harm that may be caused by a prematurely launched product will reduce their commitment to launching the product as scheduled.

3.3.1.3. Personal Cost

A handful of prior studies have found that selfish or self-centered decisions generate a greater feeling of guilt (Chang et al. 2011; Ketelaar and Tung Au 2003). Such decisions can often reduce someone else's welfare as a consequence of increasing one's own welfare. Ketelaar and Au (2003), for example, conducted an experiment (using a repeated ultimatum game) and found that participants experienced greater guilt when they increased their benefit at the expense of another person's benefit.

Based on these findings, we suggest that associating a self-centered motivation with a premature product launch decision (e.g., when delaying a product launch may cost you personally) will generate a greater feeling of anticipated guilt for the decision maker when they take the perspective of individuals who may be negatively affected by the product. Specifically, we theorize that when the personal cost of de-escalating is high for the decision maker, perspective taking will lead him/her to experience greater feelings of anticipated guilt compared to when the personal cost of de-escalating is low. When the personal cost of delaying a product launch is high for the decision maker, s/he is apt to experience more anticipated guilt because any harm that might arise to an individual from having launched the product as scheduled will serve to underscore the fact that one's own welfare was advanced by putting another individual's welfare at risk. Thus we expect that taking the perspective of the individual who may be harmed in such situations will lead the decision maker to experience greater feelings of anticipated guilt. Conversely, when the decision maker's personal cost of de-escalating is low, s/he will

experience less anticipated guilt about the consequences associated with launching the product as scheduled. Should harm arise to an individual in this instance, it would not be due to advancing one's own welfare at the expense of others. Thus, we state the following hypothesis:

> *H4: Decision makers' personal cost associated with delaying the launch of a premature software-driven product moderates the relationship between perspective taking and anticipated guilt, such that the effect of perspective taking is stronger when there is greater personal cost associated with delaying the launch of a premature software-driven product.*

Hypotheses 2 & 3 suggest a mediating relationship between perspective taking and de-escalation of commitment, while Hypothesis 4 suggests a moderating effect of personal cost on the relationship between perspective taking and de-escalation of commitment. These relationships together suggest a moderated-mediation relationship in that the mediating effect of anticipated guilt may be moderated by the decision maker's personal cost associated with delaying the launch of a premature software-driven product (i.e., de-escalation of commitment). Thus, we propose the following hypothesis:

> *H5: Decision makers' personal cost associated with delaying the launch of a premature software-driven product will moderate the extent to which anticipated guilt mediates the indirect effect of perspective taking on de-escalation. More specifically, the indirect effect of anticipated guilt will be greater when the decision maker's personal cost associated with delaying the launch of a premature software-driven product is high rather than low.*

3.3.2. Method

In order to test our hypotheses, we conducted a laboratory experiment using a scenario-based approach. We chose this method because we wanted to create a highly controlled setting that would allow us to examine the proposed causal relationships between perspective taking and de-escalation, thus achieving high internal validity (Cook and Campbell 1979). Laboratory experiments have been widely used in prior escalation (e.g., Keil et al. (2000b), Wong and Kwong (2007), Staw (1976)) and de-escalation studies (e.g., Boulding et al. (1997), Garland et al. (1990), Simonson and Staw (1992)), as well as in perspective taking studies (e.g., Galinsky et al. (2008)).

3.3.2.1. Experimental Design and Participants

Our experiment involved a 2 x 2 factorial design in which perspective taking and personal cost were manipulated independently. Participants were randomly assigned to one of four experimental conditions. In each of the four conditions, the experiment was conducted in two phases. Participants were instructed to read a scenario in which they were asked to play the role of new product development director at a software company, and to answer a series of questions. Prior to the actual experiment, we conducted several rounds of pilot tests to: (1) refine the scenario, (2) refine the manipulations of perspective taking and personal cost, and (3) validate the measures included in the experiment.

A total of 179 undergraduate students enrolled in upper-level information systems courses at a large urban university in the southeastern U.S. participated in the experiment. Due to missing responses, we dropped eight participants, retaining 171 participants for subsequent analysis. The average age of the participants was 26.2 years, and the average years of work

experience was 7.3 years. Seventy-six percent of the participants were male (n = 130) and 24% were female (n = 41).

3.3.2.2. Decision Task and Measures

Our experimental scenario was consistent with typical escalation situations in which individuals embark on a course of action, at a later point in time receive negative feedback concerning the previously chosen course of action, and then must decide whether or not to continue the same course of action (Brockner 1992b). Our experiment involved two phases. In Phase 1, we introduced an escalation scenario that involved whether or not to launch a software project as scheduled despite negative feedback. This type of product launch decision scenario has been used before in escalation research (Keil et al. 2007a). In our scenario, participants were told that for the past year they had been responsible for developing a specialized software program that controls the intensity and targeting of an external radiation beam for treating cancer tumors. They were told that the product is scheduled to be launched next week, but just today a critical software defect was discovered that could under extremely rare circumstances result in increased doses of radiation. Participants were further informed that the CEO of the company had told them to ignore the defect completely and ordered them to launch the product as scheduled. After reading the scenario, participants were asked to respond to questions concerning anticipated guilt and their willingness to launch the product as scheduled (escalation). Measures for anticipated guilt were adapted from Lindsey (2005) and escalation measures were adapted from Keil et al. (2000b) and Lee et al. (2012).

In Phase 2, we introduced the manipulations of perspective taking and personal cost. Specifically, the manipulation of perspective taking was informed by Hoever et al. (2012). Participants in the perspective taking treatment group were asked to put themselves in the shoes

of someone whose mother may suffer from radiation sickness caused by the software bug, whereas participants in the non-perspective taking group (i.e., control group) did not receive this instruction. As for the manipulation of personal cost, participants in the high cost group were told that other employees who disobeyed the CEO were scolded and denied promotions (a high personal cost associated with de-escalation), whereas participants in the low cost group were informed that the CEO was tolerant towards disobedience and employees still received expected promotions (a low personal cost associated with de-escalation). Following the manipulations, participants were asked to respond to the same sets of questions used in Phase 1 concerning anticipated guilt and their willingness to launch the product as scheduled. Further, participants were asked to answer four manipulation check questions; two for the perspective taking manipulation and two for the personal cost manipulation. Lastly, participants were asked to answer some demographic questions relating to age, gender, and work experience. The actual scenario is shown in Appendix 3-A, and a complete list of measures is shown in Appendix 3-B. All measures were based on seven-point Likert scales with the exception of anticipated guilt, which was measured using a semantic differential scale anchored from "not at all" (1) to "extremely" (7).

3.3.3. Results

3.3.3.1. Manipulation Checks and Descriptive Statistics

In order to assess whether or not the manipulations were effective, we first created a composite variable for the two perspective taking manipulation checks, and another composite variable for the two personal cost manipulation checks. Next, we examined the mean value of the perspective taking treatment group[1], which was 5.20 on a 7-point scale (n = 97, M = 5.20, SD

[1] Participants in the perspective taking control group did not receive the manipulation check questions for perspective taking because they did not receive the perspective taking manipulation.

= 1.46). This indicated that the perspective taking manipulation was effective. Furthermore, the results of a one-way ANOVA indicated that the personal cost manipulation was effective (Perdue and Summers 1986). The mean difference between the high cost group (n = 80, M = 5.75, SD = 1.15) and low cost group (n = 91, M = 3.86, SD = 1.58) was statistically significant, and in the expected direction ($F(1, 169) = 78.20$, $p < 0.001$). The mean values of manipulation checks in each treatment group are summarized in Figure 3-3.

Perspective Taking (PT)

Personal Cost (PC)	Control	Perspective Taking
High	PT = N/A PC = 5.784 (1.077) N = 37	PT = 5.349 (1.474) PC = 5.721 (1.236) N = 54
Low	PT = N/A PC = 3.878 (1.681) N = 37	PT = 5.083 (1.446) PC = 3.843 (1.517) N = 43

Note: *S.D.* in parentheses

Figure 3-3. Mean Values of Manipulation Checks by Treatment Condition

Next, we created change scores using Phase 1 and Phase 2 measures. Specifically, we created a change score for each of the anticipated guilt and willingness to launch measures by subtracting Phase 1 responses from Phase 2 responses. We chose this change-score approach in order to examine the impact of perspective taking on anticipated guilt and willingness to launch. Change-scores are frequently used in medical research (e.g., Powers et al. (2013)) and business

research (e.g., Wowak et al. (2011)) research that involves a pre-test/post-test experimental design (e.g., assessing weight loss by measuring a change in weight before and after a diet program) such as ours (e.g., assessing de-escalation of commitment by measuring a change in the escalation behavior before and after perspective taking). While using a change score is sometimes criticized for such issues as low reliability and ambiguity of interpretation (Klein et al. 2009), such criticisms are largely against "models that utilize a match between two (different) variables" (Klein et al. 2009) (i.e., taking a difference score between two matched variables that are conceptually different[2]), whereas our experiment involved repeated-measures (i.e., measuring change in the same variable between Phase 1 and Phase 2) in a pre-test/post-test experimental design. Further, our change scores showed acceptable reliability (see Table 3-2) (Straub et al. 2004), and our theorizing was centered on changes in anticipated guilt (H2) and willingness to launch (H3) caused by perspective taking as opposed to a match between two different variables.

Table 3-2. Descriptive Statistics and Reliability of Experiment 1[a]

	Variable	Mean	SD	Cronbach's α	1	2	3	4
1	Willingness to Launch	-0.471	1.281	0.848	-			
2	Perspective Taking[b]	-	-	-	-0.230**	-		
3	Personal Cost[b]	-	-	-	0.231**	-0.056	-	
4	Anticipated Guilt[c]	0.419	0.942	0.765	-0.304**	0.197**	-0.111	-

a. *: $p < 0.05$, **: $p < 0.01$, ***: $p < 0.001$

b. Experimentally manipulated between-subject variables

c. The first and fifth items measuring anticipated guilt (i.e., AGLT1 and AGLT5) were excluded from analyses due to low item loadings in the PLS measurement model

[2] A typical example of matched variables that are conceptually different would be the customer expectations of service provider vs. customer perceptions of service provider performance. In such case, the difference score represents the quality of the service provider.

Because it is not recommended to mix the dependent variable (i.e., willingness to launch product as scheduled) variables with the mediator (i.e., anticipated guilt) in a single factor analysis (Straub et al. 2004), we chose to use SmartPLS (Ringle et al. 2005) to assess the measurement model. With the exception of the first and fifth item for anticipated guilt (i.e., AGLT1 and AGLT 5), all item loadings were above the suggested threshold of 0.707 (Chin 1998) with their respective constructs as shown in Table 3-3. We decided to exclude the AGLT1 and AGLT5 because anticipated guilt was modeled as reflective and the items were interchangeable and highly correlated. Thus, we judged that dropping these items would not significantly reduce content validity (Gerbing and Anderson 1988; Straub et al. 2004).

Table 3-3. Item Loadings, Cross-Loadings and Average Variance Extracted (AVE)

Construct	Item	1	2	AVE
1. Anticipated Guilt	AGLT1	**0.700**	-0.048	0.572
	AGLT2	**0.783**	-0.250	
	AGLT3	**0.822**	-0.252	
	AGLT4	**0.803**	-0.253	
	AGLT5	**0.661**	-0.096	
2. Willingness to Launch Product	ESC1	-0.247	**0.939**	0.868
	ESC2	-0.248	**0.924**	

The measurement model was assessed again after the exclusion of AGLT1 and AGLT 5. All item loadings were above 0.81 with their intended latent variables, and all item cross-loadings were below 0.29 with other variables. In addition, the AVE values for anticipated guilt and willingness to launch were 0.68 and 0.87 respectively, indicating that more variance was captured by the construct measures relative to measurement error (Fornell and Larcker 1981).

Furthermore the AVE for each latent variable exceeded the squared correlation of anticipated guilt and willingness to launch (i.e., $r^2 = 0.03$), showing that more variance associated with each latent variable was captured by its measures rather than the measures of other latent variables (Fornell and Larcker 1981). Overall, these results provided strong support for our measurement model and convergent/discriminant validity.

3.3.3.2. Testing of Hypotheses

In order to test our hypotheses, we used Hayes' (2013) PROCESS macro for SPSS. Similar to the path analysis framework suggested by Edwards and Lambert (2007), the PROCESS macro provides capabilities to test models that consist of moderation and mediation through bootstrapping (Hayes 2013). We configured our model based on Model 7 in Hayes (Hayes 2013) which allows testing models that contain moderated mediation (i.e., the first stage moderated mediation model (Edwards and Lambert 2007; Hayes 2015)). Our analysis was conducted based on a 5,000 resample bootstrapping.[3] The results from our moderated mediation analysis are shown in Table 3-4 and Figure 3-4.

First, we examined the main effects of perspective taking on willingness to launch (*H1*) and anticipated guilt (*H2*). The results indicated that perspective taking had a significant negative effect on willingness to launch ($\beta = -0.455$, $t = -2.393$, $p < 0.05$), and a significant positive effect on anticipated guilt ($\beta = 0.359$, $t = 2.533$, $p < 0.05$). Further, the results indicated that anticipated guilt had a significant negative effect on willingness to launch ($\beta = -0.367$, $t = -3.659$, $p < 0.001$) (*H3*). The results also indicated that personal cost had a significant moderating effect on the relationship between perspective taking and anticipated guilt ($\beta = 0.561$, $t = 1.980$, $p < 0.05$), suggesting that a high personal cost strengthened the relationship between perspective

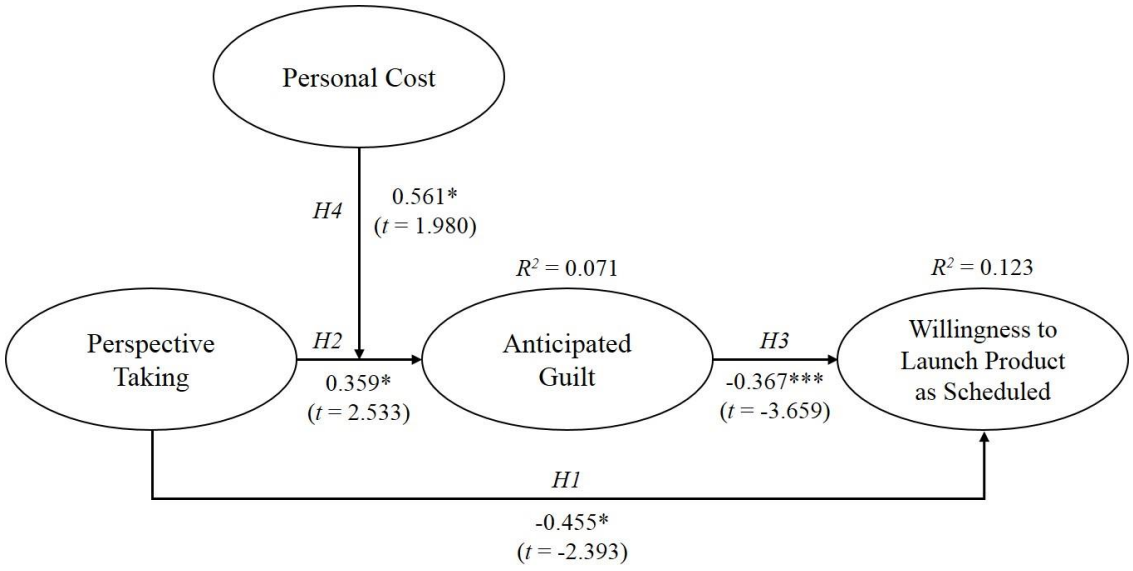
[3] Demographic variables (age, gender, and work experience) were not included in the final analysis, as they were not found to have any significant effects on our dependent variables (anticipated guilt and willingness to launch).

taking and anticipated guilt (*H4*). These results provided support for Hypotheses 1-4. We also evaluated the R^2 values of anticipated guilt (R^2 = 0.071, $F(3, 167) = 4.229$, $p < 0.01$) and willingness to continue product launch (R^2 = 0.123, $F(2, 168) = 11.740$, $p < 0.001$), and both were significant, indicating that the model explained 7% of the variance in anticipated guilt and 12% of the variance in willingness to launch.

Table 3-4. Unstandardized Regression Coefficients of Experiment 1[a]

	Anticipated Guilt			**Willingness to Launch Product as Scheduled**	
	Coefficient[1]	***t*-value**		**Coefficient**	***t*-value**
Perspective Taking	0.359*	2.533		-0.455*	-2.393
Anticipated Guilt	-	-		-0.367***	-3.659
Personal Cost	-0.186	-1.323		-	-
Perspective Taking x Personal Cost	0.561*	1.980		-	-
	R^2 = 0.071 $F(3, 167) = 4.229$, $p < 0.01$			R^2 = 0.123 $F(2, 168) = 11.740$, $p < 0.001$	

a. *: $p < 0.05$, **: $p < 0.01$, ***: $p < 0.001$



*: $p < 0.05$, **: $p < 0.01$, ***: $p < 0.001$

Figure 3-4. Path Analysis Results of Experiment 1

Next, we proceeded to test *H5*, which involved moderated mediation. We examined the *index of moderated mediation* provided by the PROCESS macro through bootstrapping (Hayes 2015). This index provides a direct test of whether the indirect effect is significantly different between two groups when the moderator is dichotomous (Hayes 2015). The index was statistically significant since the bias-corrected 95% confidence interval (BCCI) for the index did not include zero (*index* = -0.206, *SE* = 0.127, Lower-level BCCI = -0.537, Upper-level BCCI = -0.021), thus indicating that the indirect effect was significantly different between the two groups (i.e., high personal cost vs. low personal cost) (Table 3-5). Specifically, the indirect effect of perspective taking on willingness to launch was significant when the personal cost associated with de-escalation was high, whereas the indirect effect of perspective taking on willingness to launch was not found to be significant when the personal cost associated with de-escalation was low.

Table 3-5. Direct Effect and Conditional Indirect Effects of Perspective Taking

Perspective Taking		**Effect**	***SE***	**Lower-level BCCI[a]**	**Upper-level BCCI[a]**
Direct Effect		-0.455	0.190	-0.830	-0.080
Conditional Indirect Effects	High Personal Cost	-0.241	0.098	-0.481	-0.087
	Low Personal Cost	-0.035	0.074	-0.178	0.119

a. Bias-controlled 95% confidence interval

3.3.4. Discussion

In Experiment 1, we found empirical support for our research model. When decision makers took the perspective of one who could be harmed by the outcomes of a premature product launch, they became less inclined to launch the product as scheduled than those who did

not receive the perspective taking intervention. We also found anticipated guilt significantly mediated the aforementioned relationship – taking the perspective of one who could be harmed by the outcomes of a premature product launch led to greater feelings of anticipated guilt, which in turn decreased decision makers' willingness to launch the product as scheduled.

In addition, we demonstrate that the personal cost of de-escalation is an important factor amplifying the effect of perspective taking on anticipated guilt. Figure 3-5 illustrates the interaction between personal cost and perspective taking that we observed in our experiment. We conducted a simple slopes analysis following Aiken and West's (1991) approach to test whether the slopes were significantly different from zero. The results indicated that perspective taking had a significant positive influence on anticipated guilt when the personal cost of de-escalation was low ($\beta = 0.359$, $t = 2.533$, $p < 0.05$) and also when personal cost of de-escalation was high ($\beta = 0.920$, $t = 2.920$, $p < 0.001$).

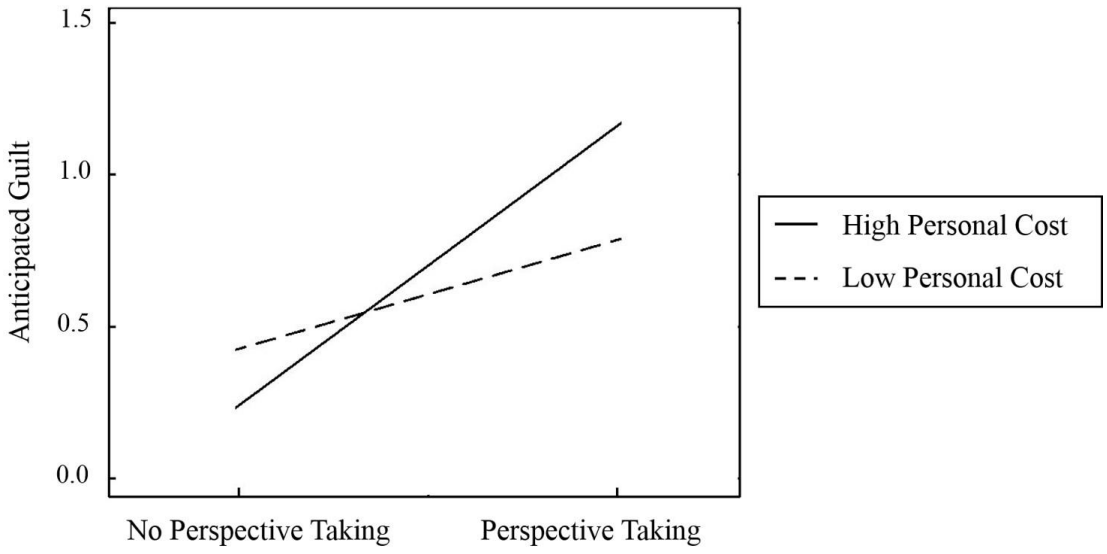


Figure 3-5. Interaction Plot Showing the Moderating Effect of Personal Cost on Perspective Taking and Anticipated Guilt

Our findings show that perspective taking has a stronger effect on anticipated guilt when the personal cost associated with de-escalation is high versus when it is low. In other words, decision makers who take the perspective of others will experience greater feelings of anticipated guilt when the personal cost associated with de-escalation is greater. Further, Experiment 1 provides empirical evidence that the indirect effect of anticipated guilt on the relationship between perspective taking and de-escalation is moderated by personal cost. The indirect effect of perspective taking through anticipated guilt was found to be significant when the personal cost associated with de-escalation was high, but there was no significant indirect effect when personal cost was low.

3.4. Experiment 2

The main focus of Experiment 1 was to examine whether perspective taking could influence de-escalation decisions and the role of anticipated guilt and personal cost in this relationship. We demonstrated that perspective taking could be used to de-escalate decision makers' commitment to a product launch. However, we only took into account the perspective of one who could be negatively affected by a premature product launch. In product launches, there are a variety of different stakeholders involved, often with conflicting interests (Carroll 1991; Hillman and Keim 2001; Ogden and Watson 1999). In Experiment 2, we address the single perspective limitation in Experiment 1 by taking into consideration how de-escalation can be influenced by two different stakeholder perspectives – the perspective of a shareholder who may experience a loss by *delaying* a premature product launch (i.e., the shareholder perspective) and the perspective of a customer who may experience a loss from launching a premature product *as scheduled* (i.e., the victim perspective).

While we identified the personal cost of de-escalation as a moderator strengthening the effect of perspective taking on de-escalation in Experiment 1, in Experiment 2 we consider a value orientation that could influence the effect of anticipated guilt on de-escalation, namely, the customer orientation of decision makers. Value orientation reflects that main principles that guide the behavior of individuals (Sommers and Scioli 1986), and is suggested to interact with one's emotional experiences in decision making. In Experiment 2, we identify the customer orientation of decision makers as one important value orientation in the context of premature product launch situations. We investigate how it can moderate the relationship between anticipated guilt and de-escalation, and the indirect effect of perspective taking on de-escalation through anticipated guilt (i.e. second stage moderated mediation). The research model for Experiment 2 is summarized in Figure 3-6.

Furthermore, we made the following methodological changes in Experiment 2 to extend Experiment 1 and to demonstrate the robustness of our findings by: (1) using a different type of manipulation for perspective taking, (2) collecting data from practitioners in the IT industry with product management experience, and (3) employing a different experimental design.

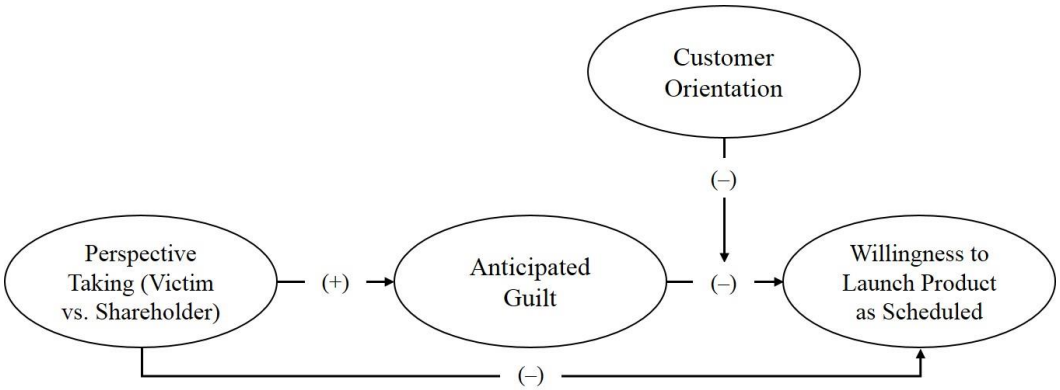


Figure 3-6. Research Model of Experiment 2[4]

[4] In Experiment 2, we investigate the influence of victim perspective taking vs. shareholder perspective taking (rather than victim perspective taking vs. no perspective taking in Experiment 1). The (+) sign between perspective

3.4.1. Theoretical Background and Hypotheses

3.4.1.1. Perspective Taking and Key Perspectives in Product Launch

Prior research on perspective taking has found that depending on whose perspective is taken, perspective taking may result in positive or negative behavioral outcomes (Galinsky et al. 2008; Ku et al. 2010). For instance, Galinsky et al. (2008) provide evidence that individuals performed better on the same analytical task when taking the perspective of a professor rather than taking the perspective of a cheerleader. They suggest that the difference in performance outcomes was due to the individuals demonstrating typical behavior that was consistent with the target of perspective taking. Therefore, it is critical to take into account the different perspectives involved in a premature product launch, as specific perspectives may not necessarily have a positive influence on promoting de-escalation of commitment.

In Experiment 2, we take into account the following two key perspectives involved in product launch situations, namely, the victim perspective and the shareholder perspective. Consistent with Experiment 1, the first key perspective we consider is the perspective of a product user who can be negatively affected by a launching a premature product *as scheduled* (i.e., the victim perspective). Launching such a product may have significant negative implications to product users – those who are directly impacted by the product and determine the success of the product in the market (Talke and Hultink 2010). Therefore, the perspective of these product users should be of important consideration when making product launch decisions. The other key perspective we take into consideration is the perspective of a shareholder who may

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taking and anticipated guilt denotes that victim perspective taking will increase the feelings of anticipated guilt relative to shareholder perspective taking, while the (–) sign between perspective taking and willingness to launch product as scheduled denotes that victim perspective taking will decrease willingness to launch product as scheduled relative to shareholder perspective taking.

suffer financial losses from *delaying* the launch of a premature product (i.e., the shareholder perspective). While product users are those who impacted by the product itself, shareholders (of the company launching the product) are those who are impacted financially by the timely launch of the product. The perspective of shareholders also should be of important consideration for decision makers during a product launch, as delays in a scheduled product launch can have a significant impact on firm profitability (Hendricks and Singhal 2008).

We suggest that decision makers will be more inclined to de-escalate their commitment towards a product launch decision when taking the perspective of a victim than when taking the perspective of a shareholder. In launch situations that involve a premature software-driven product, delaying the launch may be desirable to improve the quality of the product (Ebert 2007) and prevent any users from being harmed by a defective product, yet such a delay can lead to significant financial losses for the shareholders (Hendricks and Singhal 2008). Taking the perspective of a victim will reduce decision makers' commitment to launch a product as scheduled because they can better recognize how people can be negatively impacted by a software-driven product that is prematurely launched *as scheduled*. Relative to decision makers taking the perspective of a victim, those taking the perspective of a shareholder will be more committed to launching the defective software-driven product as scheduled, because they can better understand how shareholders can be negatively affected by *delaying* the product launch. Thus, we propose the following hypothesis:

> *H6: Decision makers taking the perspective of a victim involved in a premature product launch will be less committed to launching the product as scheduled than decision makers taking the perspective of a shareholder.*

3.4.1.2. Key Perspectives in Product Launch and Anticipated Guilt

As shown in prior research, taking the perspective of different targets can not only lead to differences in behavioral outcomes (Hung and Wyer 2009; Ku et al. 2010), but also can lead to differences in emotional experiences (Batson et al. 1997a; Hung and Mukhopadhyay 2012). For instance, Hung and Mukhopadhyay (2012) found in an experiment that individuals imagining themselves going to party experienced more joy and guilt than those imagining themselves studying for an exam during a mid-semester break. The premise is that the appraisal of the circumstances involved with anticipated events can influence both the type and strength of one's emotional experiences towards that event (Smith and Ellsworth 1985), and that the focus of these circumstances can be changed by taking different perspectives (Hung and Mukhopadhyay 2012).

In Experiment 1, we demonstrated that decision makers taking the perspective of an individual who could be negatively affected by launching a premature software-driven product (i.e., the victim perspective) experienced a greater increase in anticipated guilt about launching the product *as scheduled*. However, when *delaying* the product launch involves financial losses to the shareholders, we suggest that decision makers taking the shareholder perspective may experience less anticipated guilt about launching the product *as scheduled* relative to those taking the victim perspective. Decision makers taking the perspective of a shareholder will be more focused on the evaluation of potential negative consequences related to *delaying* the product launch (i.e., the financial loss caused to stakeholders), and therefore, experience less anticipated guilt. Thus, we propose the following hypothesis:

H7: Decision makers taking the perspective of a victim involved in a premature product launch will experience greater feelings of anticipated guilt about

prematurely launching a product as scheduled than decision makers taking the perspective of a shareholder.

3.4.1.3. Value Orientation

In Experiment 2, we investigate the decision maker's value orientation as a factor influencing the negative relationship between anticipated guilt and de-escalation (*H3* in Experiment 1). Values are a set of normative standards reflecting desired goals, states, and behaviors (Frederick 1995; Rokeach 1973; Schwartz and Bilsky 1990), and generally serve as the criteria for individuals deciding between alternative behaviors or outcomes that fulfill one's needs (Rokeach 1973; Schwartz and Bilsky 1987). Value orientation refers to the predominant guiding principles (i.e., values) that individuals espouse in "structuring experiences or general evaluative notions regarding self and environment" (Sommers and Scioli 1986, p. 418). Prior research suggests that employees' value orientation has significant implications for organizations. Specifically, such research has shown that the congruence between employee value orientations and organizational values influences important psychological (e.g., commitment) and performance-related outcomes (Meglino and Ravlin 1998). Although limited, a few studies have also provided empirical evidence that value orientation can interact with affective experiences to influence behavior and decision making (Korsgaard et al. 1996; Van Kleef et al. 2006).

Despite the potential impact on decision making (de Luque et al. 2008; Meglino and Ravlin 1998), less attention has been given to the role of value orientation in the escalation literature. To date, there has been only one study that has investigated the impact of values on escalation of commitment decisions, with a limited focus on political value orientation (Gromet and Tetlock 2014). Gromet and Tetlock (2014) found that in evaluating troubled ventures experiencing escalation of commitment, conservative individuals viewed additional investment

in the development of fighter jets (conservative value) more positively, while liberal individuals viewed additional investment in the development of solar technology (liberal value) as more positive. They suggest that the escalation is evaluated more positively when individuals' political value orientation and values are embodied in the venture domain.

Among the different value orientations in the literature, of interest in this study is the *customer orientation* of decision makers. Prior research has suggested that a strong customer orientation is fundamental for the success of new products (Cooper and Kleinschmidt 1995), because such an orientation emphasizes producing a quality product that satisfies the needs of its users (Gatignon and Xuereb 1997). We deemed the customer orientation of decision makers to be of importance in the context of a premature product launch because such an orientation is likely to make individuals more sensitive to the delivery of a reliable product. In what follows, we discuss the moderating role of decision makers' customer orientation on the relationship between anticipated guilt and de-escalation of commitment.

3.4.1.4. Customer Orientation

Customer orientation refers to "a work value that captures the extent to which employees' job perceptions, attitudes, and behaviors are guided by an enduring belief in the importance of customer satisfaction" (Zablah et al. 2012, p. 24). Customer oriented employees tend to exhibit greater concern for the users of their products/services and act in the direction that best addresses the users' needs (Boles et al. 2001; Schwepker and Good 2004).

In Experiment 2, we suggest that decision makers' degree of customer orientation will moderate the relationship between anticipated guilt and de-escalation. More specifically, we theorize that when decision makers are more customer oriented, anticipated guilt will have a stronger negative impact on willingness to launch a premature software-driven product as

scheduled. Because customer-oriented decision makers are driven by values that emphasize the importance of addressing the product users' best interests, they may be more sensitive to the harm that can come to users from launching a premature product. Therefore, we expect that as individuals' customer orientation increases, the relationship between anticipated guilt and willingness to launch a premature software-driven product that could bring harm to customers will be strengthened. Thus, we propose the following hypothesis:

H8: The customer orientation of decision makers will moderate the relationship between anticipated guilt and de-escalation such that the effect of anticipated guilt is stronger when decision makers are more customer-oriented rather than less.

Furthermore, we suggest a moderated-mediation relationship in that the mediating effect of anticipated guilt is moderated by the decision maker's degree of customer orientation based on Hypothesis 7 & 8. Specifically, we suggest that when decision makers are more customer oriented, anticipated guilt (about prematurely launching a product as scheduled) will have a greater mediating effect in the relationship between perspective taking and de-escalation of commitment in contrast to when decision makers are less customer oriented. Thus, we state the following hypothesis:

H9: The customer orientation of decision makers will moderate the extent to which anticipated guilt mediates the indirect of effect of perspective taking on de-escalation. More specifically, the indirect of anticipated guilt will be greater when decision makers are more customer oriented rather than less.

3.4.2. Method

Consistent with the approach taken in Experiment 1, we conducted a scenario-based laboratory experiment to test the hypothesized causal relationships in a controlled setting. However, in addition to considering the shareholder perspective and the subjects' customer orientation, Experiment 2 extends the Experiment 1 in three ways to demonstrate the robustness of our findings. First, we strengthened our perspective taking manipulation by instructing our subjects to engage in perspective taking and write down in a few sentences how they would think and feel as the perspective taking target. Such an approach provides a stronger manipulation of perspective taking than the narrative approach used in Experiment 1, and has been successfully implemented by several studies in the perspective taking literature (e.g., Galinsky and Ku (2004) and Ku et al. (2010)).

Second, rather than using student subjects, we collected data from a practitioner sample. In Experiment 1, we deemed student subjects appropriate because our study was aimed at generalizing to theory (Yin 2009). Also, perspective taking is a cognitive activity that commonly occurs in both workplace settings and in normal life and we had no reason to believe that managers would be any less susceptible to being influenced by perspective taking than students. However, the use of student subjects does limit our ability to generalize our findings. To address this limitation, we conducted the experiment online with actual product managers working in the IT industry in Experiment 2.

Lastly, we employed a between-subject design in Experiment 2. In Experiment 1, we used repeated measures. While the repeated measures design allowed us to control for individual differences (i.e., subjects effectively serve as their own controls), such designs are subject to validity threats (e.g., the possibility of demand effects (Sawyer 1975)). To demonstrate the

robustness of our results, in Experiment 2 we dropped the repeated measures element from our experimental design.

3.4.2.1. Experimental Design and Participants

The experimental design for Experiment 2 involved a 1 x 2 factorial design in which perspective taking was manipulated as a between subject factor. Each participant was randomly assigned to one of the two experimental conditions (i.e., shareholder condition vs. victim condition). Participants were instructed to read a short scenario, then go through the perspective taking manipulation, and answer a series of questions related to the scenario. Similar to the procedures of Experiment 1, we conducted several rounds of pilot tests to refine the scenario and perspective taking manipulation, as well as validating the customer value measures that were added in Experiment 2.

Experiment 2 was conducted online through Qualtrics – a total of 72 usable responses from product managers working in the information technology (IT) industry were obtained.[5] The participants' average age was 37.6 years, approximately 69% of them were male (n = 50) and 31% were female (n = 22). The participants' average overall work experience was 14.7 years – on average, they had 7.4 years of product management related work experience and 10.6 years of IT related work experience.[6]

[5] The total number of participants (i.e., $N = 72$) reported here does not include those participants who either failed the manipulation check question or failed the attention check question. Regarding the manipulation check question, participants were asked the degree to which they agreed upon taking the perspective of either the stakeholder or victim based on a 7 point Likert scale. Only the participants that answered 5 (i.e., "Somewhat Agree") or above were able to proceed to the remainder of the questionnaire. Regarding the attention check question, participants were given the following question: "Please select "Somewhat Disagree" for this statement." Only when participants selected "Somewhat Disagree" for this question were they able to complete the questionnaire.

[6] All demographic information – age, gender, overall work experience, product management experience, and IT related work experience – were tested as control variables for willingness to launch, and were found to be insignificant. Therefore, they were excluded from subsequent analyses.

3.4.2.2. Decision Task and Measures

Experiment 2 was conducted in a single phase, as it involved a between subjects design. Participants were introduced to a product launch decision scenario, which was adapted from prior escalation research (Keil et al. 2007a). The experiment was consistent with typical escalation situations in which individuals received negative feedback regarding a previously chosen course of action, and then had to decide whether to continue or not (Brockner 1992a).

In this scenario, participants were asked to take the role of a product manager who was responsible for the development and launch of a new implantable heart device for treating heart diseases. A central feature of this device was the software that enabled wireless transmission of diagnostic information so that doctors could remotely monitor their patients. Participants were told that the product is scheduled to be launched in two weeks, but that a third party clinical research organization reported that the device had a remote chance of being hacked which could result in the device shutting down or delivering electrical pulses that could prove fatal. Participants were further notified that they had full responsibility for launching the product as scheduled, and that they had already announced on-time delivery to a number of leading hospitals.

After reading the scenario, the participants were introduced to the perspective taking manipulations. Participants in the shareholder perspective treatment group were asked to take the perspective of a shareholder who would lose money because of delaying the product launch and then write a few sentences about how they would think and feel, whereas participants in the victim perspective treatment group were asked to take the perspective of someone whose father may die because of the heart device being hacked. Following the perspective taking manipulations, participants were asked to respond to the measures for willingness to launch the

product as scheduled and anticipated guilt which were adapted from Lindsey (2005) and Lee et al. (2012) respectively. Further, participants were asked to respond to the manipulation check question followed by the customer value measures adapted from Rindfleisch and Moorman (2003). Finally, participants were asked to respond to demographic questions relating to age, gender, industry information, and work experience. Appendix 3-C shows the experimental scenario used in Experiment 2. All measures used in Experiment 2 (shown in Appendix 3-D) were based on seven-point Likert scales with the exception of anticipated guilt, which was measured using a semantic differential scale anchored from "not at all" (1) to "extremely" (7).

3.4.3. Results

3.4.3.1. Manipulation Checks, Construct Validity, and Descriptive Statistics

To assess the effectiveness of the perspective taking manipulations, we examined the mean values of the perspective taking manipulation checks for each treatment group. Subjects in the shareholder perspective treatment group were asked to indicate the degree to which they agree that they took the perspective of a shareholder investing money in the company, whereas subjects in the victim perspective treatment group were asked to indicate the degree to which they agree that they took the perspective of someone whose father may die from the cardiac arrest (questions shown in Appendix 3-D). The mean value of the manipulation check question (based on a seven-point Likert scale) was 6.00 (n = 37, SD = 0.91) for the shareholder perspective treatment group and 6.43 (n = 35, SD = 0.70) for the victim perspective treatment group – indicating that our manipulations were effective in both groups.

Next, we tested the validity and reliability of the main constructs in Experiment 2. To assess convergent and discriminant validity, we conducted a principal components analysis with

Varimax rotation with anticipated guilt and customer value (shown in Table 3-6). With the exception of the fourth item measuring customer value, all items had loadings above 0.868 for the constructs they were intended to measure, therefore demonstrating sufficient convergent validity, while all items cross-loadings were below 0.071 with other constructs, demonstrating sufficient discriminant validity (Straub et al. 2004).

Table 3-6. Principle Components Analysis with Varimax Rotation

	Factor	
	Anticipated Guilt	**Customer Value**
AGLT1	**0.923**	0.071
AGLT2	**0.886**	0.087
AGLT3	**0.934**	0.049
AGLT4	**0.948**	0.049
AGLT5	**0.927**	-0.042
CUS1	0.015	**0.868**
CUS2	-0.009	**0.880**
CUS3	0.012	**0.906**
CUS4	0.119	**0.675**

To assess the reliability of our measures, we examined the Cronbach's alpha for each construct. The alpha values for all scales exceeded 0.8, thus demonstrating adequate reliability (Straub et al. 2004). However, when the fourth item for customer value was dropped, the Cronbach's alpha increased from 0.850 to 0.883. Due to the reasons of low item loading, increase in reliability, and the limited extent to which the content validity of customer value is affected, we excluded the fourth item measuring customer value from subsequent analyses

(Gerbing and Anderson 1988). The reliabilities and descriptive statistics for the main constructs of this study are shown in Table 3-7.

Table 3-7. Descriptive Statistics and Reliability of Experiment 2[a]

Variable		Mean	SD	Cronbach's α	1	2	3	4
1	Willingness to Launch	4.174	2.078	0.880	-			
2	Perspective Taking[b]	-	-	-	-0.432**	-		
3	Customer Value[c]	6.093	0.823	0.883	0.085	0.083	-	
4	Anticipated Guilt	4.581	1.913	0.958	-0.668**	0.247*	0.055	-

a. *: $p < 0.05$, **: $p < 0.01$, ***: $p < 0.001$

b. Experimentally manipulated between-subject variables (Shareholder perspective coded as 0 and Victim perspective coded as 1)

c. Fourth item measuring customer value (i.e., CUS4) excluded from analyses

3.4.3.2. Testing of Hypotheses

As in Experiment 1, Hayes' PROCESS macro for SPSS was used in Experiment 2 to conduct a moderated mediation analysis. However, because our research model in Experiment 2 involved a second stage moderated mediation model (Edwards and Lambert 2007; Hayes 2015), we configured our model based on Model 14 with 5,000 bootstrap samples as suggested by Hayes (2015). The results from our moderated mediation analysis are shown in Table 3-8 and Figure 3-7.

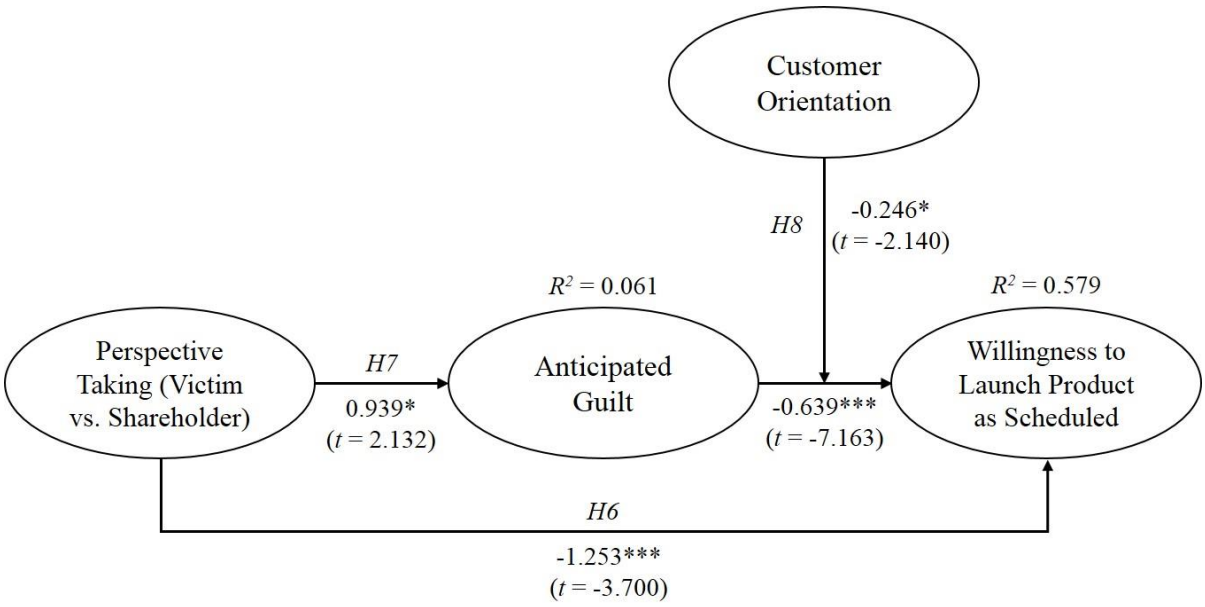
First, we examined how taking the different perspectives (i.e., victim versus shareholder) would influence willingness to launch (*H6*) and anticipated guilt (*H7*). We found that individuals taking the perspective of a victim were less willing to launch the product as scheduled (β = -1.253, t = -3.700, $p < 0.001$) and experienced more anticipated guilt (β = 0.939, t

= 2.132, $p < 0.05$) relative to those taking the perspective of a shareholder, thus providing support for Hypotheses 6 and 7. Although not specified for hypothesis testing in Experiment 2, we did replicate the results for Hypothesis 3 – there was a significant negative effect of anticipated guilt on willingness to launch (β = -0.639, t = -7.163, $p < 0.001$). The results also provided support for Hypothesis 8 as indicated by the significant moderating effect of customer orientation on the relationship between anticipated guilt and willingness to launch (β = -0.246, t = -2.140, $p < 0.05$). From the assessment of R^2 values, we found that approximately 6% of the variance in anticipated guilt (R^2 = 0.061, $F(1, 70) = 4.545$, $p < 0.05$) and 58% in willingness to launch (R^2 = 0.579, $F(4, 67) = 23.072$, $p < 0.001$) were explained through our model.

Table 3-8. Unstandardized Regression Coefficients of Experiment 2[a]

	Anticipated Guilt			**Willingness to Continue Product Launch**	
	Coefficient	***t*-value**		**Coefficient**	***t*-value**
Perspective Taking	0.939*	2.132		-1.253***	-3.700
Anticipated Guilt	-	-		-0.639***	-7.163
Customer Value	-	-		0.439*	2.158
Anticipated Guilt x Customer Value	-	-		-0.246*	-2.140
	$R^2 = 0.061$ $F(1, 70) = 4.545$, $p < 0.05$			$R^2 = 0.579$ $F(4, 67) = 23.072$, $p < 0.001$	

a. *: $p < 0.05$, **: $p < 0.01$, ***: $p < 0.001$



*: $p < 0.05$, **: $p < 0.01$, ***: $p < 0.001$

Figure 3-7. Path Analysis Results of Experiment 2

Having established customer orientation as a moderator of the relationship between anticipated guilt and willingness to launch, we proceeded to test the moderated mediation hypothesis (*H9*). The index of moderated mediation (Hayes 2015) was statistically significant since the BCCI did not include zero (*index* = -0.231, *SE* = 0.152, Lower-level BCCI = -0.653, Upper-level BCCI = -0.015); thus, indicating that the indirect effect of perspective taking on willingness to launch through anticipated guilt was moderated by customer orientation. Table 3-9 summarizes the direct effect and the indirect effect of perspective taking on de-escalation at three different levels (Mean ± 1*SD*) of customer orientation. We found that at all three levels of customer orientation, the conditional indirect effects of perspective taking were significant because the upper and lower level BCCIs did not include zero. However, the indirect effect of perspective taking became stronger when individuals were more customer oriented than less, indicating the importance of anticipated guilt for individuals with greater customer orientation.

Table 3-9. Direct Effect and Conditional Indirect Effects of Perspective Taking

Perspective Taking		Effect	*SE*	Lower-level BCCI[1]	Upper-level BCCI[1]
Direct Effect		-1.253	0.339	-1.930	-0.577
Conditional Indirect Effects	High Customer Value (+1*SD*)	-0.789	0.374	-1.574	-0.090
	Mean Customer Value	-0.599	0.275	-1.159	-0.065
	Low Customer Value (-1*SD*)	-0.410	0.208	-0.900	-0.065

a. Bias-controlled 95% confidence interval

3.4.4. Discussion

The results from Experiment 2 provide support that anticipated guilt and de-escalation decisions can be influenced by taking different perspectives into account. Specifically, our results suggest that decision makers taking the perspective of a victim involved in a premature product launch will be less willing to prematurely launch a product as scheduled than those taking the perspective of a shareholder. We also found empirical support for the mediation relationship – taking the perspective of a victim rather than a shareholder resulted in greater feelings of anticipated guilt shareholder, which in turn resulted in less willingness to prematurely launch a product.

Additionally, in Experiment 2, we provide empirical evidence that decision makers' level of customer orientation can moderate the relationship between anticipated guilt and de-escalation. The interaction between customer orientation and anticipated guilt for individuals taking the victim perspective is depicted in Figure 3-8.[7] Results from a simple slope analysis (Aiken and

[7] Due to perspective taking being coded as a binary variable (i.e., shareholder perspective as 0 and victim perspective as 1), we do not generate the interaction plot using the mean value of perspective taking as it would have no meaning. Instead we show the patterns of interaction between customer orientation and anticipated guilt for the *victim* perspective. Note that the main difference between shareholder and victim perspective is that the degree of willingness to launch is higher in the shareholder group (i.e., the intercept) – the interaction patterns (i.e., slopes) are identical in both perspective groups.

West 1991) indicated that there was a significant negative effect of anticipated guilt on willingness to launch at low (–1*SD*, β = -0.436, t = -3.440, $p < 0.001$), mean (β = -0.639, t = -7.184, $p < 0.001$), and high (+1*SD*, β = -0.841, t = -7.159, $p < 0.001$) levels of customer orientation.

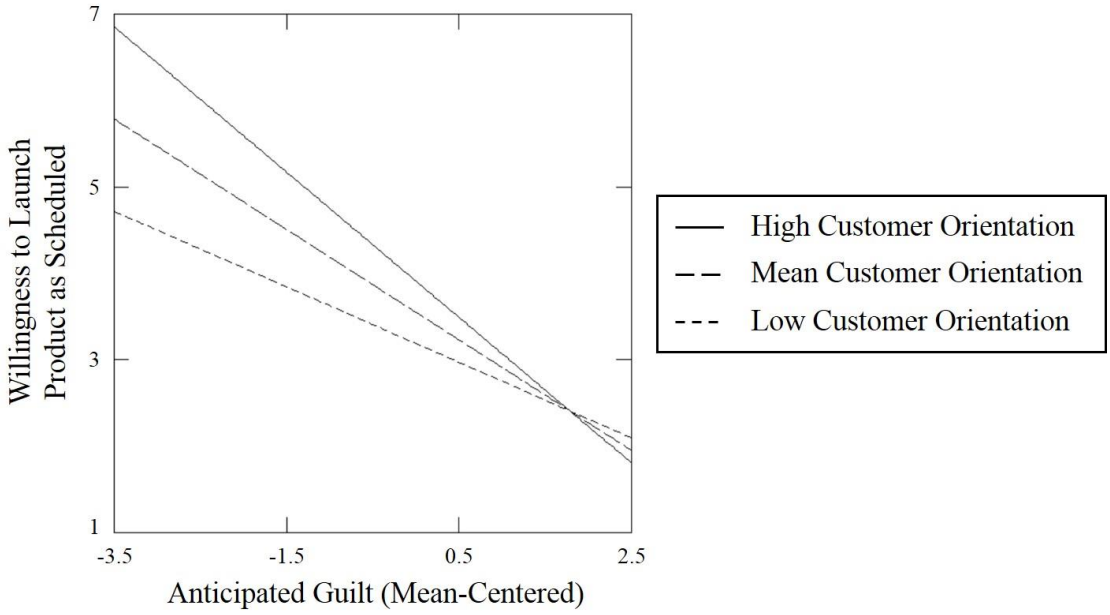


Figure 3-8. Interaction Plot Showing the Moderating Effect of Customer Orientation on Anticipated Guilt and Willingness to Launch Product as Scheduled

Our findings suggest that the negative effect of anticipated guilt on willingness to launch becomes stronger when decision makers are more customer oriented (as indicated by the steeper slopes in Figure 3-8). Specifically, decision makers who experience greater anticipated guilt will be less willing to launch a product as scheduled when the degree of their customer orientation is greater. However, it is worth noting that different from our expectations, individuals who were more customer oriented showed greater willingness to launch a premature product as scheduled at *low* levels of anticipated guilt. We can only speculate the reason behind this finding. When

individuals experience less anticipated guilt about launching the product as scheduled, they may view the premature product launch situation as less problematic. In such cases, individuals who are more customer oriented may devote more attention to the value of the product rather than the potential harm it may cause, and therefore may be more willing to launch the product as scheduled.

Lastly, we provide empirical support that the indirect effect of perspective taking on de-escalation through anticipated guilt is moderated by decision makers' customer orientation (i.e., moderated mediation). Figure 3-9 illustrates the negative relationship between decision makers' customer orientation and the indirect effect. The slope represents the index of moderated mediation, which we found to be significantly different from zero in our study. In other words, our results suggest that the stronger the customer orientation of decision makers, the greater the indirect effect of perspective taking on de-escalation through anticipated guilt.

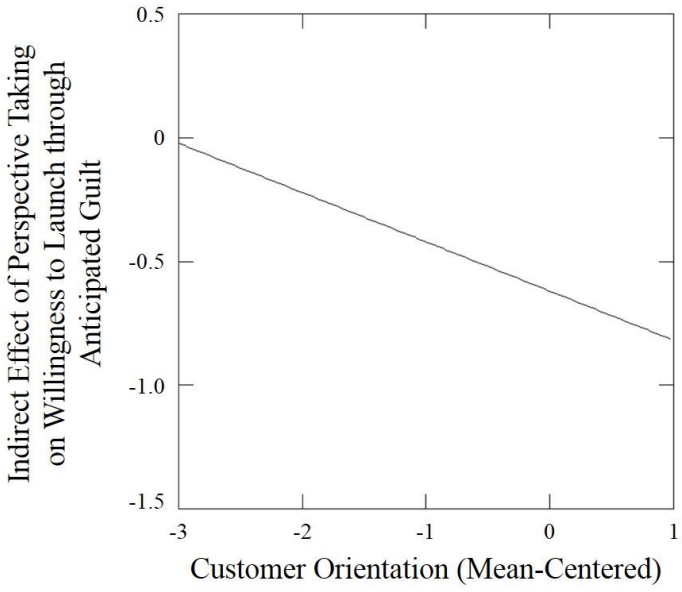


Figure 3-9. Indirect effect of Anticipated Guilt

3.5. General Discussion

In this research, we suggested the need for a "psychological" tactic that can be used to help induce de-escalation of commitment in the context of product launch decisions. By drawing on the notion of perspective taking, we suggested that taking the perspective of individuals who may be negatively affected by a software-driven product launch can reduce a decision maker's commitment to launch a product as scheduled. Further, we theorized that the effect of perspective taking on de-escalation is mediated by anticipated guilt. Lastly, we suggested two factors that can influence the mediation of anticipated guilt: (1) the personal cost of de-escalation on the relationship between perspective taking and anticipated guilt (i.e., first stage moderated mediation), and (2) the customer orientation of decision makers on the relationship between anticipated guilt and de-escalation (i.e., second stage moderated mediation). By conducting two laboratory experiments using a highly controlled setting, we obtained strong empirical evidence for the hypothesized relationships.

3.5.1. Theoretical Implications

Our study makes several meaningful contributions to both de-escalation and perspective taking research. First, this study suggests a practical and inexpensive tactic that can be used to induce de-escalation of commitment in product launch decision settings. Specifically, the findings of this study show that decision makers' commitment to a failing course of action can be reduced by simply telling them to put themselves in the shoes of someone else (Experiment 1). This is an extremely simple tactic, compared to some other tactics reported in the de-escalation literature (e.g., replacing top-management (Keil 1995; Ross and Staw 1993)). Further, Experiment 2 underscores the importance of identifying the right perspective taking target to

induce de-escalation of commitment. Specifically, Gunia et al. (2009) found that taking the perspective of the initial decision maker (responsible for negative outcomes) can lead a subsequent decision maker to escalate commitment to a failing course of action, presumably for self-justification reasons. In contrast, our research shows that escalation of commitment can be reduced when the perspective taking target involves an individual who may be negatively influenced by an escalation decision.

Second, this study contributes to the de-escalation literature by identifying an emotion construct that can induce de-escalation of commitment. In recent years, escalation researchers have begun to focus on the role of emotions in promoting escalation (e.g., anticipated regret (Wong and Kwong 2007) and negative affect (Wong et al. 2006)), or limiting escalation (e.g., regret (Ku 2008)). In this study, we showed that anticipated guilt about potential negative outcomes for other individuals can induce de-escalation of commitment.

This study also makes meaningful contributions to the literature on perspective taking. Prior research on perspective taking has shown that perspective taking causes changes in peoples' empathy, which subsequently leads to changes in attitudes (Batson et al. 1997b; Vescio et al. 2003) or behaviors (Coke et al. 1978). This study provides fresh empirical support that this two-step process of perspective taking can be further extended to different contexts and emotions Specifically, our findings show that perspective taking can increase the feelings anticipated guilt, which subsequently leads to a reduction in escalation of commitment; in other words, the effect of perspective taking on de-escalation is mediated by anticipated guilt.

Further, this study contributes to the literature on perspective taking by showing that individuals can experience greater or lesser anticipated guilt when taking the perspective of others. While prior research has shown that perspective taking influences individuals' emotional

experiences (Parker et al. 2008), it have focused on a limited set of emotions such as sympathy (e.g., Batson et al. (1989), Davis (1996), Vaish et al. (2009)). Our study suggests that perspective taking can cause a change in a negative and future-oriented emotion (i.e., anticipated guilt).

Lastly, we contribute to the literature on perspective taking and de-escalation by identifying factors that can influence the mediation of anticipated guilt in the relationship between perspective taking and de-escalation. Specifically, our findings show that the personal cost of de-escalation can enhance the effect of perspective taking on anticipated guilt, and that being more customer oriented can enhance the impact of anticipated guilt on de-escalation. While prior studies in the escalation literature have shown than emotions matter, they have focused only on the direct effect of emotions (e.g., Wong et al. (2006), Wong and Kwong (2007)). In this study, we further contribute to the literature by identifying moderating factors that can either strengthen emotional experiences when considering perspective taking (i.e., personal cost of de-escalation), or strengthen the impact of emotions on de-escalation of commitment.

3.5.2. Practical Implications

Many organizations face the challenge of escalation of commitment in IT projects (Keil et al. 2000a). To date, prior de-escalation studies have focused on identifying tactics that can be used to terminate, or redirect troubled projects. In contrast, little is known about how to reduce escalation of commitment in the context of product launch decisions. In the development of new software-driven products, decision makers often choose to prematurely launch a product as scheduled despite negative consequences that can result from it. Indeed, such decisions to

launch a premature software-driven product can lead to a nightmare situation for users, and can also result in significant business losses.

Against this backdrop, this study suggests a simple psychological tactic that can be employed to potentially persuade decision makers to de-escalate their commitment to launching a product as scheduled. We believe that this perspective taking tactic can be used more universally, compared to some other de-escalation tactics that require a great amount of effort, or can cause a significant disruption within an organization (e.g., replacing top-management (Keil 1995; Ross and Staw 1993)). However, caution needs to be taken when considering perspective taking as a de-escalation tactic, because its effectiveness in promoting de-escalation will be dependent on which target perspective has chosen. Our findings suggest that individuals who may be negatively influenced by the consequences of an escalation decision may be the best perspective taking target for promoting de-escalation.

In addition, the findings of this study suggest that managers should recognize how anticipated guilt can be used in a positive way. Although the experiences of negative emotions in the workplace are generally to be avoided due to their adverse impact on attitude, behavior, and performance (Ashkanasy and Daus 2002), anticipated guilt could also be viewed in a positive light as it can help reduce undesirable behaviors (Grant and Wrzesniewski 2010). In our study, we showed that anticipated guilt can reduce escalation of commitment. Another powerful aspect of anticipated guilt is that it is anticipatory – meaning that the negative outcomes that induce guilt can be imaginary. When providing advice to decision makers who are trapped in an escalation situation, managers (or colleagues) can promote de-escalation by having them imagine a situation (for example through perspective taking) that can arouse feelings of guilt.

Furthermore, we showed that associating a high personal cost with de-escalation can further enhance the feelings of anticipated guilt. This suggests that although managers might prefer to associate a low personal cost with de-escalation so that de-escalating commitment to a failing course of action can be inexpensive for employees, our study suggests that associating a high cost with de-escalation can induce greater anticipated guilt through perspective taking, thus strengthening the practical impact of perspective taking on de-escalation.

Lastly, our results suggest the degree of customer orientation exhibited by decision makers can enhance the impact of perspective taking on de-escalation decisions through *inducing anticipated guilt*. Although employee customer orientation is viewed as a stable trait of individuals, research suggests that it can be influenced by organization/team cultures or one's superior (Zablah et al. 2012). Fostering an organizational culture or a team environment that puts emphasis on the customers' interest first may support the strengthening of decision makers' customer orientation, which may further support the promotion of de-escalation through amplifying the feelings of anticipated guilt using perspective taking. However, managers should also recognize that greater customer orientation of decision makers may not necessarily be desirable when inducing anticipated guilt is difficult, as it may *inhibit* de-escalation of commitment in troubled product launch situations.

3.5.3. Limitations and Directions for Future Research

Like any other research, this study is not without limitations. The first limitation relates to type of experimental approach used in this study. To investigate the relationship between perspective taking and de-escalation, we conducted a scenario-based laboratory experiment which has typically been the method of choice in studies investigating escalation and de-

escalation of commitment (e.g., Conlon and Garland (1993), Boulding et al. (1997), Wong and Kwong (2007)). Although this approach limits our capability to capture all of the complex dynamics in escalation situations, it allows us to test and extend theory by examining the causal relationships in our model with "precision and control" (Dennis and Valacich 2001, p. 17). Hence, we believe that this study contributes meaningful insights regarding the relationships between perspective taking, emotions, and de-escalation.

Additionally, we limited our focus to a specific type of anticipatory emotion, namely, anticipated guilt. De-escalation situations may involve a wide variety of emotions that may have different effects on de-escalation of commitment. Additionally, our findings suggest that when the personal cost involved with de-escalation is low, anticipated guilt does not mediate the relationship between perspective taking and de-escalation. Other psychological mechanisms or emotions (e.g., empathy) may play a key role in linking perspective taking and de-escalation when personal cost is low. Future research is warranted to investigate the extent to which other emotions influence de-escalation behaviors.

3.6. Conclusion

Prior studies in the de-escalation literature have focused on identifying tactics that promote de-escalation of commitment, yet these tactics may not always be practical. In this study, we used the notion of perspective taking to propose a simple "psychological" tactic that can induce de-escalation in launching software-driven products. Through two laboratory experiments, we found strong support that taking the perspective of individuals that can be negatively influenced by a product launch can indeed effectively promote de-escalation of commitment in this context. The experiences of anticipated guilt mediated the relationship

between perspective taking and de-escalation. Furthermore, this indirect effect is significantly greater when the decision maker's personal cost associated with de-escalation is high rather than low, or when the decision maker was more customer oriented.

Appendix 3-A. Experimental Scenario and Manipulations of Experiment 1

1. Phase 1 Scenario

You are the director of new product development at Radiation Treatment Incorporated, a company that specializes in machines that deliver prescribed doses of radiation to treat cancer patients. At the heart of the machine is a specialized software program that controls the intensity and targeting of an external radiation beam for treating cancer tumors.
For the past year, you have been responsible for an exciting new project, CAPS – which involves new software technology that promises to improve the targeting of the radiation so that there are fewer side effects to surrounding tissues in the body. Next week the new software will be installed in thousands of hospitals and treatment centers around the world.
Today, you discovered a software defect, which could under extremely rare circumstances result in increased doses of radiation for one in a billion patients that are treated. If this were to occur, the patient might experience radiation sickness with symptoms that include nausea, vomiting, fever, headaches, and increased susceptibility to infections. When you brought the matter to the attention of the CEO, **he told you to ignore the defect completely and ordered you to launch the product as scheduled.** His explanation was that the risks were minimal and that your company had already entered into contracts with hospitals to deliver the product next week. Therefore, **a delay in the product launch will lead to a costly lawsuit against your company.** At the present time, only you and the CEO are aware of the software defect.
At this point, you are now wondering whether or not you should launch the product next week as scheduled, or delay the product launch indefinitely until the defect is fixed.

2. Phase 2 Scenario

[Perspective taking]
Before making your final decision, you decided to consult with your best friend. After swearing her to secrecy, you explained your dilemma and solicited her advice on what to do. Your friend says the following: **"Put yourself in the shoes of someone whose mother may suffer from radiation sickness caused by this software. It could even be YOUR MOTHER. Wouldn't you want to do everything you could to delay the launch to ensure that the product is not going to make your mother or anyone else's mother sick?"**

[High cost]
You are responsible for the successful delivery of the product next week. **The CEO is notorious for not tolerating employees who disobey his orders. On multiple occasions you have observed situations in which employees who failed to follow the CEO's orders were severely scolded and denied an expected promotion in spite of a very strong track record. And there is an unconfirmed rumor that, in one case, an employee was even fired for disobeying the CEO.**

[Low cost]
You are responsible for the successful delivery of the product next week. **The CEO is regarded as being very tolerant when employees disobey his orders. On multiple occasions you have observed situations in which employees who failed to follow the CEO's orders still received expected promotions and were not scolded.**

At this point, you are trying to make your final decision. You are now wondering whether or not you should launch the product as scheduled, or delay the product launch indefinitely until the defect is fixed.

Appendix 3-B. Constructs and Measurement Items of Experiment 1

Construct	Measurement Item	
Willingness to Continue Product Launch	ESC1	I would launch the product as scheduled.
	ESC2	I would follow the CEO's order and launch this product as is.
Anticipated Guilt[1]	AGLT1	I would feel remorseful if I didn't try to fix the software defect.
	AGLT2	I would feel guilty if I launched the product as scheduled.
	AGLT3	I would feel sorry about following the CEO's order and launching the product as is.
	AGLT4	I expect that I would feel bad if I didn't try to delay the product launch.
	AGLT5	I would feel guilty if I did nothing to fix the software defect.
Perspective Taking[2]	PT1	I took my friend's advice into consideration.
	PT2	I took into consideration the person whose mother may suffer from radiation sickness caused by this software.
Personal Cost[3]	COST1	If I don't follow the CEO's order, I may get severely scolded.
	COST2	The CEO is notorious for not tolerating employees who disobey his orders.

1. Items 1 and 5 for anticipated guilt were excluded from the main analysis due to low item loadings in our testing of the measurement model using PLS
2. Perspective taking manipulation checks – These items were given only to the perspective taking treatment group.
3. Personal cost manipulation checks.

Appendix 3-C. Experimental Scenario and Manipulations of Experiment 2

Experimental Scenario

You work for HealthTronics, a company that specializes in the development of medical devices. For the past three years, your company has been developing a new implantable heart device that helps treat irregular heartbeats and prevent cardiac arrest by delivering painless electrical pulses. A great new feature of this heart device is that the software code that drives it provides diagnostic information that is wirelessly transmitted enabling doctors to remotely monitor their patients' heart conditions, thus allowing them to spot potential problems before they lead to life threatening situations. Cardiologists have expressed delight with this new heart device and hospitals have scheduled implant procedures on the expectation that it will be launched as scheduled in 2 weeks.

However, a report from a third party clinical research organization has cautioned that the device has a remote chance of being hacked – a hacker could reprogram the device to shut down or deliver jolts of electrical pulses that could be fatal. The report also indicated that the threat is largely theoretical, and that the risk of this vulnerability ever being exploited is minimal.

You are the product manager who initiated and championed the development of the new heart device. In this capacity, **you had full responsibility for scheduling the product launch, which is to occur in exactly 2 weeks**. Furthermore, **you publicly announced to a number of leading hospitals that the product would be delivered on time**.

You are now facing the decision to launch the product as scheduled, or delay the product launch until the risk has been addressed.

[Perspective Taking – Shareholder]
Please take a few minutes to **take the perspective of a shareholder who has invested his or her hard earned money in your company's stock with the expectation that your new product will be launched as scheduled**. **Any delay in the product's launch will likely cause your company's stock to plummet**. **Imagine that you are looking at the product launch decision through this person's eyes**, and write down in a few sentences how you would think and feel:

[Perspective Taking – Victim]
Please take a few minutes to **take the perspective of someone whose father may die from cardiac arrest because the heart device you launched was hacked**. **Imagine that you are looking at the product launch decision through this person's eyes**, and write down in a few sentences how you would think and feel:

Appendix 3-D. Constructs and Measurement Items of Experiment 2

Construct	Measurement Item	
Willingness to Continue Product Launch	ESC1	I would launch the product as scheduled.
	ESC2	I would remain committed to the launch date.
Anticipated Guilt	AGLT1	I would feel guilty if I launched the product as scheduled.
	AGLT2	I would feel remorseful if I didn't try to delay the product launch.
	AGLT3	I would feel sorry about launching the product as is.
	AGLT4	I would feel bad if I didn't try to delay the product launch.
	AGLT5	I would feel guilty if I did nothing to delay the product launch.
Perspective Taking[1]	Shareholder Treatment	I took the perspective of a shareholder who has invested his or her hard earned money in this company into consideration.
	Victim Treatment	I took the perspective of someone whose father may die from cardiac arrest into consideration.
Customer Orientation[2]	CUS1	The principal goal of a company is to address the needs of its customers.
	CUS2	The main objective of a company is to satisfy its customers.
	CUS3	Companies exist primarily to serve their customers.
	CUS4	A company should be committed primarily to its customers.

1. Manipulation checks – Each item was given to their respective treatment group.
2. Item 4 for customer orientation was excluded from the main analysis due to low item loadings. Because customer orientation was modeled as reflective and the items were interchangeable/highly correlated, we judged that dropping this item would not reduce the content validity of customer orientation significantly.

Chapter 4

Conclusion

IT project failures, which remain a significant challenge for managers and organizations, are often associated with two critical domains of decision making: bad news reporting and escalation of commitment. While prior research has provided valuable insights on how decision making can be improved in these domains, the role of affect (i.e., mood or emotions) has been neglected in most studies. My dissertation addresses this gap by empirically investigating how affect can influence bad news reporting and escalation decisions. More specifically, in Essay 1, I investigate how one's mood can influence the reporting of self-committed errors. In Essay 2, I investigate the mediating role of anticipated guilt when using perspective taking to promote de-escalation of commitment. Table 4-1 provides a summary of the key findings in Essays 1 and 2. In the remainder of this chapter, I discuss the contributions of this dissertation to research and practice, followed by a discussion of limitations and directions for future research.

Table 4-1. Summary of Key Findings

Essay	Key Findings
Essay 1: Affect and Bad News Reporting	• Individuals in a negative mood state are more willing to report a self-committed error than individuals in a positive mood state. • Individuals who are highly conscientious are more willing to report a self-committed error, and this relationship is partially mediated by one's perceptions of the benefits relative to the costs of reporting. • Mood moderates the relationship between conscientiousness and willingness to report a self-committed error such that the relationship is stronger when individuals are in positive mood state.
Essay 2: Affect and De-escalation of Commitment	• Taking the perspective of someone who can be negatively affected by a premature product launch (i.e., victim) can promote de-escalation in troubled IT projects.

Table 4-1. Summary of Key Findings (Continued)

Essay	Key Findings
Essay 2: Affect and De-escalation of Commitment	• Individuals are more willing to de-escalate when taking the perspective of a victim relative to taking the perspective of a shareholder involved in a premature product launch. • Anticipated guilt partially mediates the relationship between perspective taking and de-escalation of commitment. • The personal cost of de-escalation moderates the relationship between perspective taking and anticipated guilt such that the positive relationship becomes stronger when personal cost is high rather than low. • The customer orientation of individuals moderates the relationship between anticipated guilt and de-escalation of commitment such that the negative relationship becomes stronger when individuals' customer orientation is greater. • The indirect effect of perspective taking on de-escalation through anticipated guilt is strengthened by higher personal cost of de-escalation (i.e., first stage moderated mediation) and greater customer orientation of decision makers (i.e., second stage moderated mediation).

4.1. Contributions to Research and Practice

The major contribution of this dissertation is that it demonstrates how affect can influence bad news reporting and de-escalation decisions in troubled IT projects.

Essay 1 contributes to the literature by demonstrating that mood can play an important role in bad news reporting in troubled IT projects. While Smith and Keil (2003) suggested that affective factors may influence the reporting of bad news, prior research has neglected the role of affect and rather focused on situational or organization factors that influence reporting decisions under the assumption of rationality in decision making. Essay 1 represents the first empirical investigation into how an individual's mood state can influence bad news reporting. Further, I demonstrate how conscientiousness can influence bad news reporting both directly and indirectly through cost-benefit differential, and how the direct effect is moderated by one's mood state.

Essay 2 contributes to the literature by demonstrating that perspective taking can be used as a tactic to promote de-escalation of commitment in troubled IT projects. While prior research on de-escalation of commitment has identified effective tactics for promoting de-escalation of commitment, many of them are often impractical and costly in that they require extraordinary measures or organizational support. In Essay 2, I provide empirical evidence that perspective taking can be a tactic that is less costly and easier to implement for promoting de-escalation of commitment. I show the role of affect in this context by demonstrating how anticipated guilt mediates the relationship between perspective taking and de-escalation. Furthermore, by identifying the personal cost of de-escalation and customer orientation as moderators of the indirect effect, I provide a more nuanced understanding of the role of anticipated guilt in using perspective taking as a de-escalation tactic.

For practitioners, this dissertation suggests that affect can play an important role in decision making within the domains of bad news reporting and de-escalation of commitment. While negative affect in the workplace is generally avoided because of its potential to lead to maladaptive or counterproductive behaviors (Ashkanasy and Daus 2002; Bohns and Flynn 2013), this dissertation provides evidence that this is not always the case. Managers should recognize that negative affect does not always have to be avoided, as it can help reduce undesirable behaviors in the areas of bad news reporting and de-escalation of commitment in troubled IT projects.

4.2. Limitations and Directions for Future Research

Like any other research, this dissertation is not without its limitations. First, the focus of affect is limited to moods and anticipated guilt in Essays 1 and 2, respectively. Although these

affective factors have not been considered by prior research in bad news reporting and escalation of commitment, affect is a complex concept that encompasses not only positive or negative moods, but also a variety of different emotions – which may turn out to have different influences on bad news reporting or de-escalation of commitment. Take for instance, the case of guilt and shame, which are both known as unpleasant emotions experienced from negative appraisals of the situation at hand (Tangney et al. 2007). Studies have shown that shame is often associated with destructive actions such as withdrawal (Dickerson et al. 2004), while guilt is associated with constructive actions such as reparation (Tangney and Dearing 2003). One avenue for future research would be to consider other common emotions (e.g., anxiety or frustration) that individuals experience in the workplace.

Second, all essays in this dissertation involved scenario-based laboratory experiments which is the conventional approach used in prior research investigating bad news reporting and de-escalation of commitment. While this approach provides a high degree of internal validity through a controlled environment, it does limit our capabilities to capture all of the factors that can influence such decisions in an organizational context. Clearly, reporting and de-escalation decisions involve organizational dynamics and other situational factors beyond those studied in this dissertation, and many of these factors may also interact with one's affective state. Future research may address this matter by implementing a complex scenario in which additional factors influencing such decisions are taken into consideration. For instance, a conjoint approach (e.g., Keil et al. 2010; Tiwana and Bush 2007) may be utilized to create complex scenarios and therefore, allowing a more thorough investigation of the role of affect in making bad news reporting and de-escalation decisions. Another avenue for future research would be to conduct

case studies in these domains in order to gain in-depth understandings regarding the dynamics and the process of making reporting and de-escalation decisions.

4.3. Conclusion

Motivated by the importance of preventing IT project failure through better decision making in the areas of bad news reporting and de-escalation, this dissertation investigated how affect can influence reporting and de-escalation decisions in troubled IT projects. Two empirical studies were conducted to investigate how mood can influence bad news reporting decisions (Essay 1), and the mediating role of anticipated guilt when using perspective taking as a de-escalation tactic (Essay 2). Overall, this dissertation makes several contributions by: (1) examining affective factors that have been overlooked in the areas of bad news reporting and de-escalation of commitment, (2) providing empirical evidence that affective factors can play an important role on decision making within troubled IT projects, (3) providing practitioners with insights into how affect can influence decision making, and (4) opening new avenues for research involving affective factors in troubled IT projects.

References

Aiken, L. S., and West, S. G. 1991. *Multiple Regression: Testing and Interpreting Interactions*. Sage.

Ashkanasy, N. M., and Daus, C. S. 2002. "Emotion in the Workplace: The New Challenge for Managers," *Academy of Management Executive* (16:1), pp. 76-86.

Baron, R. M., and Kenny, D. A. 1986. "The Moderator–Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations," *Journal of Personality and Social Psychology* (51:6), pp. 1173-1182.

Barrick, M. R., and Mount, M. K. 1991. "The Big Five Personality Dimensions and Job Performance: A Meta-Analysis," *Personnel Psychology* (44:1), pp. 1-26.

Barrick, M. R., and Mount, M. K. 2000. "Select on Conscientiousness and Emotional Stability," in *The Blackwell Handbook of Principles of Organizational Behavior*, E.A. Locke (ed.). Malden, MA: Blackwell Business, pp. 19-39.

Barrick, M. R., Mount, M. K., and Judge, T. A. 2001. "Personality and Performance at the Beginning of the New Millennium: What Do We Know and Where Do We Go Next?," *International Journal of Selection and Assessment* (9:1-2), pp. 9-30.

Barton, S. L., Duchon, D., and Dunegan, K. J. 1989. "An Empirical Test of Staw and Ross's Prescriptions for the Management of Escalation of Commitment Behavior in Organizations," *Decision Sciences* (20:3), pp. 532-544.

Batson, C. D. 1991. *The Altruism Question: Toward a Social-Psychological Answer*. Lawrence Erlbaum Associates, Inc.

Batson, C. D., Batson, J. G., Griffitt, C. A., Barrientos, S., Brandt, J. R., Sprengelmeyer, P., and Bayly, M. J. 1989. "Negative-State Relief and the Empathy-Altruism Hypothesis," *Journal of Personality and Social Psychology* (56:6), pp. 922-933.

Batson, C. D., Early, S., and Salvarani, G. 1997a. "Perspective Taking: Imagining How Another Feels Versus Imaging How You Would Feel," *Personality and Social Psychology Bulletin* (23:7), pp. 751-758.

Batson, C. D., Polycarpou, M. P., Harmon-Jones, E., Imhoff, H. J., Mitchener, E. C., Bednar, L. L., Klein, T. R., and Highberger, L. 1997b. "Empathy and Attitudes: Can Feeling for a Member of a Stigmatized Group Improve Feelings toward the Group?," *Journal of Personality and Social Psychology* (72:1), pp. 105-118.

Baumeister, R. F., Stillwell, A. M., and Heatherton, T. F. 1994. "Guilt: An Interpersonal Approach," *Psychological Bulletin* (115:2), pp. 243-267.

Baumeister, R. F., Vohs, K. D., Nathan DeWall, C., and Liqing Zhang. 2007. "How Emotion Shapes Behavior: Feedback, Anticipation, and Reflection, Rather Than Direct Causation," *Personality and Social Psychology Review* (11:2), pp. 167-203.

Beaudry, A., and Pinsonneault, A. 2010. "The Other Side of Acceptance: Studying the Direct and Indirect Effects of Emotions on Information Technology Use," *MIS Quarterly* (34:4), pp. 689-A683.

Berry, B. M., Ones, D. S., and Sackett, P. R. 2007. "Interpersonal Deviance, Organizational Deviance, and Their Common Correlates: A Review and Meta-Analysis," *Journal of Applied Psychology* (92:2), pp. 410-424.

Bitner, M. J., and Obermiller, C. 1985. "The Elaboration Likelihood Model: Limitations and Extensions in Marketing," *Advances in Consumer Research* (12), pp. 420-425.

Biyalogorsky, E., Boulding, W., and Staelin, R. 2006. "Stuck in the Past: Why Managers Persist with New Product Failures," *Journal of Marketing* (70:2), pp. 108-121.

Blanchette, I., and Richards, A. 2010. "The Influence of Affect on Higher Level Cognition: A Review of Research on Interpretation, Judgement, Decision Making and Reasoning," *Cognition & Emotion* (24:4), pp. 561-595.

Blay, A. D., Kadous, K., and Sawers, K. 2012. "The Impact of Risk and Affect on Information Search Efficiency," *Organizational Behavior and Human Decision Processes* (117:1), pp. 80-87.

Bless, H., and Schwarz, N. 1999. "Sufficient and Necessary Conditions in Dual-Process Models," in *Dual-Process Theories in Social Psychology*, S. Chaiken and Y. Trope (eds.). New York, NY: Guilford Press, pp. 423-440.

Bohns, V. K., and Flynn, F. J. 2013. "Guilt by Design: Structuring Organizations to Elicit Guilt as an Affective Reaction to Failure," *Organization Science* (24:4), pp. 1157-1173.

Boland, R. J., and Tenkasi, R. V. 1995. "Perspective Making and Perspective Taking in Communities of Knowing," *Organization Science* (6:4), pp. 350-372.

Boles, J. S., Babin, B. J., Brashear, T. G., and Brooks, C. 2001. "An Examination of the Relationships between Retail Work Environments, Salesperson Selling Orientation-Customer Orientation and Job Performance," *Journal of Marketing Theory and Practice* (9:3), pp. 1-13.

Borman, W. C., Penner, L. A., Allen, T. D., and Motowidlo, S. J. 2001. "Personality Predictors of Citizenship Performance," *International Journal of Selection and Assessment* (9:1-2), pp. 52-69.

Boulding, W., Morgan, R., and Staelin, R. 1997. "Pulling the Plug to Stop the New Product Drain," *Journal of Marketing Research* (34:1), pp. 164-176.

Brockner, J. 1992a. "The Escalation of Commitment to a Failing Course of Action: Toward Theoretical Progress," *The Academy of Management Review* (17:1), pp. 39-61.

Brockner, J. 1992b. "The Escalation of Commitment to a Failing Course of Action: Toward Theoretical Progress," *Academy of Management Review* (17:1), pp. 39-61.

Brockner, J., Shaw, M. C., and Rubin, J. Z. 1979. "Factors Affecting Withdrawal from an Escalating Conflict: Quitting before It's Too Late," *Journal of Experimental Social Psychology* (15:5), pp. 492-503.

Cacioppo, J., and Petty, R. 1982. "The Need for Cognition," *Journal of Personality and Social Psychology* (42), pp. 116-131.

Carroll, A. B. 1991. "The Pyramid of Corporate Social Responsibility: Toward the Moral Management of Organizational Stakeholders," *Business Horizons* (34:4), pp. 39-48.

Chandler, M. J. 1973. "Egocentrism and Antisocial Behavior: The Assessment and Training of Social Perspective-Taking Skills," *Developmental Psychology* (9:3), pp. 326-332.

Chang, Luke J., Smith, A., Dufwenberg, M., and Sanfey, Alan G. 2011. "Triangulating the Neural, Psychological, and Economic Bases of Guilt Aversion," *Neuron* (70:3), pp. 560-572.

Chen, C. C., Law, C., and Yang, S. C. 2009. "Managing Erp Implementation Failure: A Project Management Perspective," *IEEE Transactions on Engineering Management* (56:1), pp. 157-170.

Chin, W. W. 1998. "The Partial Least Squares Approach to Structural Equation Modeling," in *Modern Methods for Business Research*, G.A. Marcoulides (ed.). Mahwah, NJ: Lawrence Erlbaum, pp. 295-336.

Chin, W. W., Marcolin, B. L., and Newsted, P. R. 2003. "A Partial Least Squares Latent Variable Modeling Approach for Measuring Interaction Effects: Results from a Monte Carlo Simulation Study and an Electronic-Mail Emotion/Adoption Study," *Information Systems Research* (14:2), pp. 189-217.

Chin, W. W., Thatcher, J. B., and Wright, R. T. 2012. "Assessing Common Method Bias: Problems with the Ulmc Technique," *MIS Quarterly* (36:3), pp. 1003-A1011.

Coke, J. S., Batson, C. D., and McDavis, K. 1978. "Empathic Mediation of Helping: A Two-Stage Model," *Journal of Personality and Social Psychology* (36:7), pp. 752-766.

Compeau, D., Marcolin, B., Kelley, H., and Higgins, C. 2012. "Research Commentary—Generalizability of Information Systems Research Using Student Subjects—a Reflection on Our Practices and Recommendations for Future Research," *Information Systems Research* (23:4), pp. 1093-1109.

Conlon, D. E., and Garland, H. 1993. "The Role of Project Completion Information in Resource Allocation Decisions," *Academy of Management Journal* (36:2), pp. 402-413.

Cook, T. D., and Campbell, D. T. 1979. *Quasi-Experimentation: Design and Analysis for Field Settings*. Boston, MA: Houghton-Mifflin.

Cooke-Davies, T. 2002. "The "Real" Success Factors on Projects," *International Journal of Project Management* (20:3), pp. 185-190.

Cooper, R. G., and Kleinschmidt, E. J. 1995. "Benchmarking the Firm's Critical Success Factors in New Product Development," *Journal of Product Innovation Management* (12:5), pp. 374-391.

Costa, P. T., McCrae, R. R., and Zonderman, A. B. 1987. "Environmental and Dispositional Influences on Well-Being: Longitudinal Follow-up of an American National Sample," *British Journal of Psychology* (78), pp. 299–306.

Davis, M. H., Conklin, L., Smith, A., and Luce, C. 1996. "Effect of Perspective Taking on the Cognitive Representation of Persons: A Merging of Self and Other," *Journal of Personality and Social Psychology* (70:4), pp. 713-726.

de Luque, M. S., Washburn, N. T., Waldman, D. A., and House, R. J. 2008. "Unrequited Profit: How Stakeholder and Economic Values Relate to Subordinates' Perceptions of Leadership and Firm Performance," *Administrative Science Quarterly* (53:4), pp. 626-654.

Dennis, A. R., and Valacich, J. S. 2001. "Conducting Experimental Research in Information Systems," *Communications of the Association for Information Systems* (7), pp. 1-41.

DeSanctis, G. 1988. "Small Group Research in Information Systems: Theory and Method," in *The Information Systems Research Challenge: Experiment Research Methods*. Cambridge, MA: Harvard Business School.

Di Norcia, V., and Tigner, J. 2000. "Mixed Motives and Ethical Decisions in Business," *Journal of Business Ethics* (25:1), pp. 1-13.

Dickerson, S. S., Gruenewald, T. L., and Kemeny, M. E. 2004. "When the Social Self Is Threatened: Shame, Physiology, and Health," *Journal of Personality* (72:6), pp. 1191-1216.

Donnellan, M. B., Oswald, F. L., Baird, B. M., and Lucas, R. E. 2006. "The Mini-Ipip Scales: Tiny-yet-Effective Measures of the Big Five Factors of Personality," *Psychological Assessment* (18:2), pp. 192-203.

Dozier, J. B., and Miceli, M. P. 1985. "Potential Predictors of Whistle-Blowing: A Prosocial Behavior Perspective," *Academy of Management Review* (10:4), pp. 823-836.

Drummond, H. 1995. "De-Escalation in Decision Making: A Case of a Disastrous Partnership," *Journal of Management Studies* (32:3), pp. 265-281.

Drummond, H. 1996. "The Politics of Risk: Trials and Tribulations of the Taurus Project," *Journal of Information Technology* (11:4), pp. 347-357.

Ebert, C. 2007. "The Impacts of Software Product Management," *Journal of Systems and Software* (80:6), pp. 850-861.

Edwards, J. R., and Lambert, L. S. 2007. "Methods for Integrating Moderation and Mediation: A General Analytical Framework Using Moderated Path Analysis," *Psychological Methods* (12:1), pp. 1-22.

Eisenberg, N. 1991. "Values, Sympathy, and Individual Differences: Toward a Pluralism of Factors Influencing Altruism and Empathy," *Psychological Inquiry* (2:2), pp. 128-131.

Fenigstein, A. 1994. "Paranoia," in *Encyclopedia of Mental Health*. New York: Academic Press, p. 83.

Forgas, J. P. 1992. "Affect in Social Judgments and Decisions: A Multiprocess Model," in *Advances in Experimental Social Psychology*, M. Zanna (ed.). San Diego, CA: Academic Press, pp. 227-275.

Forgas, J. P. 1995. "Mood and Judgment: The Affect Infusion Model (Aim)," *Psychological Bulletin* (117:1), pp. 39-66.

Forgas, J. P. 2011. "Affective Influences on Self-Disclosure: Mood Effects on the Intimacy and Reciprocity of Disclosing Personal Information," *Journal of Personality and Social Psychology* (100:3), pp. 449-461.

Forgas, J. P., and George, J. M. 2001. "Affective Influences on Judgments and Behavior in Organizations: An Information Processing Perspective," *Organizational Behavior and Human Decision Processes* (86:1), pp. 3-34.

Fornell, C., and Larcker, D. F. 1981. "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," *Journal of Marketing Research* (18:1), pp. 39-50.

Frederick, W. C. 1995. *Values, Nature, and Culture in the American Corporation*. New York, NY: Oxford University Press.

Galinsky, A. D., and Ku, G. 2004. "The Effects of Perspective-Taking on Prejudice: The Moderating Role of Self-Evaluation," *Personality and Social Psychology Bulletin* (30:5), pp. 594-604.

Galinsky, A. D., Ku, G., and Wang, C. S. 2005. "Perspective-Taking and Self-Other Overlap: Fostering Social Bonds and Facilitating Social Coordination," *Group Processes & Intergroup Relations* (8:2), pp. 109-124.

Galinsky, A. D., and Mussweiler, T. 2001. "First Offers as Anchors: The Role of Perspective-Taking and Negotiator Focus," *Journal of Personality and Social Psychology* (81:4), pp. 657-669.

Galinsky, A. D., Wang, C. S., and Ku, G. 2008. "Perspective-Takers Behave More Stereotypically," *Journal of Personality and Social Psychology* (95:2), pp. 404-419.

Garland, H., Sandefur, C. A., and Rogers, A. C. 1990. "De-Escalation of Commitment in Oil Exploration: When Sunk Costs and Negative Feedback Coincide," *Journal of Applied Psychology* (75:6), pp. 721-727.

Gatignon, H., and Xuereb, J.-M. 1997. "Strategic Orientation of the Firm and New Product Performance," *Journal of Marketing Research* (34:1), pp. 77-90.

Gendolla, G. H. E. 2000. "On the Impact of Mood on Behavior: An Integrative Theory and a Review," *Review of General Psychology* (4:4), pp. 378-408.

George, J. M., and Jones, G. R. 1997. "Experiencing Work: Values, Attitudes, and Moods," *Human Relations* (50:4), pp. 393-416.

Gerbing, D. W., and Anderson, J. C. 1988. "An Updated Paradigm for Scale Development Incorporating Unidimensionality and Its Assessment," *Journal of Marketing Research* (25:2), pp. 186-192.

Goes, P. B. 2013. "Editor's Comments: Information Systems Research and Behavioral Economics," *MIS Quarterly* (37:3), pp. iii-viii.

Goldberg, L. R. 1981. "Language and Individual Differences: The Search for Universals in Personality Lexicons," *Review of personality and social psychology* (2:1), pp. 141-165.

Graham, J. W. 1986. "Principled Organizational Dissent: A Theoretical Essay," in *Research in Organizational Behavior*, L.L. Cummings and B.M. Staw (eds.). Greenwich, CT: JAI Press, pp. 1-52.

Grant, A. M., and Berry, J. W. 2011. "The Necessity of Others Is the Mother of Invention: Intrinsic and Prosocial Motivations, Perspective Taking, and Creativity," *Academy of Management Journal* (54:1), pp. 73-96.

Grant, A. M., Nurmohamed, S., Ashford, S. J., and Dekas, K. 2011. "The Performance Implications of Ambivalent Initiative: The Interplay of Autonomous and Controlled Motivations," *Organizational Behavior and Human Decision Processes* (116:2), pp. 241-251.

Grant, A. M., and Wrzesniewski, A. 2010. "I Won't Let You Down... Or Will I? Core Self-Evaluations, Other-Orientation, Anticipated Guilt and Gratitude, and Job Performance," *Journal of Applied Psychology* (95:1), pp. 108-121.

Gromet, D., and Tetlock, P. E. 2014. "Wasted Money or Worthy Investment? Ideological Values Color Perceptions of Escalation of Commitment," *Academy of Management Proceedings* (2014:1).

Gunia, B. C., Sivanathan, N., and Galinsky, A. D. 2009. "Vicarious Entrapment: Your Sunk Costs, My Escalation of Commitment," *Journal of Experimental Social Psychology* (45:6), pp. 1238-1244.

Hair, J. F., Hult, G. T. M., Ringle, C., and Sarstedt, M. 2013. *A Primer on Partial Least Squares Structural Equation Modeling (Pls-Sem)*. Thousand Oaks, CA: Sage Publications.

Hayes, A. F. 2013. *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. New York, NY: Guilford Press.

Hayes, A. F. 2015. "An Index and Test of Linear Moderated Mediation," *Multivariate Behavioral Research* (50:1), pp. 1-22.

Heath, C. 1995. "Escalation and De-Escalation of Commitment in Response to Sunk Costs: The Role of Budgeting in Mental Accounting," *Organizational Behavior and Human Decision Processes* (62:1), pp. 38-54.

Heller, D., Judge, T. A., and Watson, D. 2002. "The Confounding Role of Personality and Trait Affectivity in the Relationship between Job and Life Satisfaction.," *Journal of Organizational Behavior* (23), pp. 815–835.

Hendricks, K. B., and Singhal, V. R. 2008. "The Effect of Product Introduction Delays on Operating Performance," *Management Science* (54:5), pp. 878-892.

Higgins, E. T. 1997. "Beyond Pleasure and Pain," *American Psychologist* (52:12), pp. 1280-1300.

Hillman, A. J., and Keim, G. D. 2001. "Shareholder Value, Stakeholder Management, and Social Issues: What's the Bottom Line?," *Strategic Management Journal* (22:2), pp. 125-139.

Hoever, I. J., van Knippenberg, D., van Ginkel, W. P., and Barkema, H. G. 2012. "Fostering Team Creativity: Perspective Taking as Key to Unlocking Diversity's Potential," *Journal of Applied Psychology* (97:5), pp. 982-996.

Hung, I. W., and Mukhopadhyay, A. 2012. "Lenses of the Heart: How Actors' and Observers' Perspectives Influence Emotional Experiences," *Journal of Consumer Research* (38:6), pp. 1103-1115.

Hung, I. W., and Wyer, R. S. 2009. "Differences in Perspective and the Influence of Charitable Appeals: When Imagining Oneself as the Victim Is Not Beneficial," *Journal of Marketing Research (JMR)* (46:3), pp. 421-434.

Isen, A. M., and Means, B. 1983. "The Influence of Positive Affect on Decision-Making Strategy," *Social Cognition* (2:1), pp. 18-31.

Isen, A. M., Nygren, T. E., and Ashby, F. G. 1988. "Influence of Positive Affect on the Subjective Utility of Gains and Losses: It Is Just Not Worth the Risk," *Journal of Personality and Social Psychology* (55:5), pp. 710-717.

Jensen, M. C. 2002. "Value Maximization, Stakeholder Theory, and the Corporate Objective Function," *Business Ethics Quarterly* (12:2), pp. 235-256.

Jones, T. M., Felps, W., and Bigley, G. A. 2007. "Ethical Theory and Stakeholder-Related Decisions: The Role of Stakeholder Culture," *Academy of Management Review* (32:1), pp. 137-155.

Judge, T. A., Heller, D., and Mount, M. K. 2002. "Five-Factor Model of Personality and Job Satisfaction: A Meta-Analysis," *Journal of Applied Psychology* (87:3), pp. 530-541.

Junglas, I. A., Johnson, N. A., and Spitzmuller, C. 2008. "Personality Traits and Concern for Privacy: An Empirical Study in the Context of Location-Based Services," *European Journal of Information Systems* (17:4), pp. 387-402.

Kamdar, D., McAllister, D. J., and Turban, D. B. 2006. ""All in a Day's Work": How Follower Individual Differences and Justice Perceptions Predict Ocb Role Definitions and Behavior," *Journal of Applied Psychology* (91:4), pp. 841-855.

Kaplan, R. 2014. "Healthcare.Gov Has Already Cost $840 Million," in: *CBS News*.

Kavanagh, M. H., and Ashkanasy, N. M. 2006. "The Impact of Leadership and Change Management Strategy on Organizational Culture and Individual Acceptance of Change During a Merger," *British Journal of Management* (17:S1), pp. S81-S103.

Keil, M. 1995. "Pulling the Plug: Software Project Management and the Problem of Project Escalation," *MIS Quarterly* (19:4), pp. 421-447.

Keil, M., Depledge, G., and Rai, A. 2007a. "Escalation: The Role of Problem Recognition and Cognitive Bias," *Decision Sciences* (38:3), pp. 391-421.

Keil, M., Im, G. P., and Mähring, M. 2007b. "Reporting Bad News on Software Projects: The Effects of Culturally Constituted Views of Face-Saving," *Information Systems Journal* (17:1), pp. 59-87.

Keil, M., Mann, J., and Rai, A. 2000a. "Why Software Projects Escalate: An Empirical Analysis and Test of Four Theoretical Models," *MIS Quarterly* (24:4), pp. 631-664.

Keil, M., Mixon, R., Saarinen, T., and Tuunainen, V. 1995. "Understanding Runaway Information Technology Projects: Results from an International Research Program Based on Escalation Theory," *Journal of Management Information Systems* (11:3), pp. 67-87.

Keil, M., and Robey, D. 1999. "Turning around Troubled Software Projects: An Exploratory Study of the Deescalation of Commitment to Failing Courses of Action," *Journal of Management Information Systems* (15:4), pp. 63-87.

Keil, M., and Robey, D. 2001. "Blowing the Whistle on Troubled Projects," *Communications of the ACM* (44:4), pp. 87-93.

Keil, M., Smith, H. J., Iacovou, C. L., and Thompson, R. L. 2014. "The Pitfalls of Project Status Reporting," *MIT Sloan Management Review* (55:3), pp. 57-64.

Keil, M., Smith, H. J., Pawlowski, S., and Jin, L. 2004. "'Why Didn't Somebody Tell Me?': Climate, Information Asymmetry, and Bad News About Troubled Projects," *SIGMIS Database* (35:2), pp. 65-84.

Keil, M., Tan, B. C. Y., Wei, K.-K., Saarinen, T., Tuunainen, V., and Wassenaar, A. 2000b. "A Cross-Cultural Study on Escalation of Commitment Behavior in Software Projects," *MIS Quarterly* (24:2), pp. 299-325.

Keil, M., Tiwana, A., Sainsbury, R., and Sneha, S. 2010. "Toward a Theory of Whistleblowing Intentions: A Benefit-to-Cost Differential Perspective," *Decision Sciences* (41:4), pp. 787-812.

Ketelaar, T., and Tung Au, W. 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 & Emotion* (17:3), pp. 429-453.

Kirsch, L. J. 1996. "The Management of Complex Tasks in Organizations: Controlling the Systems Development Process," *Organization Science* (7:1), pp. 1-21.

Kirsch, L. J., Sambamurthy, V., Ko, D.-G., and Purvis, R. L. 2002. "Controlling Information Systems Development Projects: The View from the Client," *Management Science* (48:4), pp. 484-498.

Klein, G., Jiang, J. J., and Cheney, P. 2009. "Resolving Difference Score Issues in Information Systems Research," *MIS Quarterly* (33:4), pp. 811-826.

Kohlberg, L. 1969. "Stage and Equence: The Cognitive Developmental Approach to Socialization," in *Handbook of Socialization Theory and Research*, D. Goslin (ed.). Chicago: Rand-McNally, pp. 347-480.

Konovsky, M. A., and Organ, D. W. 1996. "Dispositional and Contextual Determinants of Organizational Citizenship Behavior," *Journal of Organizational Behavior* (17:3), pp. 253-266.

Korsgaard, M. A., Meglino, B. M., and Lester, S. W. 1996. "The Effect of Other-Oriented Values on Decision Making: A Test of Propositions of a Theory of Concern for Others in Organizations," *Organizational Behavior and Human Decision Processes* (68:3), pp. 234-245.

Ku, G. 2008. "Learning to De-Escalate: The Effects of Regret in Escalation of Commitment," *Organizational Behavior and Human Decision Processes* (105:2), pp. 221-232.

Ku, G., Wang, C. S., and Galinsky, A. D. 2010. "Perception through a Perspective-Taking Lens: Differential Effects on Judgment and Behavior," *Journal of Experimental Social Psychology* (46:5), pp. 792-798.

Lee, A. 1999. "A Set of Principles for Conducting and Evaluating Interpretive Field Studies in Information Systems," *MIS Quarterly* (23:1), pp. 1-1.

Lee, J. S., Cuellar, M. J., Keil, M., and Johnson, R. D. 2014. "The Role of a Bad News Reporter in Information Technology Project Escalation: A Deaf Effect Perspective," *SIGMIS DATABASE for Advances in Information Systems* (45:3), pp. 8-29.

Lee, J. S., Keil, M., and Kasi, V. 2012. "The Effect of an Initial Budget and Schedule Goal on Software Project Escalation," *Journal of Management Information Systems* (29:1), pp. 53-78.

Levin, I. P., Gaeth, G. J., Schreiber, J., and Lauriola, M. 2002. "A New Look at Framing Effects: Distribution of Effect Sizes, Individual Differences, and Independence of Types of Effects," *Organizational Behavior and Human Decision Processes* (88:1), pp. 411-429.

Liang, H., Saraf, N., Hu, Q., and Xue, Y. 2007. "Assimilation of Enterprise Systems: The Effect of Institutional Pressures and the Mediating Role of Top Management," *MIS Quarterly* (31:1), pp. 59-87.

Lindsey, L. L. M. 2005. "Anticipated Guilt as Behavioral Motivation," *Human Communication Research* (31:4), pp. 453-481.

Lindsey, L. L. M., Kimo Ah Yun, and Hill, J. B. 2007. "Anticipated Guilt as Motivation to Help Unknown Others: An Examination of Empathy as a Moderator," *Communication Research* (34:4), pp. 468-480.

Lobbestael, J., Arntz, A., and Wiers, R. 2008. "How to Push Someone's Buttons: A Comparison of Four Anger-Induction Methods," *Cognition & Emotion* (22:2), pp. 353-373.

MacCallum, R. C., and Austin, J. T. 2000. "Applications of Structural Equation Modeling in Psychological Research," *Annual Review of Psychology* (51:1), pp. 201-226.

MacDonald, A. P. 1970. "Revised Scale for Ambiguity Tolerance: Reliability and Validity," *Psychological Reports* (26), pp. 791-798.

Mackie, D. M., and Worth, L. T. 1989. "Processing Deficits and the Mediation of Positive Affect in Persuasion," *Journal of Personality and Social Psychology* (57:1), pp. 27-40.

Martin, M. 1990. "On the Induction of Mood," *Clinical Psychology Review* (10:6), pp. 669-697.

McCain, B. E. 1986. "Continuing Investment under Conditions of Failure: A Laboratory Study of the Limits to Escalation," *Journal of Applied Psychology* (71:2), pp. 280-284.

Meglino, B. M., and Ravlin, E. C. 1998. "Individual Values in Organizations: Concepts, Controversies, and Research," *Journal of Management* (24:3), pp. 351-389.

Miceli, M. P., and Near, J. P. 1992. *Blowing the Whistle: The Organizational and Legal Implications for Companies and Employees*. New York: Lexington Books.

Mitchell, M., Brown, M., Morris-Villagran, M., and Villagran, P. 2001. "The Effects of Anger, Sadness, and Happiness on Persuasive Message Processing: A Test of the Negative State Relief Model," *Communication Monographs* (68:4), pp. 347-359.

Mittal, V., and Ross, W. T. 1998. "The Impact of Positive and Negative Affect and Issue Framing on Issue Interpretation and Risk Taking," *Organizational Behavior and Human Decision Processes* (76:3), pp. 298-324.

Montealegre, R., and Keil, M. 2000. "De-Escalating Information Technology Projects: Lessons from the Denver International Airport," *MIS Quarterly* (24:3), pp. 417-447.

Moon, H. 2001. "The Two Faces of Conscientiousness: Duty and Achievement Striving in Escalation of Commitment Dilemmas," *Journal of Applied Psychology* (86:3), pp. 533-540.

Mossler, D. G., Marvin, R. S., and Greenberg, M. T. 1976. "Conceptual Perspective Taking in 2- to 6-Year-Old Children," *Developmental Psychology* (12:1), pp. 85-86.

Nabi, R. 2002. "Anger, Fear, Uncertainty, and Attitudes: A Test of the Cognitive-Functional Model," *Communication Monographs* (69:3), pp. 204-216.

Northcraft, G. B., and Neale, M. A. 1986. "Opportunity Costs and the Framing of Resource Allocation Decisions," *Organizational Behavior and Human Decision Processes* (37:3), pp. 348-356.

Nunnally, J. C., Bernstein, I. H., and Berge, J. M. t. 1967. *Psychometric Theory*. New York, NY: McGraw-Hill.

Offermann, L. R., and Gowing, M. K. 1990. "Organizations of the Future: Changes and Challenges," *American Psychologist* (45:2), pp. 95-108.

Ogden, S., and Watson, R. 1999. "Corporate Performance and Stakeholder Management: Balancing Shareholder and Customer Interests in the U.K. Privatized Water Industry," *Academy of Management Journal* (42:5), pp. 526-538.

Oz, E. 1994. "When Professional Standards Are Lax: The Confirm Failure and Its Lessons," *Communications of the ACM* (37:10), pp. 29-43.

Pan, G., and Pan, S. L. 2011. "Transition to Is Project De-Escalation: An Exploration into Management Executives Influence Behaviors," *Engineering Management, IEEE Transactions on* (58:1), pp. 109-123.

Pan, G. S. C., Pan, S. L., and Flynn, D. 2004. "De-Escalation of Commitment to Information Systems Projects: A Process Perspective," *The Journal of Strategic Information Systems* (13:3), pp. 247-270.

Pan, S. L., Pan, G. S. C., Newman, M., and Flynn, D. 2006. "Escalation and De-Escalation of Commitment to Information Systems Projects: Insights from a Project Evaluation Model," *European Journal of Operational Research* (173:3), pp. 1139-1160.

Park, C., Im, G., and Keil, M. 2008. "Overcoming the Mum Effect in It Project Reporting: Impacts of Fault Responsibility and Time Urgency," *Journal of the Association for Information Systems* (9:7), pp. 1-23.

Park, C., and Keil, M. 2009. "Organizational Silence and Whistle-Blowing on It Projects: An Integrated Model," *Decision Sciences* (40:4), pp. 901-918.

Park, C., Keil, M., and Kim, J. W. 2009. "The Effect of It Failure Impact and Personal Morality on It Project Reporting Behavior," *IEEE Transactions on Engineering Management* (56:1), pp. 45-60.

Parker, S. K., Atkins, P. W. B., and Axtell, C. M. 2008. "Building Better Workplaces through Individual Perspective Taking: A Fresh Look at a Fundamental Human Process," in *International Review of Industrial and Organizational Psychology 2008*. John Wiley & Sons, Ltd, pp. 149-196.

Parker, S. K., and Axtell, C. M. 2001. "Seeing Another Viewpoint: Antecedents and Outcomes of Employee Perspective Taking," *Academy of Management Journal* (44:6), pp. 1085-1100.

Perdue, B. C., and Summers, J. O. 1986. "Checking the Success of Manipulations in Marketing Experiments," *Journal of Marketing Research* (23:4), pp. 317-326.

Petty, R., and Brock, T. C. 1981. "Thought Disruption and Persuasion: Assessing the Validity of Attitude Change Experiments," in *Cognitive Responses in Persuasion*, R. Petty, T. Ostrom and T. Brock (eds.). Hillsdale, NJ: Erlbaum, pp. 55-79.

Petty, R., and Cacioppo, J. 1986. "The Elaboration Likelihood Model of Persuasion," in *Advances in Experimental Social Psychology, Vol. 19*. London: Academic Press, pp. 123-205.

Piaget, J., and Inhelder, B. 1969. *The Psychology of the Child*. New York, NY: Basic Books.

Podsakoff, P. M., MacKenzie, S. B., Jeong-Yeon, L., and Podsakoff, N. P. 2003. "Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies," *Journal of Applied Psychology* (88:5), p. 879.

Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., and Bachrach, D. G. 2000. "Organizational Citizenship Behaviors: A Critical Review of the Theoretical and Empirical Literature and Suggestions for Future Research," *Journal of Management* (26:3), pp. 513-563.

Powers, S. W., Kashikar-Zuck, S. M., Allen, J. R., and et al. 2013. "Cognitive Behavioral Therapy Plus Amitriptyline for Chronic Migraine in Children and Adolescents a Randomized Clinical Trial," *The Journal of the American Medical Association* (310:24), pp. 2622-2630.

Quartz, S. R. 2009. "Reason, Emotion and Decision-Making: Risk and Reward Computation with Feeling," *Trends in Cognitive Sciences* (13:5), pp. 209-215.

Reel, J. S. 1999. "Critical Success Factors in Software Projects," *IEEE Software* (16:3), pp. 18-23.

Remus, W. 1986. "Graduate Students as Surrogates for Managers in Experiments on Business Decision Making," *Journal of Business Research* (14), pp. 19-25.

Richards, D. A., and Schat, A. C. H. 2011. "Attachment at (Not to) Work: Applying Attachment Theory to Explain Individual Behavior in Organizations," *Journal of Applied Psychology* (96:1), pp. 169-182.

Rindfleisch, A., and Moorman, C. 2003. "Interfirm Cooperation and Customer Orientation," *Journal of Marketing Research* (40:4), pp. 421-436.

Ringle, C. M., Wende, S., and Will, S. 2005. "Smartpls 2.0 (M3) Beta." Hamburg.

Rizzo, A., Bagnara, S., and Visciola, M. 1987. "Human Error Detection Processes," *International Journal of Man-Machine Studies* (27:5–6), pp. 555-570.

Rokeach, M. 1973. *The Nature of Human Values*. Free press New York.

Ross, J., and Staw, B. M. 1993. "Organizational Escalation and Exit: Lessons from the Shoreham Nuclear Power Plant," *Academy of Management Journal* (36:4), pp. 701-732.

Rotter, J. B. 1966. "Generalized Expectancies for Internal Vs. External Control of Reinforcement," *Psychological Monographs* (80), pp. 1-28.

Rubin, J. Z., and Brockner, J. 1975. "Factors Affecting Entrapment in Waiting Situations: The Rosencrantz and Guildenstern Effect," *Journal of Personality and Social Psychology* (31:6), pp. 1054-1063.

Sanna, L. J., Turley-Ames, K. J., and Meier, S. 1999. "Mood, Self-Esteem, and Simulated Alternatives: Thought-Provoking Affective Influences on Counterfactual Direction," *Journal of Personality and Social Psychology* (76:4), pp. 543-558.

Sawyer, A. G. 1975. "Demand Artifacts in Laboratory Experiments in Consumer Research," *Journal of Consumer Research* (1:4), pp. 20-30.

Schwartz, S. H., and Bilsky, W. 1987. "Toward a Universal Psychological Structure of Human Values," *Journal of Personality and Social Psychology* (53:3), pp. 550-562.

Schwartz, S. H., and Bilsky, W. 1990. "Toward a Theory of the Universal Content and Structure of Values: Extensions and Cross-Cultural Replications," *Journal of Personality and Social Psychology* (58:5), pp. 878-891.

Schwarz, N., and Bless, H. 1991. "Happy and Mindless, but Sad and Smart? The Impact of Affective States on Analytic Reasoning," in *Emotion and Social Judgments*, J.P. Forgas (ed.). Oxford, England: Pergamon Press, pp. 55-71.

Schwarz, N., and 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), pp. 513-523.

Schwarz, N., and Clore, G. L. 1996. "Feelings and Phenomenal Experiences," in *Social Psychology: Handbook of Basic Principles*, E.T. Higgins and A.W. Kruglanski (eds.). New York, NY: Guilford Press.

Schwepker, C. H., and Good, D. J. 2004. "Marketing Control and Sales Force Customer Orientation," *Journal of Personal Selling & Sales Management* (24:3), pp. 167-179.

Segal, C. 2012. "Working When No One Is Watching: Motivation, Test Scores, and Economic Success," *Management Science* (58:8), pp. 1438-1457.

Shrout, P. E., and Bolger, N. 2002. "Mediation in Experimental and Nonexperimental Studies: New Procedures and Recommendations," *Psychological Methods* (7:4), pp. 422-445.

Simonson, I., and Staw, B. M. 1992. "Deescalation Strategies: A Comparison of Techniques for Reducing Commitment to Losing Courses of Action," *Journal of Applied Psychology* (77:4), pp. 419-426.

Smith, C. A., and Ellsworth, P. C. 1985. "Patterns of Cognitive Appraisal in Emotion," *Journal of Personality and Social Psychology* (48:4), pp. 813-838.

Smith, H. J., and Keil, M. 2003. "The Reluctance to Report Bad News on Troubled Software Projects: A Theoretical Model," *Information Systems Journal* (13:1), pp. 69-95.

Smith, H. J., Keil, M., and Depledge, G. 2001. "Keeping Mum as the Project Goes Under: Toward an Explanatory Model," *Journal of Management Information Systems* (18:2), pp. 189-228.

Snow, A. P., Keil, M., and Wallace, L. 2007. "The Effects of Optimistic and Pessimistic Biasing on Software Project Status Reporting," *Information & Management* (44:2), pp. 130-141.

Somashekhar, S., and Goldstein, A. 2013. "Full Testing of Healthcare.Gov Began Too Late, Contractors Say." *The Washington Post* Retrieved April 21, 2014, from http://www.washingtonpost.com/politics/house-panel-grills-contractors-on-troubled-health-insurance-web-site/2013/10/24/8f42c748-3ca7-11e3-b7ba-503fb5822c3e_story.html

Sommers, S., and Scioli, A. 1986. "Emotional Range and Value Orientation: Toward a Cognitive View of Emotionality," *Journal of Personality and Social Psychology* (51:2), pp. 417-422.

Spector, P. E. 1982. "Behavior in Organizations as a Function of Employee's Locus of Control," *Psychological Bulletin* (91), pp. 482-497.

Standish Group. 2013. "Chaos Manifesto 2013," The Standish Group International.

Staw, B. M. 1976. "Knee-Deep in the Big Muddy: A Study of Escalating Commitment to a Chosen Course of Action," *Organizational Behavior and Human Performance* (16:1), pp. 27-44.

Staw, B. M. 1981. "The Escalation of Commitment to a Course of Action," *Academy of Management Review* (6:4), pp. 577-587.

Stone, E. F. 1978. *Research Methods in Organizational Behaviour*. Santa Monica: Goodyear Pub. Co.

Straub, D., Boudreau, M.-C., and Gefen, D. 2004. "Validation Guidelines for Is Positivist Research," *Communications of the Association for Information Systems* (2004:13), pp. 380-427.

Straub, D. W. 1989. "Validating Instruments in Mis Research," *MIS Quarterly* (13:2), pp. 147-169.

Sutherland, G., Newman, B., and Rachman, S. 1982. "Experimental Investigations of the Relations between Mood and Intensive Unwanted Cognitions," *British Journal of Medical Psychology* (55:2), pp. 127-138.

Sy, T., Côté, S., and Saavedra, R. 2005. "The Contagious Leader: Impact of the Leader's Mood on the Mood of Group Members, Group Affective Tone, and Group Processes," *Journal of Applied Psychology* (90:2), pp. 295-305.

Talke, K., and Hultink, E. J. 2010. "Managing Diffusion Barriers When Launching New Products," *Journal of Product Innovation Management* (27:4), pp. 537-553.

Tan, B. C. Y., Smith, H. J., Keil, M., and Montealegre, R. 2003. "Reporting Bad News About Software Projects: Impact of Organizational Climate and Information Asymmetry in an Individualistic and a Collectivistic Culture," *IEEE Transactions on Engineering Management* (50:1), pp. 64-77.

Tangney, J. P., and Dearing, R. L. 2003. *Shame and Guilt*. New York, NY: Guilford Press.

Tangney, J. P., Stuewig, J., and Mashek, D. J. 2007. "Moral Emotions and Moral Behavior," *Annual Review of Psychology* (58:1), pp. 345-372.

Taylor, S. E. 1991. "Asymmetrical Effects of Positive and Negative Events: The Mobilization-Minimization Hypothesis," *Psychological Bulletin* (110:1), pp. 67-85.

Tett, R. P., and Burnett, D. D. 2003. "A Personality Trait-Based Interactionist Model of Job Performance," *Joumal of Applied Psychology* (88:3), pp. 500–517.

Tiwana, A., and Bush, A. A. 2007. "A Comparison of Transaction Cost, Agency, and Knowledge-Based Predictors of It Outsourcing Decisions: A U.S.-Japan Cross-Cultural Field Study," *Journal of Management Information Systems* (24:1), pp. 259-300.

Tucker, A. L., and Edmondson, A. C. 2003. "Why Hospitals Don't Learn from Failures: Organizational and Psychological Dynamics That Inhibit System Change," *California Management Review* (45:2), pp. 55-72.

UK Department of Health. 2011. "Dismantling the Nhs National Programme for It." Retrieved April 1st, 2013, from https://www.gov.uk/government/news/dismantling-the-nhs-national-programme-for-it

Underwood, B., and Moore, B. 1982. "Perspective-Taking and Altruism," *Psychological Bulletin* (91:1), pp. 143-173.

Vaidya, J. G., Gray, E. K., Haig, J., and Watson, D. 2002. "On the Temporal Stability of Personality: Evidence for Differential Stability and the Role of Life Experiences," *Journal of Personality and Social Psychology* (83:6), pp. 1469-1484.

Vaish, A., Carpenter, M., and Tomasello, M. 2009. "Sympathy through Affective Perspective Taking and Its Relation to Prosocial Behavior in Toddlers," *Developmental Psychology* (45:2), pp. 534-543.

Van Dyne, L., Cummings, L. L., and Parks, J. M. L. 1995. "Extra-Role Behaviors: In Pursuit of Construct and Definitional Clarity (a Bridge over Muddied Waters)," *Research in Organizational Behavior* (17), pp. 215-215.

Van Kleef, G. A., De Dreu, C. K. W., and Manstead, A. S. R. 2006. "Supplication and Appeasement in Conflict and Negotiation: The Interpersonal Effects of Disappointment, Worry, Guilt, and Regret," *Journal of Personality and Social Psychology* (91:1), pp. 124-142.

Velten, E. 1968. "A Laboratory Task for Induction of Mood States," *Behaviour Research and Therapy* (6:4), pp. 473-482.

Vescio, T. K., Gretchen B. Sechrist, T. K., and Paolucci, M. P. 2003. "Perspective Taking and Prejudice Reduction: The Mediational Role of Empathy Arousal and Situational Attributions," *European Journal of Social Psychology* (33:4), pp. 455-472.

Watson, D. 1988. "The Vicissitudes of Mood Measurement: Effects of Varying Descriptors, Time Frames, and Response Formats on Measures of Positive and Negative Affect," *Journal of Personality and Social Psychology* (55:1), pp. 128-141.

Weber, E. U., and Johnson, E. J. 2009. "Mindful Judgment and Decision Making," *Annual Review of Psychology* (60:1), pp. 53-85.

Wegener, D. T., and Petty, R. E. 1994. "Mood Management across Affective States: The Hedonic Contingency Hypothesis," *Journal of Personality and Social Psychology* (66:6), pp. 1034-1048.

Westermann, R., Spies, K., Stahl, G., and Hesse, F. W. 1996. "Relative Effectiveness and Validity of Mood Induction Procedures: A Meta-Analysis," *European Journal of Social Psychology* (26:4), pp. 557-580.

Wong, K. F. E., and Kwong, J. Y. Y. 2007. "The Role of Anticipated Regret in Escalation of Commitment," *Journal of Applied Psychology* (92:2), pp. 545-554.

Wong, K. F. E., Yik, M., and Kwong, J. Y. Y. 2006. "Understanding the Emotional Aspects of Escalation of Commitment: The Role of Negative Affect," *Journal of Applied Psychology* (91:2), pp. 282-297.

Wowak, A. J., Hambrick, D. C., and Henderson, A. D. 2011. "Do Ceos Encounter within-Tenure Settling Up? A Multiperiod Perspective on Executive Pay and Dismissal," *Academy of Management Journal* (54:4), pp. 719-739.

Yin, D., Bond, S. D., and Han, Z. 2014. "Anxious or Angry? Effects of Discrete Emotions on the Perceived Helpfulness of Online Reviews," *MIS Quarterly* (38:2), pp. 539-560.

Yin, R. K. 2009. *Case Study Research: Design and Methods*. Thousand Oaks, CA: Sage.

Zablah, A. R., Franke, G. R., Brown, T. J., and Bartholomew, D. E. 2012. "How and When Does Customer Orientation Influence Frontline Employee Job Outcomes? A Meta-Analytic Evaluation," *Journal of Marketing* (76:3), pp. 21-40.

Zhao, B., and Olivera, F. 2006. "Error Reporting in Organizations," *Academy of Management Review* (31:4), pp. 1012-1030.