MORAL AMBIGUITY: AN ETHICAL EXAMINATION OF ITS CONSTITUENTS, EFFECTS AND INTERVENTIONS.

by

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A Dissertation submitted to the
Graduate School – Newark
Rutgers, The State University of New Jersey

In partial fulfillment of the requirements
for the degree of
Doctor of Philosophy
Graduate Program in
Management
written under the direction of
Dr. Danielle Warren

and approved by

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Newark, New Jersey
January, 2021

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ABSTRACT OF THE DISSERTATION

Moral Ambiguity: An ethical examination of its constituents, effects and interventions.

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We are living in an era defined by ethical transgressions. Since these transgressions have come to affect those across various walks of life, there has been a public outcry to examine the precursors and combatants of such behavior. The presence of ethical gray areas is one of the most oft cited reasons for why these ethical transgressions occur. This dissertation seeks not only to examine individual differences in terms of how organizational members respond to these gray areas, but also to examine any organizational interventions that could help address the individual states that result from the presence of these gray areas, from an ethical perspective.

For this purpose, the first paper in my dissertation, titled, “Building an Understanding of Moral Ambiguity,” introduces the construct of ‘Moral Ambiguity.’ Specifically, in this paper, I examine the factors that encompass moral ambiguity, namely the extent to which one recognizes the moral principles at stake, as well as one’s sense of certainty surrounding the ethical outcomes associated with the quandary-causing options at hand. I go on to break down the experience of being presented with a moral dilemma in terms of one’s perception of the moral principles at play as well as one’s understanding of the moral outcomes associated with one’s actions. In doing so, I demonstrate the importance of introducing greater nuance into moral dilemma research.
Following the presentation of a conceptualization of moral ambiguity, the first set of empirical studies in this dissertation titled, “The relationship between moral ambiguity and ethical behavior,” seek to empirically validate the constituents of and understand the ethical implications of moral ambiguity. This leads into an examination of the components of the normative structure of an organization, namely organizational rules, that could be used as an intervention in combatting moral ambiguity.

Read together, the contents of this dissertation shed light not only upon the determinants of and outcomes associated with moral ambiguity, but also on how components of the organizational structure, namely, organizational rules, can be used to alleviate employee unethical behaviors that result due to the various forms of moral ambiguity.
ACKNOWLEDGMENTS

I am indebted to my adviser and my committee for seeing merit in the topic that I wanted to study and for always being encouraging of it. To Danielle, I am thankful for her gentle nudging when the right research direction was unclear to me. I am also thankful to her for teaching me what it means to be an academic. To Chen, I am thankful for his innate ability to know exactly what it is that the dissertation manuscript needed or was missing. To Alex, I am thankful to him for challenging me by asking me why the topic of moral ambiguity was an important one to study in the first place. His questioning led me to examine the holes in my theoretical arguments, thereby allowing me to produce a stronger piece of work. He also took the time to teach me how to be a better empiricist. For that, I will forever be grateful. Finally, I am thankful to Bobby for being supportive of my academic aspirations. His kind words and encouragement provided me with the confidence that I needed to feel less like an imposter in an academic setting, both before I started the Ph.D. program, during it, and dare I say, after.

I am grateful to my parents, who have always valued the pursuit of higher education. To my mom, I am thankful to her for being my rock. To my dad, I am thankful for his perspective, which invariably ends up being opposed to mine. I have used his challenges to either question my stance or to sharpen my own rhetoric. His challenges were a big reason why I wanted to study what it means to be in a state of moral ambiguity in the first place. To my sister, you are the best lil’ sis one could ever ask for. Thank you for being you.
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CHAPTER 1: INTRODUCTION

Following the innumerable ethics scandals that have continued to plague our world in recent years, people cannot help but question both the morality of individuals involved in these scandals, as well as the organizational structures that allow for such scandals to culminate. Organizations and their members are eager for a framework that provides some direction when it comes to ethical scandals, particularly those that arise due to competing imperatives. Popular rhetoric following such scandals makes it seem like the world is resting on two pillars representing stark opposites: order versus disorder, moral versus immoral. Through my dissertation, I seek to examine the middle-ground, namely the gap between these opposing pillars. I do so in three key ways, (i) by attempting to build a conceptualization of the manner in which decision-makers perceive gray areas, (ii) by creating a typology that takes into account how decision-makers might falter in their recognition of moral principles and moral outcomes when it comes to picking between competing options (eg. using artificial intelligence technology to track the spread of a disease vs. the invasion of citizen privacy), and (iii) creating a deeper understanding of how organizational rules, a critical component of an organization’s normative structure, can play a part in facilitating or hindering our conception of what is not clearly right or wrong.

Even though the references to “moral ambiguity” are frequent across the organizational ethics and social science literatures, a formal attempt to create a working definition has been lacking. Therefore, the first part of my dissertation is dedicated toward creating a conceptualization of moral ambiguity, or the state of not knowing the right thing to do, due to either an incomplete (or complete) understanding of the moral
principles involved, combined with either an incomplete (or complete) understanding of the degree of certainty surrounding an ethical outcome. Overall, this conceptualization takes into account the combination of the extent of one’s recognition of moral issues, identification of moral principles, and understanding of how to morally weigh moral outcomes in order to precisely identify one of four forms of moral ambiguity that an individual could possibly face. From both a theoretical as well as a practical perspective, such a conceptualization is necessary because it then allows for the framing of moral dilemmas in terms of the precise state of moral ambiguity that an individual could possibly face. Not only would this be an answer to the call for the introduction of nuance to moral dilemma research (see Gawronski, Armstrong, Conway, Friesdorf, & Hütter, 2017), but it would also allow for more precise ethics training interventions.

Formal ethics training has been criticized as being merely cosmetic, in large part because even though it might get at how an employee might act unethically, its one-size-fits-all design does not get at the why. I argue that when companies use hypothetical moral dilemmas to train their employees, the moral dilemmas need to be designed such that they allow for an employee-specific, targeted approach to combat unethical behaviors. As things currently stand, it is then no surprise that the current one-size-fits-all’ approach has been labelled as merely cosmetic. I substantiate this criticism by empirically examining how the presentation of a hypothetical moral dilemma elicits varying states of moral ambiguity, each different from the other in terms of the ethical outcome it elicits. Overall, this stream of research presents arguments in favor of organizations adopting a reason-oriented model of ethical decision-making, when presented with moral dilemmas.
In the second part of my dissertation, I seek to empirically test the empirical extent to which the theoretical constituents of moral ambiguity, which I refer to as moral principle recognition and moral outcome certainty, contribute to ethical behavior. Research in the field has historically been based on the distinction between utilitarianism (moral outcome certainty) and deontology (moral principle recognition). I propose moving away from these either utilitarianism or deontology interpretations that have plagued our field and closer toward more realistic ‘both-and’ interpretations. This is a novel perspective in response to a longstanding ‘either-or’ approach, which ultimately has the potential to push the needle on how to pick between competing imperatives. For that reason, the moral ambiguity typology as presented in my dissertation combines the varying degrees to which the observer recognizes the moral principles combined with their certainty surrounding the moral outcomes associated with the moral dilemma. There is no tension between the two constituents. This means that unlike the either utilitarianism or deontology approach, we can then study the full range of possibilities, from individuals who consider principles or outcomes of ethical behavior whilst judging certain actions to be ethical if they increase some measure of societal utility, to those who are unable to determine either when determining the ethicality of their actions.

In the third and final part of my dissertation, I build upon previous work on deliberative ethical decision-making processes by considering organizational rules as a form of guidance for decision-makers. Specifically, I examine how organizational rules can serve as a nudge toward ethical decisions, whilst in a state of moral ambiguity. Ultimately, my hope is that this study will be able to speak to the detail with which organizational codes of conduct are written, particularly because conduct codes are often
criticized as being ineffective in combatting unethical behavior (Kaptein & Schwartz, 2008; Singh, 2011). This is exactly the problem that I seek to address through my study.

In sum, through my dissertation, I hope to advance our understanding of ethical decision-making methods under conditions of uncertainty, whether the uncertainty stems from the situation or the individual’s perception. In this pursuit to build an understanding of what is right when it first comes across as not clearly right or wrong, my dissertation provides a novel conceptual framework, backed up by empirics to test those frameworks. My ultimate goal is to be able to provide guidance to decision-makers in their quest for solutions that have clear implications for ethical behavior in organizations.
Chapter 2: Building an understanding of moral ambiguity.

Albert Bandura believed that, “Most everyone is virtuous at the abstract level” (Bandura, 1999, p.206). As we push forward into the future, in which vast technological advances have largely outpaced their regulation, it would be safe to say that our philosophies surrounding the ethics of these advances is abstract at best, in large part because these advances are coming at us faster than our ability to think through the associated moral principles and moral outcomes. In addition to the issue of abstraction, we are increasingly being posed with questions to which there is a lack of social consensus surrounding the most ethical response. Take for example, the ethics of creating thinking machines that have the ability to learn, but not the ability to empathise, the question of whether robots with self-conscious emotions should also have rights, the practice of collecting data from users in a post-Cambridge Analytica world, or even questions surrounding the regulation of social media in an open, democratic society which is facing the threat of foreign subversion and influence in an online realm. To most, the answers to these dilemmatic questions are not immediately apparent.

Within the context of business, organizational members are very often confronted with these sorts of ambiguous ethical situations, rather than straightforward ones in which there is a simple right or wrong answer. The zone that exists between right and wrong behavior is commonly referred to as a “gray” area (eg. Bruhn, 2009). It is said that these gray areas arise due to issues that are situational in nature, cannot be placed neatly into categories, or even due to a lack of written or unwritten policies or procedures surrounding them (Bruhn, 2009). Based on the current state of the literature, we know very little about what happens when organizational members are faced with these morally
ambiguous situations (Warren & Smith-Crowe, 2008). What we do know is that the repercussions of the lack of concrete guidance provided by managerial moral standards, combined with the ambiguity surrounding expectations results in much of the moral stress that managers face (Waters & Bird, 1987). What further adds to this ambiguity is the fact that these organizational members do not know for certain how much wiggle room there is regarding actions that are within the law, but that are arguably still unethical (Bruhn, 2001). To better illuminate the aspects of ambiguity that are relevant to the organizational domain, this dissertation presents a conceptualization of “moral ambiguity.”

For this purpose, I start out by presenting the reader with a definition of moral ambiguity, mainly by building upon past literatures. This definition also includes a presentation of the constituents of moral ambiguity. I follow this discussion with a presentation of the relationship between moral dilemmas and moral ambiguity, as a conduit to introducing nuance to the current state of moral dilemma research. This is because moral dilemmas provide the context within which a lack of consensual information from social referents mediates the relationship between moral ambiguity and ethical behavior. I then explain the role of social influence, or lack thereof, in giving rise to moral ambiguity. To conclude the chapter, I consider the organizational implications of moral ambiguity.

**Moral ambiguity defined**

The idea of ambiguity is ubiquitous in the social sciences. Definitionally speaking, it refers to the quality of being open to more than one interpretation. Economists, refer to ambiguity as the awareness of missing information (Ghirardato,
Maccheroni, & Marinacci, 2004) relevant to a prediction (Frisch & Baron, 1988). Researchers in Management refer to ambiguity as a consequence of inadequate information due to events or causality being unknown (Pich, Loch, & Meyer, 2003). However, ambiguity from a moral perspective involves more than just the awareness of missing information or causality being unknown. As I argue in this paper, while moral ambiguity can certainly arise due to missing information and/or unknown causality, it can also arise in the presence of adequate information and known causality. For this reason and several more, creating a distinction between “ambiguity” and “moral ambiguity” is theoretically necessary.

To date, organizational ethics researchers have often alluded to the idea of moral ambiguity when discussing related constructs such as moral uncertainty (eg. Jones & Ryan, 1998) and moral approbation (eg. Jones & Ryan, 1997). However, a formal exploration into the construct has yet to be done. Through this paper, I hope to fill this void that exists in the literature.

Due to their similarities, the construct of ‘moral uncertainty’ is a good starting point for building a definition of moral ambiguity. Leading scholars studying moral uncertainty have described moral uncertainty as the problem of what to do when one is uncertain about what one morally ought to do (Lockhart, 2000). Moral uncertainty has also been described as the question of “what is rational for you to do when you are uncertain between conflicting moral theories” (Sepielli, 2013, p.2). In other words, moral uncertainty occurs when an individual has access to all, or at least most of the relevant empirical information but still remains unsure about the “moral” way to think or act, due to the competing, but nevertheless compelling moral arguments.
Moral ambiguity, like moral uncertainty, occurs when an individual is unsure of the “moral” way to think or act. However, moral ambiguity is broader than moral uncertainty, in that it takes into account the varying degrees to which the individual recognizes the conflicting moral principles at stake alongside the individual’s degree of certainty surrounding their evaluation of the rightness or wrongness of the outcomes. In comparison, moral uncertainty, as it has been presented in the philosophical tradition, merely makes the assertion that, the decision maker “should (rationally) choose some action that has the maximum probability of being morally right,” in effect, taking the decision-maker’s knowledge of the competing moral theories, as well as the decision-maker’s understanding of the degree of moral rightness associated with each of those theories, for granted (Lockhart, 2000, p.20).

**What elicits moral ambiguity?**

Outside the realm of ethics, the references to moral uncertainty and/or moral ambiguity are frequent; but there have been very few attempts at explaining the exact composition of the latter. Research on criminal sanctions for white collar crime is an example of one such attempt. Researchers in this field assert that there is often a genuine doubt as to whether the alleged actions of the defendant are in fact morally wrong, due to the fact that white collar offenses tend to involve harms that are more difficult to identify compared to conventional street crimes (Green, 2004). Not only is it difficult to identify the victims of these transgressions, but it is often also difficult to quantify these harms, say in terms of loss of investor or consumer confidence (Green, 2004). This adds to the moral ambiguity associated with white-collar crimes. In other words, even though people may have a sense that a certain action may result in harms being caused, if they find it
hard to recognize what kinds of harms a particular offence causes, who is affected by them, or how to measure them, then they are less likely to be certain that such conduct is wrong in the first place (Green, 2004).

Regardless of whether there is uncertainty about whether such conduct is wrong because the specific harms caused by the offence are unclear, it is unclear who the victims are, or it is not clear how to measure the transgression, the thing to note is that this state of not knowing the right thing to do arises in the presence of an ethical conundrum, or what is more commonly referred to as a moral dilemma. Genuine moral dilemmas bring with them exactly this kind of uncertainty, which ultimately results in a state of not knowing the right thing to do. When a moral dilemma, that arises due to conflicting requirements (Sinnott-Armstrong, 1988) is met with varying degrees of an individual’s understanding of the moral principles associated with those conflicting requirements, as well as varying degrees of certainty surrounding that individual’s evaluation of the rightness or wrongness associated with either of the ethical outcomes, a state of moral ambiguity results.

**The link between moral issue recognition, moral principle recognition, moral outcome certainty and moral ambiguity**

Uncertainty surrounding an activity in which the harms are difficult to identify or measure, speaks to Rest’s (1986) four component model of ethical decision-making, that lists ‘recognition’ as Step 1 of 4. Specifically, Rest was referring to moral issue recognition, noting that ethical dilemmas first emanate from the environment and are then recognized as moral issues by the individual (May & Pauli, 2002; Rest, 1986). Based on Rest’s model, a large body of empirical research has found that when actors do not
recognize certain issues to be moral issues, that often ends up resulting in unethical behaviors (eg. Chugh, Bazerman, & Banaji, 2005; Tenbrunsel & Messick, 2004). This is because increased exposure to moral issues, aids in the development of moral issue schemas, which in turn allows for greater overall recognition of moral issues by the individual (Gautschi & Jones, 1998; May & Pauli, 2002). The recognition of whether there is a moral issue at stake, whether that recognition is limited or advanced, is a necessary first step for the birth of moral ambiguity.

Moral issue recognition, sometimes also referred to as moral awareness\(^1\), refers to “a person’s determination that a situation contains moral content and legitimately can be considered from a moral point of view” (Reynolds, 2006, p.233). According to Rest, moral awareness is the first step in the moral action process (Rest, 1986). While some research states that the recognition of moral principles, rules or guidelines represents an implicit aspect of moral awareness (eg. Sadler, 2004), Rest (1986) did not make this point explicit. This chapter distinguishes between moral ambiguity and moral issue recognition by identifying moral issue recognition as the first step in the development of moral ambiguity. Then, it is the extent to which one recognizes the moral issue(s) at hand alongside the moral principle(s) and moral outcome(s), that results in distinct forms of moral ambiguity (see Figure 1). In other words, those who are experiencing moral ambiguity, have a general sense of awareness regarding the moral issue(s), in that, even though they may not know which moral principles or moral outcomes apply, they are aware that the situation at hand contains moral content and has to be treated as such. This

\(^1\) As used in the literature, the terms ‘moral issue recognition,’ ‘moral awareness’ and ‘moral sensitivity’ are all synonymous. Rest (1986) referred to moral awareness as moral sensitivity. In this dissertation, I use the terms moral issue recognition and moral awareness interchangeably.
assertion is in line with Smith-Crowe & Warren's (2014) view that moral ambiguity likely arises when individuals are morally aware, but confused between right and wrong (Waters & Bird, 1987).

Therefore, similar to moral uncertainty theorists, I argue that this confusion between right and wrong can occur despite a complete understanding of the moral principles and moral outcomes at stake. However, unlike moral uncertainty theorists, I argue that this confusion between right and wrong can also occur due to an incomplete understanding of the moral principles and moral outcomes at stake. Overall, the main point is that moral issue recognition is a necessary, albeit insufficient, precursor state for the conception of both moral ambiguity and moral uncertainty.

**Moral principles defined**

Upon moral issue recognition, the extent to which an individual is able to recognize the moral principles at stake, then contributes to the degree of moral ambiguity that an individual is facing. Moral principle recognition is particularly necessary when it comes to coping with a state of moral ambiguity because moral principles help one to find one’s bearings in situations where one may be perplexed about what to do, because moral principles provide a basis for the adjudication of novel problems (Churchill & Simán, 1986). Deontologists, for example, judge the ethical permissibility of an action based on the moral principles at stake, when presented with a moral dilemma. In other words, this group of individuals decides whether an action is morally acceptable or unacceptable based on the intrinsic nature of the dilemma, regardless of the consequences, theoretically speaking. In this chapter, I propose that the extent to which an individual recognizes the moral principles associated with a moral dilemma, is one of
the factors that ultimately determines how far along the moral ambiguity scale the
individual stands. This makes it necessary to consider what constitutes a moral principle
in the first place.

By definition, a moral principle makes reference to either a moral property or
deploys a moral concept (Väyrynen, 2018), whereas a non-moral principle brings a non-
moral concept to the table. Organizational researchers that have studied moral principles
empirically, have broadly defined moral principles as explicit normative standards that
people are willing to endorse (Uhlmann, Pizarro, Tannenbaum, & Ditto, 2009). From a
normative perspective, both cognitivists and expressivists have described moral
principles as statements that express universal moral prescriptions. Immanuel Kant
believed that a genuine moral principle must make a universal claim (Golding, 1963). By
this, Kant meant that an act that is right for one person, should be right for another
similarly situated person (Golding, 1963). In other words, if an individual finds theirself
making an exception, that negates the very moral principle at stake. If we shift from
Kant’s perspective to an applied one, moral principles are said to serve the function of a
“guide,” in that, conscientious moral agents can avoid immoral actions with the
assistance of moral principles (McKeever & Ridge, 2006; Väyrynen, 2008), particularly
when it comes to determining the moral way to think or act when posed with a moral
dilemma.

Another defining quality of moral principles is that they “aren’t the sorts of things
that can be robustly true or false” (Väyrynen, 2018, p.4). In other words, moral principles
do not lend themselves to fact-based proofs (Warren & Smith-Crowe, 2008). That is, one
cannot gather empirical data conclusively demonstrating, for example, that killing people is wrong or that one should keep one’s promises (Warren & Smith-Crowe, 2008).

Researchers have proposed using the moral principles of beneficence, fidelity, autonomy, justice and non-maleficence as a starting point for understanding moral dilemmas that elicit moral ambiguity because these principles are said to provide a foundational rationale for right or wrong choices (Hansen & Goldberg, 1999; Beauchamp & Childress, 2001). Other examples of moral principles include commonplace moral claims such as, ‘Always keep your promises’ and ‘Do unto others as you would have them do unto you’. We can also look to the field of medical ethics to devise a set of moral principles that can be applied to the organizational context. These principles include, “1. Do not kill. 2. Do not cause pain. 3. Do not disable. 4. Do not deprive of freedom. 5. Do not deprive of pleasure. 6. Do not deceive. 7. Keep your promises. 8. Do not cheat. 9. Obey the law. 10. Do your duty” (Gert, 2006, p.20). Overall, the extent to which one recognizes the moral principles that are involved in a moral dilemma, constitutes the moral principle recognition component of moral ambiguity.

**Moral Outcome Uncertainty defined**

Besides moral principle recognition upon moral issue recognition, the extent to which an individual is able to weigh the moral outcomes associated with the moral dilemma, also contributes to the degree of moral ambiguity that an individual is facing. Moral outcome uncertainty refers to the extent to which the individual is uncertain in their evaluation of the competing moral outcomes associated with the moral dilemma at hand. In other words, it is a measure of the extent to which an individual is uncertain in
their teleological evaluation of the moral dilemma. I therefore conceptualize moral outcome uncertainty as an individual difference variable.

Consider a hypothetical in which you are unsure about the right thing to do because you are unsure about how much moral weight you should ascribe to one moral outcome versus another. For instance, take a parent who is faced with an ethical conundrum in which they have to decide whether they should steal food for their starving child based on the moral outcomes associated with either course of action. Being that they are in a state of moral outcome uncertainty, they are uncertain about whether stealing food for their starving child is morally right or morally wrong. They might wonder if outcomes related to their child’s right to subsistence outweigh another individual’s right to property. Alternatively, do outcomes related to one’s right to property outweigh right to subsistence? In different circumstances, a parent faced with the same conundrum might feel certain in their evaluation that it is morally wrong to steal; it is morally right to not steal. This places the latter parent in a state of moral outcome certainty, as would also be the case if the parent felt certain in their evaluation that it is morally right to steal in this situation due to one’s right to subsistence.

In the end, this state of moral outcome uncertainty captures a state of not knowing how to morally weigh one expected moral outcome versus another, which can also be thought of as a lack of surety surrounding one’s teleological evaluation of the moral dilemma at hand. Ultimately, this certainty or uncertainty surrounding the moral weightage to be ascribed to each outcome results in varying degrees of moral outcome certainty.
Researchers have attempted to study the ethical implications of moral outcome uncertainty as an individual difference variable using a variety of different manipulations, from contexts in which participants have to make a tradeoff between killing mice for money or saving the mice (eg. Falk & Szech, 2013), to helping a bystander in a staged emergency (eg. Fischer et al., 2011; Latane & Darley, 1968). It is important to note that the degree to which an individual is certain or uncertain in their evaluation of the competing moral imperatives, when presented with an ethical conundrum, ultimately affects the individual’s ethical decisions. The empirical ethical implications of moral outcome (un)certainty will be further explored in the coming chapters of this dissertation.

For the purposes of further defining moral outcome uncertainty, particularly moral outcome uncertainty as a building block of moral ambiguity, it is also important to differentiate moral outcomes from general outcomes. An example of an (im)moral outcome would be the lives of those lost in a motor vehicle accident due to gross negligence on the part of the driver. A general outcome would be car malfunctionment due to faulty mechanics of the vehicle. In other words, it is important to note that moral outcome (un)certainty, deploys a moral concept, unlike general outcome (un)certainty. All in all, moral outcome (un)certainty is the third and final building block in the construction of moral ambiguity.

**Moral Ambiguity Illustrated**

The composition of moral ambiguity can be illustrated using artificial intelligence as an example. We are in the midst of a global race to set and define artificial intelligence principles. However, it has proven to be difficult to define these principles in a meaningful manner so that they may be applied to these contexts deductively.
(Hagendorff, 2020), because there is often a gap between the moral principles and the abstract reality associated with these contexts. This difficulty is perfectly summed up by the Collingridge dilemma. The Collingridge dilemma points to the fact that when it comes to new technologies, we are presented with an information problem at the beginning where the impacts of the new technology cannot be easily predicted until the technology is extensively developed and widely used (Collingridge, 1982). As the technology gets extensively developed and widely used, control or change is difficult because the technology has become entrenched by then. This is known as the power problem (Collingridge, 1982). Overall, the information problem and the power problem, as defined by the Collingridge dilemma, lays the groundwork for why it is that defining AI ethics principles in a meaningful manner so that they may be applied to these contexts deductively has proven to be difficult.

For starters, the proposed AI moral principles are built to cover a wide range of situations, are subject to interpretation and may have different meanings in different contexts (McLaren, 2003). As a result, when expert decision-makers are presented with a potential moral dilemma and asked to define moral principles for such contexts so that the principles may then be applied to future contexts deductively, they end up operationalizing the moral principles by linking them to an abstract reality, rather than using principles to make a decision regarding the facts of the case (McLaren, 2003). When contrasted with say, judicial decision-making, it becomes clear why the aforementioned approach might be problematic. But first, it is necessary to understand the two key ways in which artificial intelligence moral principles can be defined, namely intensionally and extensionally. An intensional definition of an artificial intelligence
moral principle would specify the necessary and sufficient conditions for when the artificial intelligence principle should be used (Cook, 2009). An example of an intensional definition of say the word, “bachelor” would be “unmarried man” (Cook, 2009, p.155). On the other hand, an extensional definition of an artificial intelligence moral principle would list everything that falls under that definition (Cook, 2009). In line with that, an extensional definition of bachelor would consist of a listing of all unmarried men (Cook, 2009). Now coming back to the example of judicial decision-making, when a judge presents their decision or conclusion to a case, they do so by explaining how and why the principles, norms and legal rules apply to the problem context (McLaren, 2003). In doing so, judges also compare problems to past cases or precedents to resolve conflicts among competing principles and to justify conclusions (McLaren, 2003). In other words, judges extensionally define moral principles by fleshing out the meanings of the abstract normative standards (McLaren, 2003). However, despite not having a set of principles, past cases or precedents to apply, decision-makers in the field of AI have been given the impossible task of defining principles in an intensional manner so that they may be applied deductively (McLaren, 2003). The reason this is impossible is because it is essentially a chicken and egg problem, just like the Collingridge dilemma. In order to resolve conflicts that might arise in the field of AI, one would have to extensionally define the already-set moral principles by fleshing out the meanings of the abstract normative standards, just like those in the legal profession do. But if those normative standards have not yet been set, then we are essentially intensionally defining AI ethics moral principles by linking them to an abstract reality. Without really knowing what that
reality is going to entail, the moral principles as they are currently being defined will certainly prove to be inadequate.

Having considered how a limited understanding or recognition of the moral principles at stake can lead to a state of moral ambiguity, I will now explain how limited certainty surrounding the moral outcomes at stake can lead to a state of moral ambiguity. Ethicists have become enamored with the question of how autonomous vehicles, commonly referred to as driverless cars, should be programmed in order to respond to crash scenarios where the loss of life is inevitable (Scharding, 2020). In these hypothetical scenarios, several theoretical distinctions have been made between the sacrifice of one party over another. One such example is that of choosing whether to run over a group of pedestrians or to sacrifice the life of the passenger by driving into a wall. The over-arching moral principle that a reasonable decision-maker would apply in this situation would be that one should not kill. However, this moral principle would fail to provide sufficient guidance in this situation. After all, even seasoned ethicists have not come to a consensual decision in terms of the more ethical decision in this scenario (see Awad et al., 2018). In addition, real-world decisions are usually more complex than the simplistic example just provided and sometimes include having to make decisions whilst knowing the identities of the lives of those at stake. Therefore, depending on the specific context, there could either be moral outcome certainty or uncertainty. Due to such complexities, Scharding (2020) makes the argument that the algorithms of these cars should be set up to address such accident scenarios probabilistically: dividing the risks of harm among all of the people (passengers and pedestrians) who are exposed to the risk (Scharding, 2020). Other ethicists have made the argument that the algorithm should
essentially be set up according to chance (Thomson, 2008). Overall, this theoretical supposition makes it clear that despite the fact that there are no two moral principles at stake in this scenario that are conflicting or at odds with the other, the one moral principle used in such a scenario fails to provide sufficient guidance. What adds to an individual’s perception of moral ambiguity here is the fact that there is uncertainty in terms of how to morally weigh the sacrifice of a pedestrian versus the sacrifice of a passenger in this situation. Ultimately, the degree of moral ambiguity that an individual faces is variable depending upon these definitive factors, namely, the degree to which one recognizes the moral principles at stake, as well as one’s evaluation of the moral outcomes associated with each option. Such examples highlight the pervasiveness of moral ambiguity within artificial intelligence related contexts.

Consider now the following organizationally-relevant scenario, adapted from a study conducted by Butterfield and colleagues (2000) which can be used to further understand the composition of moral ambiguity. Suppose a large financial services firm wants to hire a consultant to conduct a ‘mystery shopping study’. The consultant would be tasked with hiring small business owners to ‘shop’ for financial services with the firm’s key competitor. These shoppers would then be expected to share information about the competitor’s services. At this juncture, let’s suppose that the consultant is concerned, since something about the request does not seem quite right to him and therefore, he is not sure whether or not he should accept the contract. The consultant is facing one form of a state of moral ambiguity because he does not recognize what moral principles are at

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2 Using the pronoun ‘they’ could have been confusing for the reader as this scenario involves two individuals. Therefore, the pronoun ‘he’ was chosen. Note that “he” could just as easily have been replaced by a “she.”
stake, which likely comes from a place of nescience. Now, suppose that the consultant decides to call a colleague to figure out whether he should accept the lucrative offer of working with the large financial services firm. This colleague presents him with the two conflicting views that the job involves misrepresentation, but also that hiring a mystery shopper would allow him to do his duty of helping his company to gather all the requisite information required in order to succeed in a competitive marketplace. Although this colleague demonstrates knowledge of the opposing moral perspectives, he demonstrates no evidence of the harms being done to the competitor. This colleague is exhibiting another form of a state of moral ambiguity as he is wavering between the conflicting moral views of, “do not deceive” and “do your duty,” (see Gert, 2006) and therefore about which moral principle to apply. This colleague is caught in a state of moral ambiguity because he seems to be unclear about which of the conflicting moral principles to apply in this situation, in addition to the fact that he seems to be uncertain about the moral outcomes associated with either option.

The tradeoff that the consultant is facing in this moral dilemma is between not acting in a deceptive manner toward another and duty to shareholders. He has two options: either not to inflict harm onto another by deceiving, which would also mean not being in a position to gain materially; or doing his duty in helping his company to succeed, thereby benefiting the shareholders of not only the large financial services firm, but also those of his own consulting firm, likely including himself. The consultant has reasons to do each of the two actions but cannot do both. The first option would involve gaining information about another company without them knowing that they are giving up that information. On the other hand, the second option will likely put him in a position
where he may be heralded by the shareholders of his own consultancy company as someone who does his duty by upholding the doctrine that all employees have a duty to maximize corporate profits and shareholder value.

Regardless of which one of the two options the consultant ultimately picks, the thing to note is that some form of moral ambiguity can exist either way. This is because the degree of moral ambiguity as it is perceived in a particular situation, is determined based on one’s recognition of the moral principles at stake, as well as one’s certainty surrounding one’s evaluation of the moral outcomes associated with the moral dilemma. This distinction is important because when we break moral dilemmas down in terms of one’s sensitivity to moral principles and moral outcomes, it results in four different outcomes. In turn, this allows us to hone in on which aspect of the moral dilemma is hindering individual decision-making. I propose that one’s understanding of a moral dilemma ought to be dissected in terms of one’s recognition of the moral principles at stake, or lack thereof, as well as one’s sense of certainty surrounding the moral outcomes, or lack thereof.

**Figure 1. Moral ambiguity demonstrated**
Building on the mystery shopping example, thus far, it has been made clear that one distinction between the consultant and his colleague is the extent to which they understand the moral principles at stake. Another possible distinction between the two might include their individual certainty surrounding the moral outcomes at stake. All in all, this would allow us to distinguish between the four forms of moral ambiguity presented in Figure 1. Let’s suppose for example that the colleague whose advice the consultant was seeking happened to evaluate clearly the moral outcomes associated with the acceptance of the contract in addition to recognizing the moral principles at stake. One possible moral outcome in this case would involve, for example, a recognition of the harms being inflicted upon the company’s key competitor. If, unlike the example of traditional white-collar crimes presented earlier in this paper, the colleague had a complete understanding of the harms inflicted upon the competitor, say in terms of all the various parties affected by the act or even how to measure the harms associated with the act, then we would say that he is certain about the moral outcomes or in a state of moral outcome certainty. The classic version of the trolley moral dilemma is another scenario that is set up to elicit a state of moral outcome certainty, because the dilemma clearly informs the reader about the consequences associated with either of the options. In the end, the degree to which one is certain or uncertain about the various components of the harms associated with the moral dilemma is what constitutes the factor of moral outcome certainty.

In the mystery shopping supposition, we would say that the colleague is facing a state of ‘moral fluency,’ not only because he has a clear understanding of the moral principles that are at stake, but also because he has a clear understanding of the associated
moral outcomes. If instead this moral principle recognition were to be paired with moral outcome uncertainty, that would then result in a state of ‘moral uncertainty.’ This is termed as such due to Frank Knight’s conception of risk versus uncertainty (Knight, 2012). Knight’s theory highlights the idea that there are two kinds of chance, one in which the decision-maker can assign probabilities to events based on known chances, and another in which the decision-maker cannot. When the decision-maker is uncertain or unable to assign probabilities to the outcomes (Runde, 1998) associated with the moral dilemma, whilst being cognizant of the moral principles at stake, I term that particular form of moral ambiguity, ‘moral uncertainty.’ Similarly, if the original consultant, who did not understand the moral principles that were at stake to begin with, was certain about the moral outcomes associated with the acceptance of the contract, then as per Knight’s conception of risk, we would say that he is facing a state of ‘moral risk.’ Finally, if one does not understand both the moral principles and the moral outcomes at stake, then I term that state one of ‘moral confusion.’ This is termed as such due to the sense of confusion that is likely to arise from not knowing the core moral principles to apply whilst also being confused about the moral outcomes.

Regardless of the exact state, I am making the argument that some form of moral ambiguity can exist irrespective of one’s exact understanding of the moral principles at stake as well as one’s understanding of the moral outcomes associated with the situation. It is important to note here that with all truly significant moral deliberations, there is bound to be moral ambiguity. Moral ambiguity and a sense of struggle go hand in hand. A perfect or imperfect understanding of the conflicting moral views when paired with a
perfect or imperfect understanding of the associated moral consequences can be struggle-inducing, as induced by one’s perception of the situation at hand.

**Moral principles and Moral outcomes**

One’s recognition of the moral principles alongside one’s evaluation of the competing moral outcomes associated with a moral dilemma at hand determines the extent to which one is in a state of moral ambiguity. There is an important parallel that can be drawn from this conceptualization. That is, in measuring the extent to which the decision-maker does or does not recognize the moral principles and is certain or uncertain about the moral outcomes at stake, this conceptualization takes into account the combination of one’s understanding of the means and ends respectively, in determining the extent of one’s state of moral ambiguity.

Noting this parallel begs the question of why research on moral dilemmas has largely been confined to the extremes of the deontology versus consequentialism spectrum. So much so that one of the most popular moral dilemmas, that is the trolley dilemma, which is aimed at investigating the tension between consequentialist and deontological normative ethics, has been and largely still is the de facto means of inquiry into moral dilemmas (Bostyn, Sevenhant, & Roets, 2018). This idea is further explored in the next section.

**The Relationship between Moral Dilemmas and Moral Ambiguity**

Research on moral dilemmas has historically been based on the distinction between utilitarianism and deontology. Broadly speaking, one of the key features of a moral dilemma is that, “the agent can do each of the actions; but the agent cannot do both (or all) of the actions” (McConnell, 2014, p.2). Moral dilemmas are typically
characterized into “right versus right” dilemmas that involve tradeoffs between two competing values or principles and “right versus wrong” dilemmas in which individuals are tempted to violate moral principles in order to benefit themselves (Kidder, 2005). The classic moral dilemma paradigm, the trolley dilemma, is a “right versus right” moral dilemma. Depending upon the participant’s view of the acceptability of one of two courses of action, their judgments are deemed to be either utilitarian or deontological. Those who select the option of killing one person in order to save the lives of several others are given the tag of a utilitarian, whereas those who select the option of not killing anyone, regardless of the consequences, are given the tag of a deontologist. This categorization into utilitarian and deontological forms of reasoning is so ubiquitous in the literature that Kohlberg (1984, p. 579) referred to them as “the two major ethical principles.” An additional caveat regarding the interpretations surrounding the utilitarian versus deontologist label is that those in the former category are said to be more concerned with the moral consequences of their actions, whereas those that are in the latter category are more concerned that their actions align with moral principles (Gawronski, Armstrong, Conway, Friesdorf, & Hütter, 2017). However, researchers have criticized the validity of this interpretation, for the reason that the core components of utilitarianism and deontology – moral consequences and moral principles are not specifically manipulated (Gawronski et al., 2017). Rather participant responses are deemed to be either utilitarian or deontological based on their choice of killing one person or not killing anyone respectively. For this reason, Gawronski and colleagues (2017) present a multinomial model that includes a way to quantify one’s sensitivity to consequences as well as moral norms. In other words, they propose moving away from
the ‘either-or’ interpretations that have plagued moral dilemma research and closer
toward more realistic ‘both-and’ interpretations. In this quest to move away from the
‘either-or’ interpretations that have plagued moral dilemma research and closer toward
more realistic ‘both-and’ interpretations, it is important that these constituent factors of
moral ambiguity are treated as continuous variables, as opposed to dichotomous
variables. Therefore, the moral ambiguity typology as presented in this paper combines
the varying degrees to which the observer recognizes the moral principles as well as the
moral outcomes associated with the moral dilemma. When presented with the trolley
dilemma, one’s understanding of both constituents, moral principle recognition and moral
outcome certainty is examined in order to determine the degree of moral ambiguity
elicited in response to the dilemma. There is no tension between the two constituents.
This means that we can then study the full range of possibilities, from individuals who
consider principles and outcomes of ethical behavior whilst judging certain actions to be
ethical if they increase some measure of societal utility, to those who are unable to
determine either when determining the ethicality of their actions.

**Introducing nuance to moral dilemma research**

The various shades of moral ambiguity have a direct implication for research on
moral dilemmas because research on moral dilemmas has typically included scenarios in
which moral principles and outcomes are sometimes manipulated and at other times, not.
Indeed, by breaking moral dilemmas down not only in terms of one’s perception of the
moral principles at play, but also in terms of one’s certainty surrounding the moral
outcomes associated with one’s actions, we can introduce nuance to moral dilemma
research.
A key contribution of this conceptualization is that it provides an additional solution to calls for a more nuanced approach to studying the determinants of moral dilemma judgments (eg. Gawronski, Armstrong, Conway, Friesdorf, & Hütter, 2017). A key limitation of moral dilemma research that has been conducted to date has been “the conflation of deontological and utilitarian inclinations in[to] a single index that treats them as inversely related dimensions of a bipolar continuum” (Conway & Gawronski, 2013, p.226). In addition, “the defining aspects of utilitarian and deontological responses, consequences and norms, are not manipulated in the traditional dilemma paradigm” (Gawronski et al., 2017, p.344). In other words, based on the current state of the literature, when consequences and norms are not manipulated (eg. trolley dilemma), that is referred to as a moral dilemma. When this is manipulated, we still refer to it as a moral dilemma (eg. Kortenkamp & Moore, 2014; Shou & Song, 2017). But the very defining aspects of the dilemma have changed. I am proposing that classifying moral dilemmas based on whether and how they have been manipulated, that is, if the participants recognize the moral principles at stake as well as whether they are certain about the moral outcomes, allows for a standardization of and common language to be used in the comparison between the various operationalizations of moral dilemmas in the literature. As this paper makes clear, the breakdown of individual perceptions of these defining factors into moral fluency, moral uncertainty, moral risk and moral confusion, then allows for a comparison of the outcomes associated with the various iterations of moral dilemmas more unequivocally. This is important because the outcomes associated with
the various forms of moral ambiguity ultimately include those related to ethicality, including the ethicality of the decisions made by organizational employees.

**The role of social influence in eliciting moral ambiguity**

Moral dilemmas provide the context within which a lack of consensual information from social referents mediates the relationship between moral ambiguity and ethical behavior. In other words, a lack of consensual information when faced with a moral dilemma might explain why people come to be in a state of moral ambiguity in the first place.

This inaccessibility to consensual information is determined based on the external social referents that one invariably looks to in determining the appropriate judgment, intent or behavior\(^3\) in a morally dilemmatic situation. Individuals are motivated to consider the perspectives of external social referents not only in order to assess where they stand in relation to the norms, but also to help gauge the reactions of others to their judgments. However, if these external social referents are unable to provide any guidance, a state of moral ambiguity is likely inevitable.

We know that looking to external social referents is an essential part of the ethical decision-making process because both empirical as well as theoretical literatures make this assertion (eg. O’Fallon & Butterfield, 2012; Pitesa & Thau, 2013). In an empirical study of the issue-contingent effects of ethical decision-making, Davis and colleagues found that the link between social consensus and judgments of moral concern and judgments of immorality was especially potent (Davis, Johnson, & Ohmer, 1998). Correspondingly, in an empirical test of Ajzen and Fishbein’s (1980) theory of reasoned

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\(^3\) Following moral issue recognition, the next three steps in Rest’s (1986) ethical decision-making model are judgment, intent and behavior.
action, it was found that depending on the nature of the referent individual or group, an actor’s perceptions of what the referents think one should do makes a robust difference to the actor’s resultant moral behaviors (Vallerand, Deshaies, Cuerrier, Pelletier, & Mongeau, 1992). Similarly, in a qualitative study conducted with middle managers on their encounters with ethical dilemmas, the managers overwhelmingly noted that they relied upon their prior ethical socialization, which included their family and friends, in order to resolve their dilemmas (Pontiff, 2007). Without such external social referents, also known as, family, peers or community to look to in certain situations, the decisions that one makes are impacted, particularly those that are ethical in nature. This is because, without external social referents, there is no established social consensus that one could potentially use in order to make a decision. In fact, Flynn & Wiltermuth (2010) demonstrated that a lack of access to consensual information can affect employees’ ethical decision-making when the most ethical course of action is ambiguous, such that, employees’ intuitions about whether others agree with their ethical judgment become biased and they end up overestimating the prevalence of their personal point of view. Employees are particularly susceptible when they are centrally located within their network.

In fact, both rationalist (eg. Trevino, 1986) as well as social intuitionist ethical decision-making models (eg. Haidt, 2001) call attention to the role of referent others. Other researchers that have placed an emphasis on the role of external social referents in the ethical decision-making process include Jones & Ryan (1997), who, for example, introduced the construct of moral approbation. This refers, in part, to the desire for individuals to be seen as moral by others. The researchers state that people rely on the
opinions of their referent groups when determining a course of action (Jones & Ryan, 1997) since referent groups can create a sense of consensus around a moral issue. The social intuitionist model of moral judgment backs up this claim, in that, in order for an individual to believe that certain behaviors are clearly right or wrong, there is very likely to be social consensus around the matter (Haidt, 2001). Social persuasion, which is the link between one’s judgment and another’s intuition, or vice versa, is an important component of moral judgment (Haidt, 2001).

Just as social influence is linked to ethical decision-making, it is also linked to unethical decision-making. Take for example Sutherland’s Differential Association Theory, which predicts that criminal behavior is learnt by exposure to criminal behaviors (Timasheff, Sutherland, & Cressey, 2007). This exposure occurs in the presence of expression of favorable attitudes toward lawbreaking, either by hearing these perspectives or by observing the modeling of such behaviors (Warren, 2006). In such a scenario, it is conceivable that an otherwise well-intentioned individual could stumble onto engaging in an unethical practice because they were unsure about what to do, and were then socially influenced in the wrong direction. Overall, such empirical and theoretical models of moral judgment and moral reasoning place less emphasis on the private reasoning of individuals and emphasize instead the importance of social and cultural influences.

Organizational implications

The framing of moral dilemmas in terms of the precise state that an individual could possibly face would allow for more precise ethics training interventions within organizations. Formal ethics training has been criticized as being merely cosmetic.
Therefore, when companies use hypothetical moral dilemmas to train their employees, the moral dilemmas need to be designed such that they allow for an employee-specific, targeted approach to combat unethical behaviors. These targeted approaches need to get at the means and ends of how the employee’s state of moral ambiguity comes to be.

As things currently stand, it is no surprise then that the current ‘one size fits all’ approach has been labelled as merely cosmetic. From an organizational perspective, there are policies that can be put in place in order to prevent employees from being caught in a state of moral ambiguity. For one, organizations can train their members using hypothetical organizational moral dilemmas so that they can better recognize moral principles and be more certain about moral outcomes, when faced with a moral dilemma.
Chapter 3: An empirical examination of moral ambiguity, its effects and interventions (organizational rules).

Having set the foundation for what moral ambiguity means in an organizational context, it is necessary to empirically validate the existence of its constituent components, as well as examine its relationship with ethical behavior. In doing so, the present research makes the following key contribution to the literature, in that it extends how moral dilemmas, and by extension, moral ambiguity has been studied.

We know that moral ambiguity is the result of a presentation of a moral dilemma. Prior research on moral dilemmas has presented individuals with a choice between two possible decisions, most famously in the form of the trolley dilemma (see Thomson, 1976). In most cases, these dilemmas are set up to highlight the tension between two imperatives, at least one of which is moral. Another marker of these moral dilemmas is that the agent has moral reasons to do each of two actions, but doing both actions is not possible (McConnell, 2018). While there is a great deal of empirical research on such moral dilemmas, the core components of these moral dilemmas are often not specifically manipulated (Gawronski et al., 2017), as was also noted in Chapter 2 of this dissertation. Interpretations of these studies have largely assumed that these were experiments, as opposed to what they really were, that is, non-experiments. Therefore, this research seeks first to validate and manipulate those core defining components of moral dilemmas and then to study the extent to which those components predict ethical decisions. In addition, I study whether an organizational intervention in the form of an organizational ethical code can help individuals address moral dilemmas more constructively, particularly when in a state of moral ambiguity, with a special focus on
moral outcome (un)certainty. In other words, I study how organizational rules can serve as effective moderators in the relationship between moral outcome (un)certainty and (un)ethical decisions.

**Recognition of moral principles and its influence on ethical decisions.**

It was Plato who reasoned that “to know the good is to choose the good” (Plato, 1990). In other words, Plato believed that knowledge of what is good ultimately led to individual’s making better choices. As it turns out, recent research has pointed out that thus far, we have been assuming the existence of an individual’s moral knowledge and therefore have yet to measure it directly (Reynolds, Dang, Yam, & Leavitt, 2014). The researchers go on to make the assertion that the aforementioned assumption is problematic because the extent to which individuals recognize moral issues varies greatly (Reynolds et al., 2014). Therefore, in an attempt to measure individual moral knowledge, they find that the knowledge of the immorality of an act is negatively associated with the commission of the act (Reynolds et al., 2014), and rightly so. The following section builds upon this attempt to consider the impact of one’s recognition of moral principles on ethical decisions.

A good starting point for examining the link between knowledge of moral principles and ethical decisions is by looking to decisions made in the Supreme Court. Legal scholars that examine the application of principled decision-making on the Supreme Court have made the claim that principled judgments are made in the presence of guiding principles that contribute during the deliberation of the case (Golding, 1963). The truth is that these justices are merely following in the footsteps of Immanuel Kant’s notion of what it means to be a principled decision-maker, at least theoretically. Kant is
famous for the view that the rightness or wrongness of an act cannot be determined merely by focusing on its consequences. Rather, the morality of an act depends “on the principle of volition by which the action is done without any regard to the objects of the faculty of desire” (Golding, 1963, p.38). All in all, in order for an action to be considered moral, it should be acted upon not only due to principle, but also in accordance with the principle (Golding, 1963). What this means is that the theoretical link between principles and principled decision-making is, if not as old as time itself, then it is certainly as old as Immanuel Kant himself.

Yet, there are a lack of specific empirical studies conducted on the link between one’s recognition of moral principles, or lack thereof, and how that affects resultant behavior. Having said that, we can look to relevant related studies to understand the connection. First and most straightforwardly, a lack of recognition of moral principles may occur when it does not even occur to the individual that an issue may have moral relevance, perhaps because it involves a mundane choice, in that the choice is one of extremely low moral intensity (Kreps & Monin, 2011). Some issues, due to their very nature, will not be moralized simply because it would never occur to anyone to moralize them (Kreps & Monin, 2011). Unsurprisingly, studies conducted on the link between moral intensity and ethical decision-making find that moral intensity is associated with individuals’ ethical decisions (Barnett, 2001; McMahon & Harvey, 2007).

Non-recognition of moral principles may also occur when the individual is presented with confusing options. For example, in a study that examined consumer ethical choices, researchers found that choice uncertainties arising from issues surrounding complexity, ambiguity and conflict, were ultimately associated with
compromised beliefs which played out in the form of consumers making unethical purchase decisions (Hassan, Shaw, Shiu, Walsh, & Parry, 2013).

Another avenue that we can look to in order to get clues on how a lack of recognition of moral principles will affect ethical decisions, is studies on moral awareness, which has been defined as a state where the agent is either aware of the moral components of a situation or not (Butterfield et al., 2000). Recall that while moral issue recognition or moral awareness is a construct separate from moral principle recognition and is a precursor to a state of moral ambiguity, studies on moral awareness, or lack thereof can still give us some clues on the effects of moral principle non-recognition. Research shows that factors that do not fall within a state of moral awareness can lead us to be ethically bounded (Bazerman & Sezer, 2016). An instance where this has been shown to be true is when the same objective information framed differently entices people to avoid losses rather than obtain gains (Kern & Chugh, 2009). In other words, the loss frame leads people to act in a way that sways their ethical judgments in a manner that is different from a gain frame.

Overall, these studies on moral intensity, moral confusion and moral awareness give us some insight into how the relationship between moral principle recognition and ethical decisions might play out. In line with that, I hypothesize that moral principle non-recognition relates negatively to ethical decisions.

**H1.** Moral principle non-recognition relates negatively to ethical decisions.

**Moral outcome (un)certainty and its influence on (un)ethical decisions.**

When it comes to moral dilemmas, there is a wide variety of research on how people facing moral dilemmas often arrive at a solution or decision after weighing their
options (Greene, Sommerville, Nystrom, Darley, & Cohen, 2001; Greene, Morelli, Lowenberg, Nystrom, & Cohen, 2008). In fact, past research has investigated how, why, and under what conditions people deliberately choose one moral imperative over another (Greene et al., 2001; Greene et al., 2008). However, what is missing in this discussion is the comparison between those who are certain in their assessment of the competing moral imperatives, versus those who are uncertain in their assessment. That’s where moral outcome certainty enters the picture. As explained in Chapter 2 of this dissertation, recall that moral outcome uncertainty takes into account the extent to which an individual is certain or uncertain in their evaluation of the competing moral outcomes associated with the moral dilemma at hand. Depending on the extent to which the individual is able or unable to determine these competing moral weightages, this constituent of moral ambiguity, affects ethical decision-making.

In theorizing about the link between moral outcome (un)certainty and (un)ethical decisions, it is important to note that the uncertainty that the individual is facing is not due to (a) a lack of deliberation, (b) not knowing the likelihood of events or (c) consequences that are too abstract. Rather this uncertainty exists in spite of having deliberated, knowing the likelihood of events and consequences. Specifically, the uncertainty stems from uncertainty about the moral outcomes. Having said that, studies that consider these aforementioned factors can still provide us with some insight on the link between moral outcome (un)certainty and (un)ethical decision-making.

If we assume that a state of moral outcome certainty may operate similarly to deliberating about moral outcomes, we can look to studies that have considered the link between deliberation and ethical decision-making in order to then hypothesize about the
relationship between moral outcome certainty and ethical decision-making. For instance, we know that the predominant theories in the field of behavioral ethics note that ethical behavior is the result of reasoned action and planned behavior, or deliberation (Kish-Gephart, Harrison, & Treviño, 2010; Rest, 1986; Trevino, 1986). Conversely, mindlessness, or a lack of attention to the consequences of a prospective behavior or decision (Langer, 1989; Langer & Moldoveanu, 2000; Moore & Tenbrunsel, 2014), which can also be thought of as one form of a lack of deliberation, has been noted to be a predictor of unethical behavior (Moore & Tenbrunsel, 2014; Ruedy & Schweitzer, 2010).

Next, if we assume that a state of moral outcome uncertainty may operate similarly to being uncertain about the likelihood of events, we can look to studies that have considered the link between probability uncertainty and ethical decision-making in order to then hypothesize about the relationship between moral outcome uncertainty and ethical decision-making. From a theoretical perspective, it has been hypothesized that the “certainty of probability of effects” influences moral intensity (Jones, 1991). Jones’ theoretical model suggests that the more the uncertainty, the less the moral intensity, which in turn reduces the likelihood that the decision-maker will recognize the ethical issue and therefore, be less likely to act ethically (Jones, 1991). To an extent, Jones’ proposition is reflected in Schweitzer & Hsee's (2002) study that placed participants in a negotiation context in which price elasticity was manipulated. The negotiation context was such that there was either high elasticity or low elasticity in terms of specifying the price of an item to be sold to a buyer. Respondents were given an incentive to inflate the price that they were to report. The results of this study indicated that respondents were more likely to report higher prices in the high-elasticity condition than in the low
elasticity condition. This is an important finding because elasticity can be thought of as an operationalization of probability uncertainty. Therefore, this study reveals that the greater the elasticity or probability uncertainty, the more likely it is that respondents will overstate the value of an item.

While studies on the link between abstraction and ethical decision-making are rare, one line of research theorizes that one of the reasons why the use of unlicensed software is both widely prevalent and largely unstigmatized, for example, is that policymakers operate at a higher level of abstraction than individuals (Warwick, 1994). This abstraction is a key reason why there is divergence of societal behavior, that is in the form of illegal use of software, from that condoned by legal statute (Warwick, 1994). This gives us some indication as to the link between abstraction and ethical decision-making.

Overall, this leads me to hypothesize that there is a negative relationship between moral outcome (un)certainty and ethical decisions.

**H2.** Moral outcome uncertainty relates negatively to ethical decisions.

**Moral ambiguity and its influence on ethical decisions**

Having considered the relationship between the constituents of moral ambiguity and ethical behavior, I will now build up to theorizing about moral ambiguity, the whole construct, and its relationship with ethical behavior. Overall, if we assume that moral ambiguity is akin to a sort of flexibility or malleability around a moral issue, then we know that research has shown that when the malleability to interpret one’s actions increases, dishonesty increases as well (Mazar, Amir, & Ariely, 2008). This is because people tend to rationalize their unethical decisions especially when judgment criteria are
uncertain or vague (Schweitzer & Hsee, 2002). In addition, studies have found that creativity increases individuals’ moral flexibility, which in turn, increases their dishonest behaviors (Gino & Ariely, 2012). Moral flexibility is an “individuals’ ability to justify their immoral actions by generating multiple and diverse reasons that these actions can be judged as ethically appropriate” (Gino & Ariely, 2012, p. 447). By studying the effects of related constructs such as moral flexibility and moral rationalizations on ethical behavior, we can deduce that the effects of moral ambiguity on ethical behavior will likely be similar. For instance, studies have found that when lawyers are paid to think creatively, they often end up exploiting loopholes or ambiguities of the law on behalf of their clients (McBarnet & Whelan, 1991). In other words, in the presence of ambiguity, the likelihood of exploiting those ambiguities for personal gain increases. There is reason to presume that the same would hold true if those ambiguities are moral in nature. For instance, Gino & Ariely (2012) found that creative participants are more likely to display dishonesty in contexts where they construe the task at hand to be an ethical dilemma. The ethical dilemma being an ambiguous perceptual task in which the trials provide participants with the option of perceiving reality as is, or in a way that would benefit them personally. The researchers reason that when individuals are presented with an ethical dilemma that allows for self-serving interpretations, they are often placed in a position where they have to weigh two opposing forces: the desire to maximize self-interest and the desire to maintain a positive view of oneself (Mead, Baumeister, Gino, Schweitzer, & Ariely, 2009). When battling between these forces, recent studies suggest that individuals choose to employ self-serving rationalizations, in that they choose to behave dishonestly, but only to the extent that they do not have to question their positive self-concept (Gino &
Ariely, 2012; Gino, Ayal, & Ariely, 2009). To put it in other words, when individuals are presented with moral dilemmas, or related, moral ambiguities, they exhibit increased unethical behavior. In line with these findings, I am hypothesizing that moral ambiguity will be associated with unethical decisions.

**H3.** Moral ambiguity relates negatively to ethical decisions.

**Organizational rules as an intervention for reducing moral ambiguity**

Rules are ubiquitous and can be found in almost all societal institutions. Whether labeled, “code of conduct,” “laws” or simply “rules,” they are meant for the purpose of providing an ethical framework for individuals. Psychologist, B.F. Skinner, noted that the function of rules is to provide information. Through rules, people learn to avoid prohibited behaviors, such as not playing with fire, without necessarily having to experience its harmful effects first-hand (Mulder, Jordan, & Rink, 2015; Skinner, 1974). Nevertheless, the mere presence of rules does not automatically indicate that people will avoid prohibited or unethical behaviors. In order to understand how rules work, researchers have looked at the link between how rules about ethical behavior and how these rules either encourage or discourage ethical decisions (e.g. Feldman & Harel, 2008; Mulder et al., 2015).

From an organizational perspective, rules help to encourage or discourage ethical decisions. Often, the evaluation of organizational dilemmas is based on situational moderators such as the normative structure of the organization (Trevino, 1986). The normative structure of the organization includes ethical codes of conduct, both explicit and implicit. Such rule-based approaches to ethical conduct can offer a form of guidance when it comes to situations without a clear directive of the “right” path to follow.
The importance of a robust set of rules in an organizational context has become especially apparent in certain fields with new and upcoming technologies. For example, it has been noted that the engineering ethics guidelines provided in the National Society of Professional Engineers reference guide fail to provide sufficient guidance for real-world situations. The guidelines tell the engineers to, “fulfill their professional duties” and “hold paramount the safety, health, and welfare of the public” (National Society of Professional Engineers, 2012). However, researchers in the field of Artificial Intelligence have referred to these guidelines as “abstract” due to the fact that there are no precise definitions provided for anything from “fulfillment of professional duties” to “safety of the public” (McLaren, 2003, p.146). On the other hand, it is certainly not possible to define rules to cover all of the possible conditions under which the guidelines would apply. More importantly, consider a situation in which two conflicting rules apply equally well to a particular scenario. For example, researchers have highlighted a scenario where an engineer needs to make a decision between maintaining a client’s confidences and an engineer’s obligations to public safety (McLaren, 2003). The engineer’s reference guide fails to provide direction regarding which rule should trump the other, simply because the rules are not specific enough to be applied to the variety of situations that are faced on the ground. This is why studying the effects of rules in terms of the behavioral outcomes they elicit becomes especially important.

One stream of research for example has considered the differences between specifically and generally framed rules. This stream of research finds that specifically-framed rules elicit ethical decisions more strongly than generally-framed rules do, due to a reduction in people’s moral rationalizations with the former (Mulder et al., 2015).
However, they further posit that a specific rule will only increase ethical decisions when the decision encountered explicitly corresponds to the rule (Mulder et al., 2015). We know that rules can be far from perfect because they cannot be written for all possible situations (Sekerka & Zolin, 2007), and this is precisely what differentiates specific rules from general ones when it comes to the outcomes associated with each. The construct of moral ambiguity can be used in order to further understand when and how specific and general rules come into play when an individual makes ethical evaluations.

When moral ambiguity enters the picture, specific and general rules will impact ethical decision-making in different ways. A specific rule that does not apply exactly to the situation will likely deter the actor who already does not recognize the principles at stake from behaving in a morally upstanding manner, compared to a general rule that merely sets a guideline for the right way to act in that same situation. With specific rules, people can get so focused on meeting the requirements of the specific standard, that they lose the rationale behind it (Tenbrunsel, Wade-Benzoni, Messick, & Bazerman, 2000). In other words, focus on a specific rule may put one’s need to act in an all-inclusive ethical manner on the back burner. In a study on the impact of specificity of norms in situations of ambiguity, researchers found that the less specific the norms are, the more likely it is that people will base their understanding of the situation on the prevalent social norms (Feldman & Harel, 2008a). Consequently, the manner that people choose to act in, will depend on the social norms surrounding that particular situation. The question that then remains is how will people act when one is unable to decipher those very social norms. While propositions surrounding the differences in general versus specific rules in the presence of moral ambiguity is beyond the scope of the current undertaking, this
paper proposes that, organizational rules will moderate the relationship between moral ambiguity and (un)ethical behavior, such that the presence of an organizational rule will reduce the strength of the relationship between moral ambiguity and unethical behavior and improve the strength of the relationship between moral ambiguity and ethical behavior. In other words, similar to the mechanism at work for general versus specific rules, in the presence of moral ambiguity, an organizational rule will curtail moral rationalizations and therefore increase ethical behavior outcomes.

**H4.** Organizational rules moderate the relationship between moral ambiguity and (un)ethical decisions, such that the presence of organizational rules weakens the relationship between moral ambiguity and unethical decisions.

**Study 1A**

The purpose of Study 1 was twofold, to validate the existence of the four components of moral ambiguity, namely, moral fluency, moral uncertainty, moral risk, and moral confusion, and to measure the extent to which the four states of moral ambiguity predict unethical decisions. In doing so, I will be looking at the link between each dimension of moral ambiguity, namely moral principle recognition and moral outcome certainty, and ethical decisions.

**Method**

**Participants.** I collected data from 218 participants at a large public university in the northeastern United States who participated in exchange for course credit. I omitted 3 participants who failed a comprehension check. This left me with a final sample of 215 participants. Of those participants, 96.7% were between the ages of 18-24 and 3.3% were between the ages of 25-34. 38.6% of the participants were female.
Procedure and Measures. To determine the existence of the four components of moral ambiguity, participants read a scenario that described a moral dilemma in which a manager had to pick between two ethically competing options. The dilemma used was adapted from Zhang, Gino, & Margolis (2018). The gist of the moral dilemma was that a hiring manager of a pharmaceutical company based in Argentina is faced with a situation in which they have to choose between hiring the son of a high-ranking official who could provide the company with important connections in local government versus another candidate who had ranked higher in a series of interviews that had been conducted for the position (see Appendix for Scenario). The scenario was designed with enough ambiguity such that there were good reasons for participants to wrestle with either option.

After presenting the scenario, I measured the extent to which participants were certain about the right thing to do in the situation, in order to eliminate those participants from further analyses. By definition, participants who are in a state of decision certainty cannot also be in a state of moral ambiguity. Decision certainty was measured using the statement, “I am certain that the choice that I will make in this decision situation is the right decision.” This was measured using a 7-point (extremely uncertain – extremely certain) scale. 32 participants indicated that they were extremely certain. These participants were not included in further analyses, leaving me with 183 participants.

Next, participants were presented with measures of moral principle recognition and moral outcome uncertainty, as these are the factors composed of moral ambiguity. In order to measure the extent to which participants recognized the moral principles that applied to the moral dilemma, I presented them with a list of 8 moral principles. The most relevant moral principles to select from the list were “do your duty,” “justice (fairness),”
and “non-maleficence (do no harm).” Participants rated the extent to which they thought that these moral principles applied to the dilemma on a 7-point (not at all – a lot) scale. The ratings given to the three accurate moral principles were averaged together to form a scale of moral principle recognition. Next, in order to measure moral outcome uncertainty, participants were presented with the statement, “I am certain that the outcomes associated with this decision situation are moral in nature.” This was measured using a 7-point (extremely uncertain – extremely certain) scale.

In order to classify each participant into which one of the four states of moral ambiguity they were facing in response to the moral dilemma, I determined the average to be the cut point. In other words, if a participant’s moral principle recognition score was below average, I categorized them to be in a state of moral principle non-recognition; if above average, then moral principle recognition. Whether participants were in a state of moral outcome certainty or uncertainty was determined using the same technique.

**Dependent Variable**

The dependent variable of interest was ethical decisions. This was measured using a set of statements to assess the extent to which participants would choose not to hire the son of the high-ranking official who did not make the cut over the less well-connected individual who did make the cut (3 items; $\alpha = .70$). The three items were, (1) “I would not hire candidate 16, in order to be fair to the other candidates,” (2) “The most pressing concern to me in this scenario was that the company receives support from the government.” and (3) “The most pressing concern to me in this scenario was for the most deserving intern be hired.” The second item was reverse scored so that higher scores on all three items would be reflective of greater ethical decisions.
Results

In line with the first hypothesis, results indicate that moral principle non-recognition relates negatively to ethical decisions. An independent samples t-test revealed that moral principle recognition ($M = 4.87$, $SD = 1.31$) was more likely to be associated with ethical behavior, compared to moral principle non-recognition ($M = 4.41$, $SD = 1.49$), $t(181) = 2.22$, $p < .03$, $d = 0.33$.

An analysis was also run using individual ratings on each of the three moral principles, “do your duty,” “justice (fairness),” and “non-maleficence (do no harm) with ethical decisions in order to account for those participants who may have rated one moral principle highly but not another. Here too, if a participant’s moral principle recognition score was below average, I categorized them to be in a state of moral principle non-recognition; if above average, then moral principle recognition. Results indicated that the recognition of duty ($M = 4.88$, $SD = 1.43$) as a moral principle was associated with ethical decisions compared to the non-recognition of duty, ($M = 4.35$, $SD = 1.33$), $t(181) = 2.54$, $p = .01$, $d = 0.38$. The recognition of fairness ($M = 4.80$, $SD = 1.42$) as a moral principle was also associated with ethical behavior compared to the non-recognition of fairness, ($M = 4.22$, $SD = 1.31$), $t(181) = 2.42$, $p < .02$, $d = 0.42$. However, the recognition of non-maleficence ($M = 4.80$, $SD = 1.36$) was not significantly associated with ethical decisions compared to the non-recognition of non-maleficence, ($M = 4.52$, $SD = 1.45$), $t(181) = 1.42$, $p = .16$, $d = 0.21$.

Another set of analyses was run in order to compare moral principle recognition versus non-recognition on each of three items on the ethical behavior scale, rather than a composite version of the scale. Here too, in line with the first hypothesis, an independent
samples t-test revealed that moral principle recognition ($M = 4.93, SD = 1.82$) was more likely to be associated ethical decisions, when using only the first statement from the ethical behavior 3-item scale, compared to moral principle non-recognition ($M = 4.12, SD = 2.05$), $t(181) = 2.84, p = .005$, $d = 0.42$. For the second statement however, in contrast to the hypothesized directionality, an independent samples t-test revealed that moral principle recognition ($M = 4.10, SD = 1.71$) was less likely to be associated with ethical decisions, compared to moral principle non-recognition ($M = 4.25, SD = 1.77$), $t(181) = 0.56, p = .58$, $d = 0.08$. As for the third statement out of the three, an independent samples t-test revealed that, as hypothesized, moral principle recognition ($M = 5.58, SD = 1.55$) was more likely to be associated ethical decisions compared to moral principle non-recognition ($M = 4.87, SD = 1.66$), $t(181) = 3.00, p = .003$, $d = 0.44$.

As for the second hypothesis, results indicate that moral outcome uncertainty relates negatively to ethical decisions. An independent samples t-test revealed that moral outcome certainty ($M = 5.12, SD = 1.41$) was more likely to be associated with ethical decisions, compared to moral outcome uncertainty ($M = 4.07, SD = 1.18$), $t(181) = 5.36, p < .001$, $d = 0.80$.

With ethical decisions as the dependent variable, I also found that there was a statistically significant difference between the four moral ambiguity groups as determined by a one-way ANOVA ($F(3, 179) = 10.18, p < .001$). This means that, as predicted by the third hypothesis, moral ambiguity relates negatively to ethical decisions. A Tukey post hoc test revealed that when it comes to ethical decisions, there was a statistically significant difference between (1) moral fluency and moral confusion, (2) moral fluency and moral uncertainty, (3) moral risk and moral uncertainty and (4) moral risk and moral
confusion. There was no statistically significant difference between (1) moral fluency and moral risk, (2) moral uncertainty and moral confusion.

*ANOVA Comparisons of Ethical Decisions Based on Type of Moral Ambiguity*

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
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<td>3.93</td>
<td>1.11</td>
<td>&lt; .001 &lt; .003 &lt; .73</td>
</tr>
</tbody>
</table>

**Study 1B**

The purpose of Study 1B was to replicate Study 1A, but with a different sample, in order to study older participants with more full-time work experience.

**Method**

**Participants.** I collected data from 200 participants using the online platform, TurkPrime. All participants were between the ages of 18-74. Of those participants, 44.5% were between the ages of 25-34 and 26% were between the ages of 35-44. 43% of the participants were female. When describing their employment status, 76.5% of participants indicated that they were employed full-time.

**Procedure and Measures.** I used the same procedure and measures as in Study 1A. As before, I measured the extent to which participants were certain about the right thing to do in the situation, in order to eliminate those participants from further analyses. 53 participants indicated that they were extremely certain about their decision. These participants were not included in further analyses, leaving me with 147 participants.
Dependent Variable

As before, the dependent variable of interest was ethical decisions. This was measured using a set of statements to assess the extent to which participants would choose not to hire the son of the high-ranking official who did not make the cut over the less well-connected individual who did make the cut (3 items; $\alpha = .80$).

Results

In line with the first hypothesis, results indicate that moral principle non-recognition has a negative relationship with ethical decisions. The means aligned with the hypothesized direction, however this relationship was not statistically significant. An independent samples t-test revealed that compared to moral principle non-recognition ($M = 4.42, SD = 1.40$), moral principle recognition ($M = 4.82, SD = 1.57$) was not statistically significantly more likely to be associated with ethical decisions, $t(145) = 1.61$, $p = .11$, $d = 0.27$.

In order to explore these findings further, an analysis was again run using individual ratings on each of the three moral principles, “do your duty,” “justice (fairness),” and “non-maleficence (do no harm) with ethical decisions in order to account for those participants who may have rated one moral principle highly but not another. Here too, if a participant’s moral principle recognition score was below average, I categorized them to be in a state of moral principle non-recognition; if above average, then moral principle recognition. Unlike Study 1A, the recognition of duty ($M = 4.70, SD = 1.61$) as a moral principle was not associated with ethical decisions compared to the non-recognition of duty, ($M = 4.59, SD = 1.38$), $t(145) = 0.45$, $p = .65$). Although, the means aligned with the hypothesized direction. The recognition of fairness ($M = 4.90, SD$
= 1.57) as a moral principle was associated with ethical decisions compared to the non-recognition of fairness, \((M = 4.07, SD = 1.19), t(145) = 3.16, p = .002), d = 0.57. Similar to Study 1A, the recognition of non-maleficence \((M = 4.74, SD = 1.43)\) was not significantly associated with ethical decisions compared to the non-recognition of non-maleficence, \((M = 4.55, SD = 1.60), t(145) = 0.74, p = .46). But here too, the means align with the hypothesized direction.

Just as in Study 1A, another set of analyses was run in order to compare moral principle recognition versus non-recognition on each of three items on the ethical decisions scale, rather than a composite version of the scale. Here too, in line with the first hypothesis, an independent samples t-test revealed that moral principle recognition \((M = 5.00, SD = 1.99)\) was more likely to be associated ethical decisions, when analyzing only the first statement from the ethical behavior 3-item scale, compared to moral principle non-recognition \((M = 4.27, SD = 1.88), t(145) = 2.27, p = .03), d = 0.38. As for the second statement, just as in Study 1A, in contrast to the hypothesized directionality, an independent samples t-test revealed that moral principle recognition \((M = 3.95, SD = 1.85)\) was less likely to be associated with ethical decisions, compared to moral principle non-recognition, \((M = 4.20, SD = 1.64), t(145) = 0.86, p = .39). As for the third statement out of the three, an independent samples t-test revealed that, as hypothesized, moral principle recognition \((M = 5.52, SD = 1.62)\) was more likely to be associated ethical decisions compared to moral principle non-recognition \((M = 4.80, SD = 1.49), t(145) = 2.77, p < .01), d = 0.46.

Coming to the second hypothesis, results indicate that moral outcome uncertainty relates negatively to ethical decisions. An independent samples t-test revealed that moral
outcome certainty ($M = 5.16, SD = 1.40$) was more likely to be associated with ethical decisions, compared to moral outcome uncertainty ($M = 4.30, SD = 1.48$), $t(145) = 3.52$, $p = .001$, $d = 0.59$.

Finally, in order to validate the existence of the four components of moral ambiguity, with ethical behavior as the dependent variable, I found that there was a statistically significant difference between groups as determined by a one-way ANOVA ($F(3, 146) = 4.81, p = .003$). This means that, as predicted by the third hypothesis, moral ambiguity predicts unethical decisions. A Tukey post hoc test revealed that when it comes to ethical decisions, there is a statistically significant difference between (1) moral fluency and moral confusion as well as (2) moral fluency and moral uncertainty. There was no statistically significant difference between (1) moral fluency and moral risk, (2) moral risk and moral uncertainty, (3) moral risk and moral confusion and (4) moral uncertainty and moral confusion.

**ANOVA Comparisons of Ethical Decisions Based on Type of Moral Ambiguity**

<table>
<thead>
<tr>
<th>Group</th>
<th>$n$</th>
<th>Mean</th>
<th>SD</th>
<th>Moral Fluency</th>
<th>Moral Risk</th>
<th>Moral Uncertainty</th>
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<td>5.35</td>
<td>1.31</td>
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<td></td>
<td></td>
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<tr>
<td>Moral Risk</td>
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<td>1.54</td>
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<tr>
<td>Moral Confusion</td>
<td>44</td>
<td>4.25</td>
<td>1.31</td>
<td>.004</td>
<td>.50</td>
<td>.99</td>
</tr>
</tbody>
</table>
Discussion

Both Study 1A and Study 1B reveal that the recognition of non-maleficence (do no harm) as a moral principle was not related to ethical decisions. The most likely explanation for this is that participants did not deem non-maleficence to be representative of this moral dilemma.

Secondly, the second statement on the ethical decisions scale, specifically, “The most pressing concern to me in this scenario was that the company receives support from the government,” was not associated with ethical decisions for either of the studies. In fact, in contrast to the hypothesized direction, recognizers of the appropriate moral principles were less likely to indicate that they were concerned about the company receiving support from the government. The fact that this occurred in both studies indicates that this finding cannot be attributed to a lack of attention on the part of the participants. Rather, the most likely explanation seems to be that many participants read that statement as being indicative of receiving aid from the government for drug manufacturing, not aid from the government due to hiring of the government official’s son.

Another shortcoming of the study design was that moral principle recognition was measured using a given set of eight moral principles. For moral principle recognition to truly get at the extent to which the participant recognized the moral principles associated with the moral dilemma, it should have been presented as an open-ended question without options to choose from.

In validating the existence of the four components of moral ambiguity, in general, it is evident that smaller differences exist between those groups that are next to each other
on the moral ambiguity scale. For example, statistically significant differences exist between (1) moral fluency and moral confusion and (2) moral fluency and moral uncertainty, but not between (3) moral fluency and moral risk. This was true for both Study 1A and 1B. Therefore, future versions of this study should involve the presentation of moral dilemmas that are set up to exaggerate the differences between moral ambiguity groups that are next to each other on the scale, such as that between moral fluency and moral risk. Perhaps this might involve using one scenario that hones in on the difference between moral principle recognition and non-recognition and another scenario that hones in on the difference between moral outcome certainty and moral outcome uncertainty. In doing so, validation of all of the four components of moral ambiguity should be more likely. Another reason why two separate scenarios might be the way forward is because the category of moral risk had the least number of respondents for both Studies 1A and 1B. Speaking speculatively, perhaps the scenario used in this study was less likely to elicit the combination of moral principle non-recognition alongside moral outcome certainty, i.e. moral risk, atleast compared to each of the other combinations of moral ambiguity, thereby pointing toward the need for another scenario.

Another takeaway from Study 1A and 1B was that moral risk elicited greater ethical decisions compared to moral uncertainty. This means that the non-recognition of moral principles does not bring about unethical behavior to the same extent that moral outcome uncertainty does. This was also evidenced by the effect size difference between moral principal non-recognition and unethical behavior versus moral outcome uncertainty and unethical behavior.

**Study 2**
Based on Study 1, I now have evidence that suggests moral outcome uncertainty will predict unethical decisions. But my inability to make causal claims serves as justification for having an experimental design for the next study. Therefore, the purpose of Study 2 is to experimentally manipulate moral outcome uncertainty in order to study the relationship between moral outcome (un)certainty and (un)ethical behavior.

**Method**

**Participants.** I collected data from 303 participants at a large public university in the northeastern United States who participated in exchange for course credit. I omitted 15 participants who failed to answer a comprehension check question accurately. Specifically participants were asked to indicate what issue the manager in question was facing. They had to pick between the following options, (1) which intern to hire for a summer internship, (2) whether to start a new job at another company, or (3) where to sell a new pharmaceutical drug. This left me with a final sample of 288 participants ($M_{\text{Age}} = 20.32$ years, $SD = 4.73$, 46.9% female).

**Procedure and Measures.** The study scenario used was the same as that of Study 1. In order to manipulate a state of moral outcome uncertainty, participants were presented with two opposing, yet accurate evaluations of the moral outcomes (see Appendix for manipulation). Specifically, they were told that hiring a less deserving, but politically-connected candidate might not be well-received by other employees in their company because of the predominant belief that interns should be hired on the basis of their merit. At the same time, participants were told that hiring the politically-connected candidate might mean that their pharmaceutical company’s drugs could get included in the list of medicines approved by the government for prescription. In turn, the company
would be able to use the power of economies of scale to reduce the cost of medication per unit sold, making some of their company’s life-saving drugs accessible to customers who previously could not afford them. Therefore, by presenting participants with these opposing, yet accurate, evaluations of the moral outcomes, a state of moral outcome uncertainty was manipulated.

In order to manipulate moral outcome certainty, participants were only presented with the former perspective, i.e. that hiring a less deserving, but politically-connected candidate might not be well-received by other employees in their company. With regard to the actual definition of moral outcome (un)certainty, participants in the moral outcome certainty condition could have been presented with either one of the aforementioned opposing, yet accurate, evaluations of the moral outcomes in order to manipulate the moral outcome certainty variable accurately. However, for the purposes of this study, I will only be presenting them with one of the two perspectives. In a later study, I will present participants in the moral outcome certainty with either of the two perspectives.

**Dependent Variable**

The dependent variable of interest was ethical decisions. Again, this was measured using the same set of statements to assess the extent to which participants would choose not to hire the son of the high-ranking official who did not make the cut over the less well-connected individual who did make the cut (3 items; $\alpha = .62$).

**Manipulation check**

After participants completed the ethical behavior measure, they responded to a series of statements meant to serve as a manipulation check. To check the moral outcome un/certainty manipulation, participants indicated their agreement to statements such as,
“This situation had more than one moral option,” (5 items; $\alpha = .77$). An independent samples t-test revealed that participants who received the moral outcome uncertainty manipulation ($M = 3.90$, $SD = 1.21$) were less likely to recognize the moral outcomes compared to those in the moral outcome certainty category, ($M = 3.59$, $SD = 1.04$), $t(286) = 2.28$, $p < .024$, $d = 0.27$.

**Results**

In line with the second hypothesis, I found that participants in a state of moral outcome certainty ($M = 4.86$, $SD = 1.10$) demonstrated stronger ethical behavior intentions than those in a state of moral outcome uncertainty, ($M = 4.53$, $SD = 1.52$), $t(286) = 2.37$, $p = .02$, $d = 0.28$.

Since the Cronbach’s alpha value of the 3-item ethical behavior scale was low, I also looked at the relationship between the independent variable and each of the three items on the dependent variable scale. Measuring ethical decisions using only the first item on the scale, I found that participants in a state of moral outcome certainty ($M = 4.97$, $SD = 1.66$) demonstrated greater ethical decisions than those in a state of moral outcome uncertainty, ($M = 4.40$, $SD = 1.79$), $t(286) = 2.80$, $p = .005$, $d = 0.33$. Results for the second and third item on the ethical decisions scale, while in the hypothesized direction, were not statistically significant.

**Discussion**

Using an experimental study design, in Study 2, I was able to establish that participants in a state of moral outcome certainty demonstrate stronger ethical behavior intentions than those in a state of moral outcome uncertainty.

**Study 3A**
Having established the predictive relationship between moral outcome certainty and ethical decisions, the purpose of Study 3 is to introduce a moderator, specifically an organizational rule, to the relationship between moral outcome certainty and ethical decisions. As per the fourth hypothesis, the intent behind this study was to examine the extent to which organizational rules moderate the relationship between moral ambiguity and ethical decisions. Note that while the fourth hypothesis was about moral ambiguity as a construct rather than its constituents, the following study explores the link between between moral outcome certainty, that is one of the dimensions of moral ambiguity, and ethical decisions.

Method

Participants. I collected data from 296 participants at a large public university in the northeastern United States who participated in exchange for course credit. Similar to Study 2, I omitted 14 participants who failed either a comprehension check or an attention check. This left me with a final sample of 282 participants ($M_{Age} = 21.85 \text{ years, } SD = 5.95, 53.9\% \text{ female}$).

Procedure and Measures. The study scenario and manipulation used was the same as that of Study 1 and Study 2. In order to introduce a moderator to the relationship between moral outcome certainty and ethical behavior, participants were either presented with an organizational rule or a control. In the organizational rule condition, participants were presented with a component of the organization’s mission statement that emphasized making hiring decisions based on merit-based criterion. In contrast, the control condition accentuated making hiring decisions based on a holistic assessment (see
Appendix for manipulation). The rule in the organizational rule condition was adapted from JP Morgan’s mission statement (“Business Principles,” n.d.).

**Dependent Variable**

As before, the dependent variable of interest was ethical decisions. Again, this was measured using the same set of statements to assess the extent to which participants would choose not to hire the son of the high-ranking official who did not make the cut over the less well-connected individual who did make the cut. To correct for the low Cronbach’s alpha value from the last study, an additional statement was added to the previous 3 items (4 items; $\alpha = .73$). This statement read, “I would hire candidate 16, based on the possibility that the company’s drugs be included in the list of medicines approved by the government for prescription.” Removing this statement would reduce the Cronbach’s alpha value to 0.601. A reliability analysis revealed that if the ethical behavior scale were only to include the first item on the scale alongside this new addition, then the Cronbach’s alpha value would be 0.81.

**Manipulation check**

After participant’s completed the ethical behavior measure, just as in Study 2, they responded to a series of statements meant to serve as a manipulation check (5 items; $\alpha = .79$). An independent samples t-test revealed that participants who received the moral outcome uncertainty manipulation ($M = 4.44, SD = 1.10$) were less likely to recognize the moral outcomes compared to those in the moral outcome certainty condition, ($M = 4.86, SD = 1.33$), $t(280) = 2.86, p = .004, d = 0.34$.

**Results**
A 2 X 2 (moral outcome uncertainty X organizational rule) factorial analysis of variance tested the effects of moral outcome uncertainty and the presence of an organizational rule on ethical behavior intentions. Results indicated a significant main effect for moral outcome uncertainty, $F(1, 282) = 16.16, p < .001$. As hypothesized, participants in a state of moral outcome certainty ($M = 5.33, SD = 1.20$) demonstrate stronger ethical behavior intentions than those in a state of moral outcome uncertainty ($M = 4.75, SD = 1.31$). Although not specifically hypothesized, the main effect of an organizational rule ($M = 5.15, SD = 1.33$) on ethical decisions was marginally significant, compared to a control ($M = 4.92, SD = 1.24$), $F(1, 282) = 3.38, p < .07$. In contrast to the fourth hypothesis, the interaction effect between the two factors was not significant, $F(1, 282) = .09, p = .77$, indicating that the presence of an organizational rule did not alleviate the effects of moral outcome uncertainty on unethical decisions. Running an analysis on each statement of the ethical behavior dependent variable as opposed to the dependent variable as a composite measure revealed similar results; wherein the main effect of moral outcome certainty was statistically significant, the main effect of an organizational rule was marginally significant and their interaction was non-significant.

**Study 3B**

The purpose of Study 3B was to replicate study 3A, but with one key difference. As noted previously, definitionally speaking, participants in the moral outcome certainty condition could have been presented with either one of the opposing evaluations of the moral outcomes in order to manipulate the certainty variable accurately. In prior studies, only one of those opposing evaluations was presented in the moral outcome certainty condition. For the purposes of Study 3B, in line with the definition of moral outcome
certainty, participants were presented with either one of the opposing, yet accurate, evaluations of the moral outcomes in order to manipulate the moral outcome certainty variable to map more closely onto its theoretical definition.

Method

Participants. I collected data from 292 participants at a large public university in the northeastern United States who participated in exchange for course credit. I omitted 18 participants who failed either a comprehension check or a procedure comprehension check. This left me with a final sample of 274 participants ($M_{Age} = 19.84$ years, $SD = 2.04$, 50% female).

Procedure and Measures. The study scenario and manipulation used was the same as that used in prior studies. The manipulation for the moderator was also the same as that used in Study 3A. What was different was that in the moral outcome certainty condition, participants were presented with either one of the opposing, yet accurate, evaluations of the moral outcomes in order to manipulate the moral outcome certainty variable, meaning that this time around there was one moral outcome uncertainty group and two moral outcome certainty groups.

The first moral outcome certainty group, henceforth referred to as moral outcome certainty (I), emphasized the moral outcome that hiring a less deserving, but politically-connected candidate might not be well-received by other employees in their company because of the predominant belief that interns should be hired on the basis of their merit. Those in moral outcome certainty group (II) were told that hiring the politically-connected candidate might mean that the drugs could get included in the list of medicines approved by the government for prescription. In turn, the company would be able to use
the power of economies of scale to reduce the cost of medication per unit sold, making some of their company’s life-saving drugs accessible to customers who previously could not afford them. Those in the moral outcome uncertainty group were presented with both of these perspectives.

Dependent Variable

As before, the dependent variable of interest was ethical behavior. Similar to Study 3A, this was measured using a set of four statements to assess the extent to which participants would choose not to hire the son of the high-ranking official who did not make the cut over the less well-connected individual who did make the cut (4 items; $\alpha = .80$).

Manipulation check

After participant’s completed the ethical behavior measure, as before, they responded to a series of statements meant to serve as a manipulation check (5 items; $\alpha = .77$). A factorial analysis of variance revealed that there was a statistically significant difference between (1) Moral Outcome Uncertainty and Moral Outcome Certainty (I) and (2) Moral Outcome Certainty (I) and Moral Outcome Certainty (II). Theoretically speaking, there should not have been a difference between Moral Outcome Certainty (I) and Moral Outcome Certainty (II). In addition, there was no difference between moral outcome uncertainty and moral outcome certainty (II), although theoretically speaking, there should have been.
An independent samples t-test however revealed that participants who received the moral outcome uncertainty manipulation ($M = 4.02, SD = 1.23$) were less likely to recognize the moral outcomes compared to those in the moral outcome certainty category, ($M = 4.45, SD = 1.26$), $t(272) = 2.90, p = .004, d = 0.35$.

**Results**

A 3 X 2 (moral outcome certainty X organizational rule) factorial analysis of variance tested the effects of moral outcome certainty or uncertainty and the presence of an organizational rule on ethical decisions.

In line with the second hypothesis, results indicated a significant main effect of moral outcome uncertainty, $F(2, 274) = 4.65, p < .01$. As hypothesized, participants in a state of moral outcome certainty ($M = 5.33, SD = 1.20$) demonstrate greater ethical decisions than those in a state of moral outcome uncertainty ($M = 4.75, SD = 1.31$). However, a Tukey’s HSD Comparison revealed that when it comes to ethical decisions, the moral outcome uncertainty condition did not differ significantly from moral outcome certainty (II).

### ANOVA Comparisons of the Moral Outcome Certainty Manipulation Check

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Moral Outcome Certainty I</th>
<th>Moral Outcome Certainty II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moral Outcome Uncertainty</td>
<td>133</td>
<td>4.02</td>
<td>1.23</td>
<td>&lt;.001</td>
<td>.265</td>
</tr>
<tr>
<td>Moral Outcome Certainty I</td>
<td>72</td>
<td>4.68</td>
<td>1.19</td>
<td></td>
<td>.03</td>
</tr>
<tr>
<td>Moral Outcome Certainty II</td>
<td>69</td>
<td>4.22</td>
<td>1.29</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Although not specifically hypothesized, the main effect of an organizational rule ($M = 5.15$, $SD = 1.33$) on ethical decisions was marginally significant compared to a control ($M = 4.92$, $SD = 1.24$), $F(1, 282) = 3.38$, $p < .07$.

In contrast to the fourth hypothesis, the interaction effect between the two factors, moral outcome certainty and organizational rules was not significant, $F(2, 282) = .09$, $p = .77$, indicating that the presence of an organizational rule did not alleviate the effects of moral outcome uncertainty on unethical decisions.

**Discussion**

The empirical findings of Study 3 reveal that the interaction effect between moral outcome uncertainty and the presence of an organizational rule is not statistically significant. In other words, I do not have evidence that organizational rules can be used to mitigate instances of moral ambiguity. The primary reason for this non-finding is likely that moderation models such as the one that I proposed between moral outcome certainty and the presence of an organizational rule require larger sample sizes. Any follow-up studies that I conduct should gather data from larger samples.
More importantly, the manipulation check revealed that there was a difference between both of the moral outcome certainty conditions. Theoretically speaking, this should not have been the case. Specifically, I find that participants in moral outcome certainty condition (II) were almost just as uncertain as those in the moral outcome uncertainty condition. This points toward the need for another scenario, or at least one in which the differences between moral outcome uncertainty and both moral outcome certainty (I), (II) pop. One path forward might be to use right-right moral dilemmas as opposed to the right-wrong moral dilemma used in this study. However, in using a right-right moral dilemma, the designation of what constitutes an ethical action will be trickier.

One of the shortcomings of the study design for Study 3 was that a manipulation check for the organizational rule manipulation was not included. Future studies should include a manipulation check for whether participants picked up on whether hiring decisions should be based on merit-based criterion (organizational rule condition) or a holistic assessment (control condition). Based on the overall finding that the effect of an organizational rule on ethical decisions was found to be marginally significant for both Studies 3A and 3B, there is good reason to believe that the organizational rule manipulation could have been further strengthened.
GENERAL DISCUSSION

Moral ambiguity occurs when an individual is unsure of the “moral” way to think or act due to either an incomplete (or complete) understanding of the moral principles involved, combined with either an incomplete (or complete) understanding of the degree of certainty surrounding an ethical outcome. This dissertation not only provides a conceptualization of the varying degrees of the various states of moral ambiguity, namely, moral fluency, moral uncertainty, moral risk and moral confusion, but also provides an empirical evaluation of the ethical implications of such states, in addition to approaches to mitigate some of the felt moral ambiguity. In doing so, it considers the means and ends, process and outcome of how moral ambiguity comes to be. Overall, the research in this dissertation demonstrates that (1) moral principle recognition relates positively to ethical decisions, (2) moral outcome certainty relates positively to ethical decisions, and (3) moral ambiguity relates negatively to ethical decisions.

The study of the construct of moral ambiguity makes it clear that moral judgments in response to moral dilemmas are rarely simple and straight-forward; instead people often differ in what constitutes a moral transgression. When asked to evaluate the morality of certain behaviors, people “may see the issue in plain terms, in which case they would be relatively certain of their judgment, or they may see the issue in nebulous terms, in which case they would be relatively uncertain” (Wiltermuth & Flynn, 2013, p.1004). By studying the elements of moral ambiguity, we can understand how and why people make moral judgments in the manner that they do.

Specifically, this dissertation demonstrates that moral dilemmas elicit more than just deontologist or consequentialist tendencies and that this either-or dichotomy that the
field has confined itself to has left a lot of room to study the range of states in between. This approach of studying moral dilemmas in terms of the dilemma’s felt constituent factors is a novel perspective in response to a longstanding either deontology or consequentialism approach. In studying the gap between deontology and consequentialism, this dissertation points out that the evaluation of moral dilemmas that elicit moral judgments can be enhanced or hindered based on individual factors such as the recognition or non-recognition of moral principles and moral outcomes.

As Table 1 demonstrates, in the vast majority of studies on moral dilemmas, there is an assumption that participants are in a state of moral fluency, which is defined as the state that arises as a result of moral principle recognition and moral outcome certainty. This is despite the fact that the defining aspects of what it means to be a utilitarian or deontologist, recognition of outcomes and principles, is not manipulated in the vast majority of these dilemmas. This is problematic because there is a whole range of possible states that are not covered by this assumption, namely that of moral uncertainty, moral risk and moral confusion. Take for example, a study conducted by researchers Nichols & Mallon (2006) wherein they presented participants with a version of the traditional trolley dilemma paradigm. As has been assumed in the vast majority of these studies on moral dilemmas, participant responses are deemed to be either utilitarian or deontological based on participant choice of the number to be sacrificed. But without manipulating the moral outcomes and moral principles, the researchers are essentially making the assumption that all participants are in a state of moral fluency. The point being that without a manipulation, we cannot assume a state of moral fluency because the participants could just as easily have been in a state of moral uncertainty, moral risk or
moral confusion, which essentially means participants could have been unsure about the morality of outcomes, the morality of principles, or both. Importantly, as the studies conducted in this dissertation demonstrate, each of the four states of moral ambiguity is then associated with different ethical outcomes, making it necessary not to assume moral fluency upon presentation of a moral dilemma. Another way to think about this is that just because someone picks the outcomes-based consequentialist option when presented with two competing options in an unmanipulated study, that should not lead to the conclusion that this person is not aware of the moral process or the moral principles.

All in all, this approach pushes the needle on understanding how individuals respond to picking between competing ethical imperatives. In focusing less on the ends of the spectrum, i.e. deontology or consequentialism, this dissertation shines light on the full range of possibilities, from individuals who consider principles and outcomes of ethical behavior whilst judging certain actions to be ethical if they increase some measure of societal utility, to those who are unable to determine either when determining the ethicality of their actions.

The study of moral ambiguity and its constituents is important for management research because it displays how varying combinations of the same factor, i.e. moral principle recognition and moral outcome certainty, can ultimately lead to varying degrees of ethicality. Furthermore, this dissertation challenges the implicit assumption that a state of moral principle recognition combined with moral outcome certainty, that is, moral fluency, will always lead to ethical behavior. While the empirical findings of this study certainly demonstrate that moral fluency results in greater degrees of ethical behavior compared to other states of moral ambiguity, it is clear that the degree of ethicality
elicited even by moral fluency leaves room for improvement. In other words, while moral ambiguity can certainly arise due to missing information and/or unknown causality, it can also arise in the presence of adequate information and known causality, also known as a state of moral fluency. Understanding the ethical implications, or lack thereof, of such states can give us a better understanding as to why even more advanced reasoners may falter at times when it comes to ethical decision-making in the presence of moral dilemmas.

While the findings with regard to whether organizational rules moderate the relationship between moral ambiguity and unethical behavior were mixed in that it was not clear that the presence of an organizational rule can be used to mitigate instances of moral ambiguity, I can speculate about reasons for the non-finding. The primary reason is likely that moderation models such as the one that I proposed require large sample sizes. Follow-up studies that I conduct will gather data from larger samples. In contemplating about other moderators that might combat the effects of moral ambiguity in the relationship between moral ambiguity and ethical behavior, I propose training effects. That is, if participants are trained to recognize moral principles and moral outcomes alongside the presentation of a moral dilemma in a study environment, the future presentation of a moral dilemma that elicits moral ambiguity will likely elicit lower degrees of non-recognition when it comes to moral principles and moral outcomes.

**THEORETICAL IMPLICATIONS**

One implication of this line of research is that the study of the constituent factors that form moral ambiguity revealed that moral dilemmas are not experienced equally by everyone. This was especially apparent in measurements of decision certainty in response
to the presentation of a moral dilemma. Researchers have labelled this state of uncertainty about the decision to make, “general preference for inaction versus action” (Gawronski et al., 2017. p. 343). These differences amongst respondents should be taken into account when conducting moral dilemma research and researchers should not presume that a dilemma will be experienced equally by everyone who is faced with it. Decision certainty is important to measure in reference to moral ambiguity because the implications of such decision uncertainty can be dire. Take for example, an otherwise well-intentioned person stumbling into a corrupt act because he is unsure of what to do, and therefore decides to follow through on the act based on what he has seen others modeling (Smith-Crowe & Warren, 2014).

Although this is an empirical question, there are bound to be varying degrees of decision certainty associated with the various forms of moral ambiguity. Moral fluency may imply a greater degree of certainty surrounding a decision, especially since it comes with a certain degree of certainty surrounding an ethical outcome. When this is then combined with an understanding of the moral principles at stake, such a state could lead to a greater degree of decision certainty, especially when compared to moral uncertainty, moral risk and moral confusion. The main point to note here is that all four categories of moral ambiguity should differ in terms of the level of decision certainty that they elicit.

Conversely, in measuring decision certainty in response to the moral dilemma we might even be able to predict the specific form of moral ambiguity that an individual is facing. In other words, it remains to be teased out whether decision certainty is a predictor of a state of moral ambiguity or vice versa. Along similar lines, those who engage in unethical behavior may be more likely to claim moral ambiguity. Therefore,
future studies should determine the causal direction between moral ambiguity and unethical behavior.

**PRACTICAL IMPLICATIONS**

Also another aspect to note is that this dissertation focuses on the implications of varying degrees of one’s understanding of moral outcomes when it comes to moral dilemmas. This is an attempt to come at moral dilemmas a bit differently particularly in the context of the current global race to set and define artificial intelligence principles. While this focus on defining artificial intelligence principles is well and good, the empirical findings of this dissertation suggest that it would be especially good to focus on the outcome-side, whether intended or unintended outcomes, when considering the ethical implications of new technologies.

This research also has implications for how to set up content moderation teams, particularly in the context of the proliferation of false content on social media platforms. Since it has become clear that there is no universal solution to optimize content moderation because each platform has different users and needs, when moderators find themselves presented with content that has been flagged due to the fact that it might be partly true whilst being partly false, or false information is being presented in a way that it appears to be true, it may help for content moderators to consider the moral principles and moral outcomes associated with keeping or removing the content. Similarly, when it comes to questions surrounding the regulation of social media so that it is not being used to manipulate users who may not realize that they are being manipulated, regulation needs to account for citizens who may not be adept at weighing the moral principles or moral outcomes.
LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

First and most straight-forwardly, in terms of future directions, moral principle recognition versus non-recognition needs to be experimentally manipulated in order to study its impact on ethical behavior. While there are indications that this factor will not be as important as moral outcome certainty in predicting ethical behavior, it is nevertheless a component of moral ambiguity and needs to be examined.

In addition, since this dissertation only put to test a right-wrong moral dilemma, it offers a limited snapshot of the link between participant responses to moral dilemmas and unethical behavior. This limitation makes the study findings of this dissertation less generalizable. Using dilemmas that are structured differently (eg. right-right moral dilemmas) or dilemmas from other contexts (e.g., accounting fraud) would provide a broader view of the link between moral ambiguity and unethical behavior. Speculatively speaking, a right-right moral dilemma should elicit more decision uncertainty compared to a right-wrong moral dilemma. The need for a right-right moral dilemma was also especially apparent upon conducting Study 3. It was determined that the use of a right-right moral dilemma might exaggerate the differences between moral outcome uncertainty, moral outcome certainty (I) and (II).

Using dilemmas that are structured differently or dilemmas from other contexts would also allow us to test for whether or not people consistently experience a specific type of moral ambiguity. In other words, studies using various types of moral dilemmas could help to detect whether people have a particular tendency toward the recognition or non-recognition of moral principles and outcomes. Ultimately, measuring these tendencies would allow for a more targeted approach to organizational ethics training.
Specifically, the most prevalent or stubborn forms of moral ambiguity could be the focus of training. Another possibility is to orient ethics training towards the identification of relevant moral principles to a particular dilemma, as opposed to the recognition of moral principles. In other words, there might be certain moral principles that are more relevant in an organizational setting. Determining what those relevant moral principles are could help managers to conduct more focused ethics training.

An additional shortcoming concerned the dependent variable, ethical decisions, which had means near the scale midpoint for all four states of moral ambiguity. This might indicate that across the four states of moral ambiguity, the respondent’s were uncertain about their decision. In other words, there is a concern that the independent variable and dependent variable, moral ambiguity and ethical decisions, are tapping into the same ambiguity, such that there might be endogeneity. Solutions to combat this problem of endogeneity include using a behavioral task or a dichotomous dependent variable in future studies. By using a behavioral task or a dichotomous dependent variable, the respondents’ ambiguity cannot transfer over into the dependent variable. In other words, there will be no middle ground for them to choose from. Respondents will need to commit to either an ethical or unethical act, in turn, providing a better sense of whether moral ambiguity predicts unethical behavior.

In addition, a limitation of Studies 2, 3a and 3b was the use of the term, “well-received” to bring in the perspective of social referents for the moral outcome certainty condition. Both conditions should not make any reference to decisions being “well-received” by social referents. If social referents are introduced, then both conditions should make reference to a decision being “well-received.” This is important because if
only one condition makes reference to decisions being well-received, then that becomes a confounding factor by indicating that this is the decision that work colleagues desire. The second limitation of Study 2 was that both conditions should make reference to moral content (e.g., saving lives), even if that moral content may ultimately be different in both conditions. The main point being that hiring on the basis of merit in the moral outcome certainty condition is not “equal” in terms of moral content to the uncertainty condition, which states that hiring the lower-ranked candidate would save actual lives. Possible solutions for this limitation include either removing the term, ‘saving lives’ from the moral outcome uncertainty condition altogether or adding more moral content to the moral outcome certainty condition (e.g., hiring on the basis of merit would be viewed as more fair).

Another future research direction to consider in studying ethical behavior as a dependent variable might be how participants in the various states of moral ambiguity respond if the ethical behavior is framed as an action that could be done versus should be done. This would serve to give us greater insight into how the four states of moral ambiguity differ from each other.

Overall, in examining the constituents and effects of moral ambiguity, this dissertation contributes to the literature in behavioral and business ethics. It is my hope that having created a conceptualization of moral ambiguity, this dissertation helps to introduce nuance to our understanding of moral dilemmas. My ultimate hope is that the contents of this dissertation will aid in our understanding of ethical decision-making within organizations.
In closing this dissertation, I will state that the study of moral ambiguity is meant to be a referendum on the idea that the world is gray, rather than black or white. Elie Wiesel said it best in his Nobel Prize speech, when he noted that, “We must take sides. Neutrality helps the oppressor, never the victim” (Wiesel, 1986). The study of moral ambiguity is meant to give us the tools necessary so that we do not succumb to neutrality due to our belief that the world is gray, when in fact as my study of moral ambiguity has made clear to me, it is only as gray as we make it out to be.
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APPENDIX A

Table 1: Sample of research on Moral Dilemmas in the literature

<table>
<thead>
<tr>
<th></th>
<th>Moral Fluency</th>
<th>Moral Risk</th>
<th>Moral Uncertainty</th>
<th>Moral Confusion</th>
<th>Label used</th>
<th>IV</th>
<th>DV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hanselmann, M., &amp; Tanner, C. (2008).</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>Taboos and conflicts in decision-making</td>
<td>Sacred values and variation of trade-off type (taboo, tragic, routine trade-offs)</td>
<td>Perceived decision difficulty</td>
</tr>
<tr>
<td>Authors</td>
<td>X</td>
<td>X</td>
<td>Moral dilemma</td>
<td>Impersonal versions of the bystander or footbridge case</td>
<td>Was a moral rule broken? All, things considered, was it okay for the protagonist to act as they did?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---------------</td>
<td>--------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Broeders, van den Bos, Müller, &amp; Ham (2011)</td>
<td>X</td>
<td></td>
<td>Moral dilemma</td>
<td>Primed moral rules: “Save lives” vs. “Do not kill”</td>
<td>Willingness to intervene in the dilemma</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX: Study Scenario

You are the manager of a multinational company’s pharmaceutical unit in Argentina.

As the manager of your company’s pharmaceutical unit, you have recently established a new internship program to recruit talent for possible careers with the company.

Over 1,200 applied for the internship and you have shortlisted only 30 to participate in a two-week program where the candidates’ skills were tested through a variety of exercises. A final set of 15 interns would be selected at the end of the two weeks.

Just two days before you were set to announce the 15 college students chosen for the summer intern program, you received a phone call from a middle manager who informed you that Candidate 16 was the son of a high-ranking government official.

The government official’s son’s presence would give the company an excellent opportunity to increase sales by ensuring that all its drugs were included in the list of medicines approved by the government for prescription.

Therefore, you are faced with two options:

Hire the son of the high-ranking official (candidate 16), and therefore, candidate 15 does not get hired.

OR

Do not hire the son of the high-ranking official (candidate 16), and therefore candidate 15 gets hired.

Study 2

Moral outcome certainty: You have discussed this option with your colleagues. One of your colleagues stated that hiring Candidate 16 would not be well-received by current employees in the company, because they believe interns should be hired on the basis of their merit, not their social status or political connections.

Moral outcome uncertainty: You have discussed this option with two of your colleagues. One of them stated that hiring Candidate 16 would not be well-received by current employees in the company because they believe interns should be hired on the basis of their merit, not their social status or political connections.

However, another one of your colleagues raised the point that if the companies’ drugs were to be included in the list of medicines approved by the government for prescription, the company would then be able to use the power of economies of scale to reduce the cost of medication per unit sold, in turn, making some of your company’s life-saving drugs accessible to customers who previously could not afford them.
Study 3

**Control:**

At our company, we seek to hire, train and retain employees. We hire people for the job and train them well.

Our mission is to develop leaders who want to build a better working world. We seek to select people for the job, put them in the right jobs and make decisions based on a wholistic assessment of what they bring to the company. We make people decisions based on many criteria.

**Organizational Rule:**

At our company, we seek to hire, train and retain great, diverse employees. We hire the most qualified people for the job and train them well.

Our mission is to develop leaders who want to build a better working world. We seek to select the best people for the job, put them in the right jobs and make decisions based on an honest assessment of their capabilities and performance. We make people decisions based on merit.