Morality by Consensus

A dissertation presented to

the faculty of

the College of Arts and Sciences of Ohio University

In partial fulfillment

of the requirements for the degree

Doctor of Philosophy

Dorian L. Bloom

May 2015

© 2015 Dorian L. Bloom. All Rights Reserved.
This dissertation titled
Morality by Consensus

by

DORIAN L. BLOOM

has been approved for
the Department of Psychology
and the College of Arts and Sciences by

Mark D. Alicke
Professor of Psychology

Robert Frank
Dean, College of Arts and Sciences
Abstract

BLOOM, DORIAN L., Ph.D., May 2015, Experimental Psychology

Morality by Consensus

Director of Dissertation: Mark D. Alicke

Morality by consensus refers to the idea that morality is influenced greatly by peer consensus information, specifically when the consensus information counters individuals’ initial moral beliefs. Broadly, morality refers to anything related to the topics of right and wrong (DeScioli & Kurzban, 2009). Such an ambiguous definition emphasizes the variations in people’s moral values, which they follow and use to make evaluations of others. As a result, moral beliefs are not consistent across individuals but unique to an individual or group with many personal attitudes simply representing socially accepted norms instead of developed individual preferences (Sherif, 1936). Nevertheless, people often overlook the personal nature of their moral values. They expect everyone to hold similar views and judge others negatively for having distinct moral beliefs (e.g. Hare, 1952; Haidt, Rosenberg, & Hom, 2003). People also overestimate the stability of their moral beliefs, assuming that they are resistant to change.

In relation to morality, social consensus can be construed as the degree of social agreement about an action’s goodness or badness (Jones, 1991), while more generally referring to the proportion of a population that supports a specific behavior or attitudinal position (Hodson, Maio, & Esses, 2001). The current studies sought to analyze the relationship between one’s own preferences, perceived moral quality, and consensus
information. They further examined the possibility that consensus information can influence ratings of moral acceptability more than one’s own explicitly preferred course of action.

The introduction more thoroughly examines the idea of morality by consensus and its related theories, beginning with a general discussion of morality and its real world application. It then segues into the conceptualizations of consensus and research related to moral identity, particularly how individual differences and deviations from moral behavior impact moral identity. The next section explains two ethical mindsets, deontology and consequentialism, and their relationship to moral viewpoints. In addition to an understanding of morality, this paper addresses the effect consensus information has on attitudes and opinions. As a result, the third section of the introduction describes the persuasiveness of consensus information. The literature review ends with a brief discussion of the relationship between morality and the legal system.

With the theoretical background in place, a pilot study, using 17 moral dilemmas, was conducted to initially demonstrate that consensus has an influence on ratings of perceived moral quality. Overall, participants rated the same alternatives as being morally better when seen as the majority opinion compared to the minority opinion. The pilot study indicates that moral beliefs are swayed by consensus information, while Studies 1 and 2 investigated whether moral beliefs were actually changeable. To demonstrate the changeability of moral judgments, Study 1 incorporated a within subjects factor that allowed for the assessment of individual change over time as well as conditions where consensus information ran directly counterattitudinal to the chosen course of action for
participants. Study 1 found that consensus information did influence ratings of perceived moral quality toward the majority option. Study 2 expanded on Study 1 by adding a second manipulated factor, the behavior of the target character, while still manipulating consensus information. The addition of target behavior complicated the effect of consensus, as it appeared that in the presence of both, people were more influenced by an individual target.
Table of Contents

Abstract .................................................................................................................. 3
List of Tables ......................................................................................................... 8
List of Figures ......................................................................................................... 9
Morality by Consensus .......................................................................................... 10
Consensus .............................................................................................................. 17
Moral Identity ......................................................................................................... 21
  Moral Balancing ................................................................................................. 23
  Deviations from Moral Behavior ....................................................................... 26
  Moral Convictions ............................................................................................. 28
Moral Judgments ................................................................................................... 30
  Moral Development ........................................................................................... 30
Ethical Mindsets: Deontology and Consequentialism ........................................... 31
  Motivated Use of Ethical Mindsets ................................................................ 36
  Dual Process Perspective ............................................................................... 39
Source Status: Conformity .................................................................................... 41
The Legal System, Consensus, and Morality ......................................................... 46
  Punishment ....................................................................................................... 46
Pilot Study ............................................................................................................. 49
Method .................................................................................................................. 50
  Participants and Design ................................................................................... 50
Materials ............................................................................................................... 50
Procedure ............................................................................................................. 51
Results .................................................................................................................. 53
  Difference Scores ............................................................................................. 54
  Changing Opinion ............................................................................................ 55
Study 1 ................................................................................................................. 57
Method .................................................................................................................. 59
  Participants and Design ................................................................................... 59
List of Tables

Table 1: Perceived Moral Quality Means & Standard Deviations for the Pilot Study .......................................................... 106

Table 2: Univariate Effects by Vignette .......................................................... 108

Table 3: Frequencies for Choosing Each Option ........................................ 110

Table 4: Option Identification by Scenario .................................................... 112

Table 5: Abortion Scenario: Ratings of Moral Superiority ............................ 113

Table 6: Income Scenario: Ratings of Moral Superiority ............................. 114

Table 7: Life Support Scenario: Ratings of Moral Superiority ...................... 115

Table 8: Money Scenario: Ratings of Moral Superiority .............................. 116
List of Figures

Page

Figure 1. This is an example of the graph that experimental participants viewed with each vignette in the pilot study ................................................................. 117

Figure 2. This graph represents ratings of the moral badness of the options in the majority in Condition A .................................................................................. 118

Figure 3. This graph represents ratings of the moral goodness of the options in the majority in Condition B ................................................................. 119
**Morality by Consensus**

Philosophers, legal scholars, and laypeople alike have examined and evaluated human behavior with respect to a moral framework. Both individuals and groups have considered the idea of morality, resulting in different conceptualizations of what it means to be a moral person. These varying viewpoints have led diverse religious, political, and ideological factions to claim that they have found the proper moral way to behave, live, and thrive, as they vie for control, power, and influence. Many of these groups as well as individuals believe in the infallibility of their moral judgments and assume that moral values lie at the core of a person’s character. All the while, they underestimate the pliability of their judgments and the influence of their peers. The present studies hope to establish ways that moral judgments are swayed with simple manipulations, similar to other attitude judgments.

Humans automatically and regularly evaluate other people’s behavior (Bargh & Chartrand, 1999; Fazio, Sabonmatsu, Powell, & Kardes, 1986). These subsequent valenced evaluations often include ideas about morality and can affect future interactions with the evaluated others (Haidt, 2001; Boehm, 1999). To allow for the inclusion of varying interpretations, this paper relies on a broad definition of morality. Specifically, morality refers to any phenomena related to the concepts of “right” and “wrong” (DeScioli & Kurzban, 2009). Most people believe their moral judgments to be rational, unchanging, and unerring, but as will be discussed, this is not always the case. In reality, opinions about morality change greatly over time, vary across culture, and have a motivational influence. Individuals often rely on self-serving definitions of morality to
validate their choices in much the same way as they distort ability judgments to create a more flattering self-image (Dunning, Meyerowitz, & Holzberg, 1989). Moreover, moral claims continue to persist without apparent objective criteria or evidence verifying their accuracy (Mackie, 1977).

Beyond supposing that their own moral judgments are correct, many also assume that others should corroborate their moral judgments (e.g., Hare, 1952; Haidt, Rosenberg, & Hom, 2003; Goodwin & Darley, 2012). As a result, individuals erroneously deduce that the majority share their moral values and overestimate the amount of people with corresponding moral beliefs. Additionally, people tend to surround themselves with likeminded others, reinforcing this false consensus effect in the moral domain (Ross, Greene, & House, 1977). Given this biased perception of moral norms, it seems likely that informing people about the “true” opinion of others should affect moral evaluations in a similar manner to other attitudes. The current study investigated the influence of social norms, by providing consensus estimates, on moral perceptions when contradictory to a chosen course of action. Specifically, can norms influence perceptions of moral acceptability on an endorsed course of action in as little as one exposure?

As mentioned previously, people use their moral beliefs to judge the behavior of others. Realizing the limits of these moral judgments might be expected to encourage more respect and tolerance of differing ideas. Nevertheless, many morally concerned groups profess to abide by a strict, unwavering set of moral standards, which they sometimes attempt to force onto uninterested individuals. To make matters worse, such groups may criticize outgroup members for non-adherence or a lack of belief, when they
themselves fail to obey their own prescribed moral principles. For instance, the married, former evangelical minister of New Life Church, Ted Haggard, famously preached traditional family values. While supporting bans on gay marriage in Colorado, he simultaneously engaged in secret sexual relations with a male prostitute, which ultimately led to his dismissal from the church (Banerjee & Goodstein, 2006). As this paper suggests, it is necessary to understand the malleability of moral beliefs to external factors, especially before passing judgment on others or dictating moral absolutes.

This kind of hypocritical behavior tends to generate questions about the invariable nature of moral judgments; examining the past demonstrates the extent that moral beliefs have “matured” over time. The evident variability in moral judgments can be seen through major historical changes in opinion, such as those about human sexuality that followed the publication of the Kinsey Reports (Kinsey, 1948/1998). Prior to the dissemination of Alfred Kinsey’s research, many Americans reported that they believed oral sex to be immoral; however, Kinsey’s findings revealed that many if not most people were engaging in this form of sexual behavior. As a result, the taboo status and social stigma that surrounded oral sexual behavior diminished, while the notion of it being an ordinary sexual act increased (Kinsey, 1948/1998). Many people changed their moral opinions after learning this basic knowledge about the sexual behavior of the population majority, perhaps through decreased guilt about engaging in such a “normal” act.

Updating the moral constraints of a culture not only includes approving previously prohibited behaviors, but also involves the removal of archaic, questionable practices. Sects of society that still subscribe to outdated social conventions often feel it
necessary to hide their behavior to avoid rebuke or legal sanction. For example, polygamy and child betrothal, both behaviors that were once acceptable and commonly practiced in the United States, are now restricted to a small number of areas and performed in secret. The societal consensus and moral values related to these behaviors have changed over time and have been accompanied by legal repercussions. This subjectivity in judgment is contrary to a more unwavering, rule-based understanding of morality. Such a rule-oriented belief is often referred to as deontology, which relies on adherence to absolute rules and laws that can never be acceptably violated. Accordingly, an action’s rightness or wrongness does not depend on the thoughts and behavior of others.

In relation to morality, social consensus concerns the degree of social agreement about an action’s goodness or badness (Jones, 1991). Consensus opinion on morally laden actions not only can change judgments of behavior from moral to amoral, but can also moralize previously neutral actions or objects by imbuing them with a moral component (Rozin, Markwith, & Stoess, 1997). This moralization process works in the opposite direction as well, with amoralization referring to the removal of moral status from an act or object. People moralize acts to help assuage discomfort and increase a sense of fairness in the world after misfortune. Once moralized, people accept and permit moral censure or government intervention in the designated area (Rozin, 1999). This pattern of moralization appears regularly in the health domain because of the link between health and moral status (Kleinman & Kleinman, 1997; Brandt & Rozin, 1997).
Examples of moralization in health related topics include: cigarette smoking, fat intake, and the initial reaction to the AIDS virus. Unlike previous generations, many current Americans not only see cigarette smoking as unpleasant, but also as something morally wrong (Rozin, 1999). In the past, individuals were allowed to smoke on college campuses, but current regulations restrict such behavior. Today, individuals cannot smoke inside or even next to buildings and must remain ten feet from a university building to satisfy their nicotine cravings. Similarly, parents now are expected to provide their children with nutritious foods that omit artificial ingredients, high fructose corn syrup, or large amounts of trans fats. Feeding children empty calories may be viewed as inadequate childcare, potentially garnering reproach from other parents. A final example of moralization occurred in the 1980’s, when the AIDS virus quickly became viewed as a disease of gay men or those addicted to drugs (Rozin, 1999). Many inferred that individuals contracting this virus had done something morally wrong to incur such a fate.

This moralization process can aid in maintaining a belief in a just word, as people find relief in punishing those considered to have made moral infractions (DeScioli & Kurzban, 2008). People also attend to and weigh signs of immorality more than indicators of morality (e.g., De Bruin & Van Lange, 2000; Reeder & Coovert, 1986; Wojciszke, Bazinska, & Jaworski, 1998). This combination of noticing the negative and believing in a just world converge in the public’s obsessions with celebrity impropriety and corruption, ranging from the antics of Lindsay Lohan to the aforementioned hypocrisy of Ted Haggard. Watching privileged or seemingly enlightened others fall from grace could be considered by some a national pastime. This interest in scandalous
behavior not only occurs in the United States but around the world, with the mass media news cycle enabling increased engagement in such judgmental behavior. Moreover, people ubiquitously participate in conversations about the immoral behavior of friends, family, and acquaintances in the form of negatively focused gossip (e.g. Barkow, 1992; De Backer, 2005). This idea of monitoring and judging other’s moral behavior is referred to as moral surveillance and, unsurprisingly, found worldwide (DeScoli & Kurzban, 2009).

Even when faced with evidence of changes and flexibility in moral values, people still maintain their moral judgments with fervency. The current study analyzes the relationship between one’s own preferences, perceived moral quality, and consensus information. This study examines the possibility that consensus information can influence ratings of moral acceptability more than one’s own preferred course of action. In other words, the knowledge of how others would behave will lead an individual to potentially change their opinion. The ambiguous nature of morality is seen in the discordance between individuals, groups, and cultures, further signaling the influence of outside forces on moral beliefs. Furthermore, moral values and judgments have similarities to attitudes and preferences, which are affected by social norms and consensus information. The present study uses ambiguous moral dilemmas to show that people’s ethical standards become more situational due to the knowledge of social norms. The following sections contain an explanation of the theoretical background to this research, including a discussion of consensus, moral identity, the philosophical doctrines of deontology and
consequentialism, the influence of majority and minority opinion, and the relationship between social norms and the legal system.
Consensus

Consensus information refers to the proportion of a population that supports a specific behavior or attitudinal position (Hodson, Maio, & Esses, 2001). This socially derived information can affect attitudes, as it indicates the majority and minority opinions, and can aid in predicting the degree of conformity to a group (e.g. Asch, 1951; Asch, 1956; Festinger, 1954; Hardin & Higgins, 1996; M. Sherif, 1936; Gerard, Wilhemy, & Conolley, 1968). Although often provided using percentages and proportions, the expression of consensus information comprises three main formats: numerical support, consensus adjectives, and social status labels (Gardikiotis, Martin, & Hewstone, 2005). Numerical support provides the percentages or numbers of people in a population endorsing an attitudinal position. In this format, the distinction between minority and majority is objectively made, and the relative size and difference of the two groups are measureable. Consensus adjectives describe a majority or minority opinion using expressive words, such as large, small, powerful, feeble, etc. Finally, social status labels use only the terms majority and minority to depict the source status of the attitudinal position.

Overall, the manner of presenting source status information (whether majority or minority) affects attitudes. Consensus adjectives impact the interpretation of majority and minority in a distinct manner; a large source leads to more influence than a small source, irrespective of the source status. This suggests that a large minority can have as much, if not more influence than a small majority. Moreover, consensus adjectives alter the type of message processing that they instigate; large sources generate heuristic message
processing, while only small minority opinions encourage systematic message processing. Relying on percentages instead of descriptive adjectives to indicate the size of the source status engenders dissimilar results. When supplying percentages, majority opinion always has more influence than minority opinion regardless of consensus size or adjectives (Gardikiotis et al., 2005).

In the present study, numerical support is used to indicate consensus. People are familiar with viewing consensus information as numerical support from public opinion polls, newspaper articles, and information about styles and trends. News reports and article headlines also frequently mention majority and/or minority opinion. As such, it is worthwhile to understand the effects that this consensus information has on people’s moral perceptions.

Research has examined the way consensus estimates are actually used in real world situations by scouring newspaper archives. Typically, such sources only provide adjective descriptors to help explain the size of a majority, while rarely employed to describe the size of a minority (Gardikiotis, Martin, & Hewstone, 2004). Furthermore, all minority size adjectives found in the newspapers referred to a kind of small minority. The topics that rely on these source status terms also differ, with majority depictions relating to political issues and minority depictions referencing social issues. Unsurprisingly, majorities are regularly portrayed more positively than minorities, but both are seen in approximately the same proportion of newspaper headlines. Oftentimes, numerous minorities are mentioned but only one majority, which explains why a majority is almost always reported in the singular form and minorities in the plural form (Nafstad, Phelps,
Carlquist, & Blakar, 2005). This indicates that minority engenders a more complex social representation than the inclusive yet poorly defined singular majority.

Although people learn about actual consensus in polls and surveys, they also have common sense notions about the world that include inferred perceptions of consensus opinion. Individuals’ common sense beliefs accumulate through everyday, insulated interactions with members of their culture. These interactions do not include systematic observation, yet people often generalize these notions and view them as objective and accurate. Occasionally, improving and increasing interactions with dissimilar others can lead people to recalibrate their perceptions of shared beliefs. For example, improved accuracy in perceptions of a new society’s shared beliefs is a key predictor of adjustment for immigrants (Kurman & Ronen-Eilon, 2004; Li & Hong, 2001). Understanding shared beliefs helps immigrants act in accordance with the local customs and function at a higher level in that society. They also see shared ideas as common ground, which makes them more likely to communicate ideas to others (Krauss & Chiu, 1998; Lau, Chiu, & Lee, 2001).

Perceived consensus, however, does not inherently reflect the objective consensus of a culture but tends to be systematically biased, oftentimes toward traditional viewpoints (Romney, Boyd, Moore, Batchelder, & Brazill, 1996). Pluralistic ignorance occurs when groups have mistaken perceptions of consensus for their own behaviors and beliefs, and these erred perceptions go unnoticed from failure to directly observe other group members’ opinions (Katz & Allport, 1931; Prentice & Miller, 1993). These errors in estimation can be seen at a national level when people misperceive the continued
predominance of traditional views and fail to notice appreciable changes in beliefs (Hirai, 2000; Robins, 2005; Wan, Chiu, Tam, et al., 2007). With the recent retraction of the Defense of Marriage Act (Barnes, 2013), many of those supporting equal rights had not realized that the nation was ready to institute this historic action. Perceptions of the national consensus lagged behind in the direction of traditional family values. The strongest traditionalist bias occurs for those who only communicate with their ingroup (O’Gorman & Garry, 1977). Learning that some stray from the traditionalist box allows others the freedom to change their perceptions of moral acceptability. In the present study, discovering their peers’ consensus beliefs should affect moral judgments by potentially overcoming pluralistic ignorance. To recognize the relationship between consensus and morality, the next section addresses how individuals judge the importance of morality.
Moral Identity

Many disagree on the definition of moral behavior, making it unsurprising that they also vary the importance placed on morality. Moral identity, an individual difference dimension, refers to the extent that morality is central to one’s personal goals and self-concept (Blasi, 1980, 1983, 2004; Reed, Aquino, & Levy, 2007). Although most people consider being moral a valuable attribute, individuals differ in the level of priority attached to the concept resulting in varying levels of moral self-importance (Blasi, 1983; Aquino & Reed, 2002). In other words, some people care greatly about their virtuous reputation, while others relish the title of heathen or philistine. According to the consistency principle, people who incorporate morality into their self-identity should desire to remain true to themselves and behave in accordance with their moral ideal (Erikson, 1964). The present study examines the relationship between social norms and moral judgment, while considering the influence of variations in moral identity.

Beyond a desire to be moral, those high in moral self-importance also strive to be considered more moral than others. Focusing on morality leads such individuals to interpret the world and their own behavior in more moral terms (Monin & Jordan, in press; Blasi, 1983; Aquino & Reed, 2002). Furthermore, people high in moral identity have increased availability of moral self-schemas, construe social information through a moral lens, and more frequently attend to moral violations (e.g. Lapsley & Narvaez, 2004; Fiske, 1992; James, 1890/1983; Smith & Semin, 2007). Contingencies of self-worth also demonstrate variability in moral self-regard, as moral behavior disparately contributes to people’s general sense of self-worth (Crocker & Wolfe, 2001). Moral
identity chronically differs between individuals, but can also be primed or intensified by circumstance (Aquino, Freeman, Reed, Lim, & Felps, 2009). Those higher in moral self-importance are likely to consistently pay more attention to their moral self-regard, leading to a greater impact on their global self-worth.

To measure moral self-importance, Aquino and Reed (2002) created the moral identity scale. This scale is based on social identity theory and relies on traits that correlate with people’s descriptions of moral prototypes, such as compassion, generosity, fairness, and honesty (Tajfel, 1959; Blasi, 1984; Walker & Pitts, 1998). This scale can also be conceptualized as a measure of the chronic accessibility of the moral self, with people high in moral identity having easily available and readily primed moral schemas (Lapsley & Lasky, 2001). The scale measures two dimensions of moral identity: internalization and symbolization. The first refers to the private part of moral identity and measures the self-determined importance of possessing moral qualities; the latter reflects the public aspect of moral identity and measures the amount that people feel their daily activities convey morality to others. These dimensions are discrete in that individuals can score high or low on both, neither, or one.

The moral identity scale asks participants to imagine a person with prototypical moral characteristics, such as honest and hardworking. After creating this mental image, participants indicate their agreement with 10 statements related to these character traits. Half of the items are related to the public expression of moral identity, symbolization, and the other half assess moral identity centrality, internalization. The scale does not directly ask participants how much of each trait they possess. Instead, participants
express their feelings about having these traits to estimate the level of individual importance attached to such characteristics. This attempts to avoid general impression management. At the same time, this scale does not address other positive traits unrelated to moral domains, such as happy, bright, and funny. See Appendix H for a copy of the moral identity scale.

Higher internalization scores indicate higher moral reasoning, concern for others, perceived obligation toward outgroups, forgiveness for transgressors and lower desire to cause harm to wrongdoers (Reed & Aquino, 2003). However, higher internalization scores remain unrelated to measures of self-esteem, like the Rosenberg Self-Esteem Scale (1965). Those with higher symbolization scores tend to have self-presentation concerns and a need to reinforce their identity after it is threatened (Wicklund & Gollwitzer, 1982). In the present paper, moral identity is hypothesized to moderate the effect of consensus on ratings of moral acceptability, as those higher in symbolization moral identity should be more concerned with deviating from consensus. In other words, those high on symbolization moral identity should be more focused on the norms of their peers and preserving a front of morality, augmenting the influence of consensus.

**Moral Balancing**

Research on moral identity indicates that people want to maintain their sense of self as a moral being and behave accordingly, yet the threshold for moral behavior differs across individuals (Aquino & Reed, 2002; Blasi, 1983). In certain contexts, however, present moral behavior can actually encourage people to subsequently behave in a less
than exemplary way (Monin & Miller, 2001). People’s choices come in a sequence of past and future behavior, building off or contrasting prior moral or immoral actions.

According to Nisan’s moral balance model (1991), people mentally attend to credits accrued for moral behavior and to debits incurred for immoral conduct. People feel comfortable when their debits do not exceed their credits because this allows them to maintain a reasonable sense of moral identity. Moral balancing results in two opposing patterns: moral licensing and moral compensation (Monin & Miller, 2001). Moral licensing refers to the tendency for past moral behavior to sanction potentially immoral action, and moral compensation refers to the counteracting of prior selfish and thoughtless behavior with later ethical acts (Monin & Miller, 2001; Mazar & Ariely, 2006; Monin & Jordan, 2009).

Moral licensing frees people from some of the anxiety related to morally ambiguous decisions. Similarly, moral dilemmas increase indecision and encourage participants to look to other sources of information for guidance. In the case of moral licensing, people look at their past, but in the present study, the consensus of others becomes another source of disambiguation.

Numerous empirical demonstrations in a variety of domains have substantiated the existence of moral licensing (Merritt, Fein, & Savitsky, 2009). For example after establishing oneself as non-racist, people feel comfortable saying somewhat racist remarks without them reflecting on their racial sensitivity. Sexism shows similar results, as people will describe a stereotypically masculine job as better suited to a man after disagreeing with blatantly sexist statements. People will even behave morally in
anticipation of needing future moral license credit. In one study, participants were instructed to consider two job applicants: an African American and a Caucasian man. After viewing the applicants’ qualifications but before choosing one for the position, participants rated the extent of racism in five equivocal behaviors. When the Caucasian applicant was more qualified, participants described more of the behaviors as racist to increase their sense of racial sensitivity before ultimately choosing the White applicant (Merritt, Fein, & Savitsky, 2009).

Both moral licensing and moral compensation encourage a belief in moral balancing, yet research has indicated another behavioral trend. Instead of reacting in opposition to either positive or negative behavior, people often act in a morally consistent manner. In this case, individuals follow moral behavior with continued moral actions or immoral behavior with subsequent immoral actions (Foss & Dempsey, 1979; Thomas & Batson, 1981). Research has suggested that activated ethical mindset may alter how moral history predicts future behavior (Cornelissen, Bashshur, Rode, & Le Menestrel, 2013). In other words, people’s reliance on either a deontological or consequentialist mindset moderates whether they will behave in a morally consistent or a morally balanced manner. With a detailed description of the two ethical mindsets in the next section, generally consequentialism considers the outcomes of an action, while deontology relies on predetermined rules of conduct. The outcome oriented focus of consequentialism results more frequently in moral licensing, but deontology’s emphasis on rules encourages moral consistency. Whether classifying or manipulating mindset, researchers find that mindset moderates if remembering an ethical or unethical behavior
leads to consistent or contradictory action. Recalling past unethical behavior results in contrasting generous behavior when in an outcome-based mindset, while recalling past ethical behavior encourages corresponding generosity when in a rule-based mindset. The predominant ethical mindset of a participant could likely affect their responses to the consensus information in the present study.

**Deviations from Moral Behavior**

In addition to past behavior and individual differences, situational factors, such as consensus information, affect people’s actions. At times, these influences guide moral decision-making by encouraging negative behavior (e.g. Monin & Jordan, 2009; Zhong, Liljenquist, & Cain, 2009). In the classic studies, Milgram demonstrated the power of a situational factor, nominal authority figures, to promote unethical behavior (Milgram, 1974). People found themselves willing to hurt a stranger in an effort to obey the requests of an ostensible authority. In addition to power dynamics, feelings of psychological closeness can encourage people to follow others’ questionable moral behavior. After exposure to negative behaviors of psychologically close others, people change their cognitions about these unsavory behaviors, judging such actions as less immoral and shame-worthy (Gino & Galinsky, 2012). Moreover, people increase their intentions to behave poorly and, at times, actually model these dubious behaviors. Since psychological closeness does not require a deep, meaningful bond, this vicarious dishonesty can occur with only minimal connection to another person. In fact, psychological closeness can stem from something as trivial as sharing a birth month or can be induced through a simple perspective taking exercise (e.g. Cialdini & DeNichols, 1989; Miller, Downs, &
Prentice, 1998; Gunia, Sivanathan, & Galinsky, 2009). If even these inconsequential similarities can affect moral judgments, participating in the same research should instigate psychological closeness in the present study between the participants and their peers who provided the consensus estimates.

Regardless of the motivating reasons, behaving unethically leads to the experience of negative emotions, such as guilt or shame (Klass, 1978; Wright, 1971; Noel, 1973). In the face of their own poor conduct, people have trouble maintaining their positive self-view as moral individuals in a fair world and worry that others no longer view them in such a manner (Lerner, 1970, 1977). This misalignment between actions and goals can result in unpleasant psychological tension or dissonance, instigating a drive similar to the one to maintain positive moral self-importance (Festinger, 1957). Reducing this psychological distress occurs regularly in one of two ways: modifying behavior to align with one’s goals or altering one’s beliefs about the behavior (Baumeister & Heatherton, 1996). In the current study, it is predicted that students will adjust their perceptions about the moral acceptability of behavior to avoid dissonance and maintain positive moral identity in the face of dissenting opinions.

A variation on belief alteration, moral disengagement invokes a series of beliefs or assumptions to justify or explain seemingly immoral behavior (Bandura, 1990). To mollify the psychological discomfort from behaving badly, people reconstrue their behavior to meet ethical standards. For instance, one could redefine ethical behavior after lying to a friend to include obscuring the truth to avoid hurting someone’s feelings. Research indicates that memory can actually contribute to this distorted self-image. At
times, dishonesty can lead to the forgetting of moral rules (e.g. codes of ethics) and the suppression of moral norms for guiding behavior (Shu & Gino, 2012). Learning that many others agree about the ethicality of a behavior may prompt individuals to adapt their definition of moral to include that behavior. Justifications for changing attitudes in the present study could be seen in increased confidence in decision-making or ratings of moral superiority when agreeing with the high consensus opinion.

**Moral Convictions**

Just as people vary the value placed on being moral, they also regard certain moral beliefs as more significant than others. For example, people may have strong opinions on the ethicality of gay marriage, while little concern for cruelty to animals. These shifting rankings of moral importance are the basis of moral convictions, which reflect core beliefs about right and wrong based on intuitive reactions instead of reason (Mullen & Skitka, 2006). In other words, moral convictions are the instinctive and emotional way people feel about certain issues. Measuring moral convictions allows researchers to compute the level of moral relevance attached to an issue, as opposed to assuming that a topic has moral relevance (Skitka, 2010). Moral convictions vary in strength with stronger convictions inciting a larger intuitive and emotional reaction. Deep-seated moral convictions often lead people to pay more attention to their ideal behavior and to have difficulty reconciling conflicting viewpoints (Stitka, Bauman, & Sargis, 2005). Researchers have often relied on face valid measures to assess moral conviction. They ask participants to indicate the extent that an issue “relates to
fundamental beliefs about right and wrong” and “is a reflection of your core moral beliefs and convictions” (Skitka, 2010).

In the present study, participants will view ambiguous moral dilemmas about four separate issues. Two of the scenarios involve standard harm or injustices based transgressions (e.g. lying), while the other two discuss contested value of life issues (e.g. euthanasia) (Goodwin & Darley, 2012). As such, each of the four topics may prove more important for some participants than others. More intense moral convictions are anticipated to lessen the effects of consensus information on ratings of moral acceptability. In the following section, the discussion changes from the lay value placed on being moral to the development of moral values and how philosophers have categorized behaving in a moral fashion.
Moral Judgments

Moral Development

Moral behavior has typically been examined using cognitive approaches like Kohlberg’s stage model of moral development or Rest’s four-stage model of moral decision making. Kohlberg’s stage model describes moral development from childhood to adulthood along with the accompanying changes in moral judgment during the lifetime (Kohlberg, 1971). Rest’s model depicts the moral decision making process and its four stages: awareness of the moral issue, making a moral judgment, creating an intention to act morally, and engaging in the moral behavior (Rest, 1986). Researchers, including Kohlberg, claim that the most important aspect of this process is the formation of a moral judgment, in other words deciding what is right and wrong (Kohlberg, 1981).

Kohlberg’s stage model of moral development highlights evaluative differences in the minds of children and adults. As people progress in age, the way that they understand and appraise moral and conventional transgressions changes (for a review, Turiel, Killen, & Helwig, 1987). In fact, the ability to distinguish these types of transgressions can develop as early as 39 months in humans (Smetana and Braeges, 1990). Moral transgressions typically infringe on the human rights of others, making these violations universal and independent of authority. On the other hand, conventional transgressions remain contingent on local law and customs because they only contravene social structure or rules (Huebner, Lee, & Hauser, 2010). For example, eating soup in a restaurant without the aid of a spoon might seem uncouth to many, yet such a faux pas does not garner moral reproach. However, throwing scalding soup at your dining partner would
reflect poorly on your moral character. As a result, moral transgressions are usually
deemed more serious, more wrong, and more punishable than conventional transgressions
(Nucci, 1981; Smetana, 1981, 1985; Smetana & Braeges, 1990; Smetana, Bridgeman, &
Turiel, 1983; Stoddart & Turiel, 1985).

Kohlberg’s theory specifically outlines six developmental stages. In the
preconventional level (Stages 1 and 2), children behave mainly out of self-interest.
Obeying authority and following orders is done in the service of avoiding punishment or
gaining advantages. At the conventional level (Stages 3 and 4), children see themselves
as members of their respective society and begin to value social norms, rules and
authority as a means to maintain societal order. The postconventional level (Stages 5 and
6) signifies a sense of autonomy for the individual and a belief in morality independent of
convention and authority (Kohlberg, 1971).

Ethical Mindsets: Deontology and Consequentialism

The other common way to conceptualize moral judgment has been through ethical
mindsets. Philosophers’ disagreements about what constitutes moral behavior has helped
lead to the distinction between two ethical mindsets, deontology and consequentialism.
These opposing doctrines lie at the heart of the debate about how to act in a moral
fashion, with each espousing distinct guiding principles (Western moral philosophy
framework, P. Singer, 1991). These two moral mindsets can be construed as cognitive
frameworks for making moral decisions because they provide guidelines for deciding the
The present research relates to these two theories in that people will respond to moral
dilemmas in different manners depending on their dominant ethical mindset, which will be explored in more detail in this section.

Deontology is a broad, rule-based mindset that champions a belief in a discrete right and wrong, demanding compliance with nonnegotiable principles and imperatives (Alexander & Moore, 2008). In fact, deontology earns its name from the Greek word “deon,” meaning obligation or necessity. According to this mindset, the judgment of an action’s morality is based on its compatibility with universal rules of conduct, independent of consequences (Witte & Doll, 1995). Deontology suggests the existence of a correct way to act and offers no satisfactory reasons to deviate. One cannot ethically violate certain rights, even if the violation may potentially lead to the most overall good for the largest number of people. For example, “do not steal” takes precedence as a rule, regardless of the reason behind one’s thievery or its prospective outcome. As a result, stealing to save one’s starving child or to obtain a coveted luxury are both morally unacceptable according to deontological principles.

The overriding principle of deontology is the obedience to a set of rules, but these rules vary based on the deontological theorist. Immanuel Kant created one of the most influential deontological theories, which was considered a form of rationalism due to its foundation in rules of practical reasoning (Kant, 1785/1959; Kant, 1785/1994). In contrast, non-Kantian deontologists stressed that rights must be inferred from different kinds of judgments, such as those related to natural law. According to Kant, no consequence has fundamental moral worth, and the only thing good in and of itself is The Good Will, a person’s free will motivated by reason. Reason has no exceptions, making
moral duty absolute. Applying the categorical imperative remains the only acceptable way to assess moral action and refers to behaving in such “a way that we can will the maxim of our action to become universal law” (Kant, 1785/1959, p. 18). Kantian deontology further stresses the worth and intrinsic moral value of every individual; no person should be treated as a stepping-stone to obtain something else (Burnor & Railey, 2011). Kant strongly believed that under no circumstances should one’s moral goodness be compromised to gain an object of desire.

Deontology’s stringent obedience to set rules opposes consequentialism’s reliance on possible outcomes. Consequentialism is a teleological or outcome-based mindset, in which an act’s moral rightness is evaluated based on its consequences (Sinnott-Armstrong, 2008). Accordingly, it proposes that people should maximize positive outcomes by concentrating on the result of actions. Like deontology, all consequential theorists do not agree, and varying subtypes of consequentialism have emerged. Philosophers credit John Stuart Mill and Jeremy Bentham as the originators and greatest proponents of one category of consequentialism, utilitarianism. According to utilitarianism, people should attend to an action’s impact on others in an attempt to create the greatest good for the greatest number of people. By examining the expected utility of an action, the ends can justify the means. A negative outcome for a few individuals is acceptable, if they are outweighed by positive consequences for many (Witte & Doll, 1995).

With their specific recommendations, these theories create concrete models of moral justification that often advocate conflicting courses of action (Gollan & Witte, 2008). These frameworks have been shown to influence moral behavior (Trevino et al.,
2006), moral awareness (Reynolds, 2006), moral decisions (Brady & Wheeler, 1996), and justice perceptions (Schminke, Ambrose, & Noel, 1997). The following moral dilemma about a contested value of life issue is used to illustrate the differences between the prescribed behaviors of these two mindsets:

Andrew’s Great Uncle George has pancreatic cancer. Pancreatic cancer is a terminal illness accompanied by a great deal of discomfort and pain. Doctors have estimated that Uncle George only has a couple of months to live. Terrified of his deteriorating quality of life, Uncle George asks Andrew for some assistance. Andrew is a pharmacist with access to many medications. Uncle George wants Andrew to provide him appropriate drugs to aid in his suicide. His uncle does not want to experience the pain as his body deteriorates and very desperately begs him.

Allowing Andrew’s Uncle George to die may be the course of action that leads to the most positive consequences, making this choice consistent with consequentialism. Andrew’s aunt may be accumulating immense debt to pay for the treatment that keeps her husband comfortable. With the terminality of his cancer unquestioned, she may benefit financially from her husband’s death coming sooner rather than later. George’s current condition may also place a large burden on his children who have to spend money on treatment and transportation to visit. Furthermore, Andrew’s elderly uncle wants to die to end his misery and pain. As a result, Andrew would be fulfilling his uncle’s wishes and doing something good by assisting in his uncle’s death. However, these considerations do not alter deontologists unwavering stance about following one’s duty. Deontological
principles do not permit aiding in the death of another human being, even in the face of such situational factors and potentially positive outcomes. Depending on which doctrine people support, they may come to incongruous conclusions. In the present study, how people conceive of moral behavior should alter their responses to the scenarios.

It is possible to combine the stage theories like Kohlberg’s with the notion of ethical mindsets (Reynolds, 2006). The middle or conventional stages of moral development stress maximizing shared interest and pleasing others (Victor & Cullen, 1988). Similarly, consequentialism emphasizes the potential consequences for others by identifying the moral decision as the one that achieves the most good. Kohlberg’s highest or postconventional stages rely on a commitment to standards and rules of conduct that have been agreed on through critical evaluation (Kohlberg, 1981). Deontology, likewise, focuses on consistent conformity to moral patterns. According the MDT, those who reach the highest stages are still capable of appreciating and comprehending the ideas of the previous stages. As a result, those whose predominant mindset stresses deontology may still think through the utilitarian solution when making moral decisions (Reynolds, 2006).

To differentiate the dominant mindset in most individuals, researchers have used two dilemmas that emphasize the discrepancy between the deontology and consequentialism: the trolley dilemma and the footbridge dilemma. In the typical trolley dilemma, a runaway trolley is heading for five people on the tracks who will be killed if there is no change to its current course. The only chance to save the five people involves using a switch that will turn the trolley onto another track, but it will still kill one person on that track (Foot, 1967). Flipping the switch indicates more of a consequentialist
mindset (killing 1 is preferable to killing 5), while refusing to flip the switch represents more of a deontological mindset (killing anyone is unacceptable). The footbridge dilemma creates a similar situation, where a runaway trolley is on a track and about to hit and kill five people. The only way to save these five people is to push another person off of a footbridge and into the trolley’s path, indubitably killing the pushed person (Thomson, 1986). It would be expected that a prototypical consequentialist would push the person in the name of the greater good while a deontologist would see this as a breach of rights or duties (Greene, Morelli, Lowenberg, Nystrom, & Cohen, 2008). See Appendix A for visualizations of the dilemmas.

Another way to measure people’s ethical predisposition has relied on traits related to the characteristics of each mindset. The character traits version of the Measure of Ethical Viewpoints (MEV) has participants rate the importance of traits that reflect a focus on either deontology or consequentialism on a scale from not important to me to very important to me. Identifying which traits are important to them indicates people’s preference for these ethical mindsets (Brady & Wheeler, 1996). This measure can be subtler than the trolley problem as it does not ask the participant to make a difficult decision. See Appendix H for a copy of the traits section of the MEV.

**Motivated Use of Ethical Mindsets**

People often rely on general moral principles, such as ethical mindsets, to quickly guide behavior across a wide variety of situations. Individuals usually apply these ethical principles in one of two ways: in a motivated manner to attain other goals or in a situational manner with aspects of the situation prompting the mindset. For example,
individuals’ reliance on deontological versus consequentialist moral principles changes based on how those principles match with the moral conclusions most consistent with their political orientation (Uhlmann, Pizarro, Tannenbaum, & Ditto, 2009). Moreover, slight variations in the trolley problem, such as whether the harm is direct or indirect, result in people consistently favoring one mindset over the other (Foot, 1967; Thomson, 1986; Greene, Somerville, Nystrom, Darley, & Cohen, 2001). People have a moral toolbox from which they can build support for their moral intuitions, sometimes resulting in the use of moral principles as post hoc rationalizations for decisions.

Research has also directly manipulated deontological or consequentialist mindset. As mentioned previously, Cornelissen, Bashshur, Rode, & Le Menestrel (2013) examined the effects of ethical mindset on moral consistency and moral balancing. They asked people to think of ethical or unethical behavior that they had done in the past, while altering the directions to induce one of the mindsets. Specifically, the directions instructed participants to think of a behavior’s ethicality in terms of either outcome-based aspects of the action or rule-based characteristics. If the ethicality hinged on the hurt or benefit to others then this should trigger a consequentialist mindset, while a focus on whether it followed an ethical norm or principle relates to deontology. Using the trolley problem as a manipulation check, the instructions appeared to induce the respective mindsets.

In addition to motivation or manipulation, the moral principle used may stem from simple cognitive heuristics, such as the accessibility of a particular mindset. In situations with conflicting moral rules, the most accessible rule during the decision-
making process can dictate the ethical mindset activated. Researchers previously assumed that “do not kill” is the dominant response to the footbridge dilemma (Thomson, 1986). In other words, most participants choose not to intervene when it will result in the death of one in order to save five. Recently, however, evidence indicates that whether the deontological rule “do not kill” or the consequentialist notion of “save lives” is more accessible affects how people solve these dilemmas by altering the dominant response (Broeders, van den Bos, Muller, Ham, 2011). Whether due to motivational, situational, or cognitive factors, the ethical mindset of participants may affect responses in the current study.

The present proposal expects that the differences between the two mindsets to alter the influence of consensus information. Those in a deontological mindset believe in a set of core values that can never be violated. Although these core values may differ for every person, they should remain constant for each individual in the face of contradictory peer consensus information. On the other hand, those who support the doctrine of consequentialism may be more swayed by consensus information, as the opinion of others could help reveal how best to maximize good. As will be discussed later in the paper, individuals typically acquiesce to the majority view. It is expected that most people will be influenced by the opinions of their peers, while few will apply the strict invariant standards of deontology and remain unaffected by the consensus beliefs. Specifically, those who are classified more as consequentialists should have larger opinion changes from consensus information than those who are classified as deontologists.
Dual Process Perspective

Ethical mindsets play a role in designating moral behavior but involve a great deal of reasoning. Research reveals that many moral judgments occur in a much less rational way. Moral judgments form through three basic processes: moral reasoning, affective intuitions, or dual processes. Using moral reasoning, people come to an appropriate conclusion from conscious, effortful deliberation as in the cognitive frameworks mentioned previously (e.g., Kohlberg, 1969; Monin, Pizarro, & Beer, 2007a, 2007b; Nichols & Mallon, 2006; Piaget, 1932/1975; Pizarro & Bloom, 2003; Turiel, 1983, Bargh, 1997). Conversely, affective intuitions constitute the immediate, spontaneous reactions to morally laden situations that can guide behavior (e.g. Haidt, 2001; Kagan, 1984; Wilson, 1993). The dual process perspective argues that both reasoning and affective reactions play important roles in the moral decision-making process (Greene et al., 2001).

The social intuitionist model of moral judgment suggests that moral judgments largely stem from hasty gut reactions, leaving people at the mercy of impulses and affective intuitions (Haidt, 2001). Reasoning and rational thought can and do affect moral judgments, but in many ordinary instances, moral evaluations are rapid, automatic, and emotional (Bargh & Chartrand, 1999). David Hume, a well-known philosopher, acknowledged the possibility that people rely more on affective intuitions than rational thought processes hundreds of years ago (Hume 1777/1969). His ideas came about in contrast to theories of rational moral reasoning, such as consequentialism and deontology.
Oftentimes, moral reasoning is used to help justify initial affective reactions in a post hoc manner, to aid in convincing others to agree, and to clarify the appropriate behavior when people have no immediate reaction or have contradictory intuitions. One dual process perspective, the affect-as-information approach, suggests that people use emotions to assess the value of things and objects (Clore et al. 2001; Schwartz & Clore, 1983, 1988). In essence, people consider their feelings about a target when creating an evaluative judgment. For instance, people use feelings of disgust for decision-making purposes whether appropriate or not (Schnall, Haidt, Clore, & Jordan, 2008). Due to the importance of affective reactions on moral judgments, participants in the present study indicated their impressions of the vignette characters to measure their intuitive feelings. In the following section, the discussion will move from the philosophical aspects of moral judgment to the influence of source status.
Source Status: Conformity

Because source status (majority vs. minority) influences conformity, this section delves further into the conformity process to better understand the relationship between moral responses and consensus information. Early studies in the social influence canon discuss the conditions under which a person acquiesces to a numerical majority (e.g. Asch, 1956; Crutchfield, 1955). These studies demonstrate that individuals will publicly endorse objectively false responses to remain in agreement with the majority. Reaching agreement with a majority can satisfy two needs: belongingness and information (Jones & Gerard, 1967). Either normative or informational social influence has occurred depending on the motivating factor behind the conformity (Deutsch & Gerard, 1955). In the former, individuals conform for the positive experience of belonging to a majority group and to gain insulation from social rejection. From an informational perspective, people conform in uncertain situations because they accept the knowledge gathered from a majority as evidence of its correctness.

Regardless of the motivating reason, research has consistently shown people’s susceptibility to conform to the majority view (Sherif, 1936; Wood, 2000) and the positive psychological effects experienced from following social norms (Lane & Gibbons, 2007). In fact, unfavorable social comparisons and deviations from the norm can have adverse effects, especially in student populations. When students believe they are not similar to their peers, they achieve less and are more likely to leave school than others students without such beliefs (Blanton, Buunk, Gibbons, and Kuyper, 1999). In addition, students who saw themselves as highly similar to the prototypical good student
earned better grades a year later. This has also been seen in other domains, such as health-risk and health promotion behaviors (Gibbons & Gerrard, 1995; Rivis & Sheeran, 2003). As such, the sample in this study should have a strong desire to share views with their peers and see themselves as similar to those who previously took the survey.

Furthermore, this desire to hold a majority viewpoint can be exacerbated in situations of uncertainty, such as in a moral dilemma or after a mortality salience. Renkema, Stapel, & Van Yperen (2008) find that after a mortality salience, people conform to conventional opinion, even on familiar topics. Participants that received a mortality salience manipulation endorsed beliefs more in line with their perceptions of the population’s opinion compared to those without a morality salience. People that hold skewed perceptions of the majority opinion may not be conforming to the majority but instead deviating further from it.

People do not only learn from others in times of ambiguity, but also internalize group norms to increase feelings of belongingness. According to group-norm theory, new members have to acquire many of a group’s attitudes, values, beliefs and prejudices to feel like a real group member (Sherif & Sherif, 1953). These learned norms might continue to guide behavior in situations without any group members (Sherif & Sherif, 1953). As a result, many personal attitudes do not represent individual preferences developed over a lifetime but the socially accepted norms of their ingroups (Sherif, 1936).

Due to such socialization of prejudices, attitudes towards minorities tend to come from contact with group attitudes toward minorities instead of from actual interactions
with minority group members. To reduce prejudice and stereotyping, changing attitudes at the group level may be more effective than at the individual level. This suggests that reshaping people’s attitudes can successfully occur by revising their perceptions of the norms around them. For instance, Strangor, Sechrist, and Jost (2001) had participants believe that their view of African Americans was more stereotypic than their peers, which led participants to lessen their endorsement of these stereotypes. In the opposite direction, participants increased their endorsement of stereotypes when they thought that their peers’ views were more stereotypic. Perceived consensus should impact moral values and judgments in a similar manner to these racial stereotypes.

Although people commonly conform to a majority, minorities can also shape opinions. People enjoy being in the majority as a way to confirm their decisions, however, they also desire to be distinctive and unique. Individuals value having distinguishing abilities (Snyder & Fromkin, 1980), want their groups to be different from others (Tajfel & Turner, 1979) and sometimes, even desire to belong to a minority group (Brewer, 1991). Much of this contrasting evidence emanates from the different focus of the research about majority and minority opinion (Spears, Ellemers, & Doosje, 2009).

Majority research originates out of social comparison theory (Festinger, 1954) and has continued predominantly in the attitudes and social influence literature. Minority research, however, has a group and social identity background. Spears, Ellemers, and Doosje (2009) hypothesized that these dissimilar research focuses and individual desires can be explained by the difference between opinion-based beliefs and taste-based preferences. Opinions, like beliefs, can at least in principle be evaluated for correctness.
This makes opinions benefit from the power that accompanies holding a majority viewpoint. Preferences, on the other hand, refer to arbitrary predilections for foods or objects that have no intrinsic power associated with them. Taste-based preferences can help to differentiate people or groups from one another, creating a feeling of uniqueness (Spears, Ellemers, & Doosje, 2009).

The moral dilemmas faced in the present study have more of an implication as opinion based beliefs. These decisions can be evaluated for correctness at some level, leaving people with more to gain from being part of the majority. Moreover, people look to others when unsure, using majority information as guidelines for the correct way to behave. Moral dilemmas are created for their ambiguity, which may leave participants seeking guidance to better assess the appropriate course of action.

Individuals’ evaluations of others are not only influenced by social norm perceptions, but also by the decisions that they make (Alicke, 1993). People judge others who would behave similarly to them as morally better than those who would behave in a contradictory manner. The relative evaluation effect refers to the differences in evaluation of the same target for people with discordant preferences (Alicke, 1993). This proclivity stems from people’s reliance on their own egocentric standards when evaluating behavior, rather than a set of prevailing moral absolutes. People deduce how they would behave in a situation and use their personal choice to guide the evaluation of others’ conduct. In certain situations, people do recognize that they are using poor judgment and rate their chosen behavior negatively. Universally evaluated moral issues refer to those concerns in which most agree on the morally preferable alternative (90% or more),
regardless of their chosen alternative (cf. Sherman, Chassin, Presson, & Agostinelli, 1984). For example, almost everyone recognizes that calling a taxi is the appropriate behavior when intoxicated; nevertheless, some people admit that they would drive home drunk anyway (Alicke, 1993). Knowing that many others would also behave poorly can reduce the guilt associated with a negative behavior. The influence of source status information pervades to other broad aspects of society, such as the purportedly impartial legal system.
The Legal System, Consensus, and Morality

Perceived moral quality, consensus, and the legal system are related, with the first two concepts impacting the latter. As previously discussed, people enjoy the experience of being part of the majority and can be encouraged to change opinion due to the consensus of their peers. This shift toward consensus opinion can even happen in a legal setting.

Many behaviors that warrant legal action violate group and cultural norms. It is this threat to shared values that connects legal topics to the present research. These actions can include behavior intended to harm another or behaviors that if everyone violated would result in negative effects for society. As will be described in more detail later in this section, the motivation to restore a shared consensus is one of the main driving factors behind punishment. When a transgression questions consensual beliefs, people doubt their value system, yet they desire to avoid the conclusion that their peers have different values. Morality by consensus demonstrates that people will move their belief system to be more in line with perceived consensus, even on topics that are typically thought of as more steadfast and personal like moral judgments.

Punishment

Both psychological and legal minds have studied transgressions and their effect on the involved parties. Wrongdoings inherently imply a breach of social norms and often result in punishment. As a result, much of the academic discourse has centered on the utility and function of punishment. Offenders take advantage of their victims, which leads victims to experience humiliation and anger as well as to question their relative status.
(Heider, 1958). To restore a sense of justice, victims desire to reestablish their value as a person and to disempower offenders. Punishment can satisfy this restorative function for many victims (Bies & Tripp, 1996; Vidmar, 2000). Two popular theories of justice exist to explain punishment: retributive justice and restorative justice. Retributive justice involves punishing the offender in proportion to their wrongdoing, while restorative justices is based on value reaffirmation (Carlsmith, 2006; Wenzel, Okimoto, Feather, Platow, 2008; Wenzel & Thielmann, 2006).

Groups live in accordance with collectively shared views of right and wrong, which may involve legal sanctions or simply well established group norms. People question the validity of their beliefs and the significance of these shared rules of conduct when others disregard these norms. Such violations undermine the perceived consensus that provides these rules legitimacy (Tyler & Boeckmann, 1997; Vidmar, 2000; Durkheim, 1964) and disrupt social order (Rucker, Polifroni, Tetlock, & Scott, 2004). Group values must be restored through restorative justice punishments to demonstrate social disapproval of the transgression and to reaffirm a sense of justice in the community (Okimoto & Wenzel, 2009; Vidmar, 2000; Wenzel, Okimoto, Feather, & Platow 2010). This begins a process of social validation where perceived consensus is brought back among people expected to hold the same values (Haslam, McGarty, & Turner 1996). Punishment’s function to restore apparent consensus in moral values emphasizes the power and importance of perceived unity.

In addition to using punishment to restore consensus opinion, the legal system sometimes relies on lay perceptions of majority opinion to determine legal fault. The law
asks jurors and judges to decide what the “reasonably prudent person” would do to establish fault, especially in situations of negligence. The reasonably prudent person refers to a community’s judgment as to how the typical community member should behave under the same or similar circumstances (e.g. Columbus, 2009; Eisenhuth, 1954; Hurst, 1995). This notion is fraught with people’s assessments of perceived consensus, which can often be mistaken.

Furthermore, the legal system has struggled with its relationship to morality. The law has had difficulty deciding if morality falls within its purview as well as how to define moral and immoral behavior. With the varied conceptions of morality across individuals and cultures, the legal system cannot rely on morality as the sole justification for rules and laws; nevertheless, morality and the legal system often overlap.

When people believe an action violates a moral code, they focus more on the potential harmful consequences than those who do not see the action as a moral violation (Turiel, Hilderbrandt, and Wainryb, 1991). In other words, people associate moral violations with harmful consequences. When an action results in significant, harmful aftereffects, legal sanction often follows the behavior. Even without harmful consequences, people’s affective reactions can bias moral evaluations of behavior. In such circumstances, people want punishment for behaviors that offend but do not harm, such as cleaning the toilet with the national flag (Haidt, Koller, & Dias, 1993). As a result, both moral ideology and consensus information can have leverage in the legal arena.
Pilot Study

As seen above, perceived consensus has a major impact on punishment and is also expected to have an effect on perceptions of moral quality. The current research seeks to explore the relationship between perceived moral quality, consensus, and preference. To begin understanding these associations, a pilot study was run to assess the malleability of moral judgments using a between subjects manipulation of consensus. The pilot study had participants read moral dilemmas with two possible options for how to behave in each of the described situations. Consensus opinion was varied, through the course of action chosen by the majority, to see the effect on perceived moral quality. It was predicted that participants would rate the options endorsed by a majority more morally good than those options endorsed by a minority. In addition, more participants were hypothesized to choose each option when a majority of previous participants supported it.
Method

Participants and Design

Participants were \( N = 233 \) undergraduate students whose participation partially fulfilled a requirement for introductory psychology. The study had a between subjects design with three conditions (Condition A, Condition B, and Control). Condition A and B were both experimental conditions that varied which of the two options was seen as endorsed by the majority of previous participants. Condition A randomly selected an option to be the majority for each of the 17 vignettes, and Condition B had the opposite option from Condition A as the majority in each vignette. See Appendix B and C for the 17 vignettes as well as the options shown as the majority in each experimental condition. In both Conditions A and B, participants viewed the percentage of previous participants that favored each option graphically. Control condition participants did not view any information about the consensus estimates of previous participants.

Materials

The materials consisted of a packet of papers that contained 19 moral dilemmas and corresponding questions. On the cover page, participants identified their gender and read the instructions for the study. The instructions for the two experimental conditions indicated that past students had seen these vignettes, and before each scenario, information about prior students’ choices would be presented. The control condition had similar instructions but did not mention viewing previous participants’ results. See Appendix D for complete instructions. Each page of the packet contained a different vignette, depicting a precarious moral situation in which a difficult choice had to be
made. Two moral dilemmas were included with moderate ratings around 50% to decrease participant suspicion. Results from these two vignettes were not included in any analyses. The scenarios ranged from more mundane examples to situations that could have potential long-term consequences. All vignettes offered two potential courses of action for the target character to choose. Order of the scenarios was randomized for each participant.

**Procedure**

Participants signed up for the study using the online participant Psychpool. Participants were seated at a table and provided with a consent form. After signing the informed consent, researchers handed participants a packet and instructed them to read the directions carefully and begin. In the control condition, participants read a vignette, answered two questions related to the scenario, then moved on to the next vignette until having responded to all of them. The first question following each dilemma asked participants to rate each option’s perceived moral quality separately on a scale ranging from -5 (morally bad) to 5 (morally good). The second question had participants choose between the two given options for how they would behave in the described situation. See Appendix E for examples of these questions.

In the experimental conditions, participants read the same vignettes. However before responding to any questions, experimental participants viewed graphs depicting the percentage of previous participants that endorsed the two alternatives. See Figure 1 for a sample graph. To ensure that the graphical consensus information was attended to, participants had to restate the percentages of previous participants who chose each
option. Participants who failed to list the correct percentages were excluded from analyses. After entering the percentages, participants responded to the identical two questions about perceived moral quality and anticipated behavior as those in the control condition.

In the graphs from the experimental conditions, a majority of previous participants had chosen one option (72% or higher), while only a minority selected the other option (28% or less). The size of the minority and majority opinions was varied for each participant to control for the potential influence of consensus size. For example, “not tell Judy” was always the majority option in Condition A, but the percentage listed in the graph varied from 72 to 90% for each participant. As previously mentioned, two of the nineteen vignettes had graphs with ratings close to 50% for each option.
Results

To assess the overall effect of consensus estimates on perceived moral quality, ratings of each option’s moral quality were collapsed across the 17 vignettes. See Table 1 for means and standard deviations of perceived moral quality by condition. Ratings for the high consensus options in Condition A indicated acceptable reliability ($\alpha = .733$), as did ratings for the high consensus options in Condition B ($\alpha = .695$). Using independent samples t-tests, ratings of the options were compared across experimental conditions. In the first test, the options in the majority in Condition A were compared to the same options when in the minority in Condition B. Participants rated the majority options ($M = -.61$) less morally bad than the minority options ($M = -1.51$), $t (150) = 6.016, p < .0001$. In the second test, Condition B majority options were contrasted with Condition A minority options. Participants rated the options more morally good when in the majority ($M = 2.32$) than when in the minority ($M = 1.74$), $t (150) = -4.200, p < .001$. See Figures 2 and 3. Thus, perceived consensus affected perceptions of morality in the predicted direction. Each option was randomly selected to be the majority consensus in either condition A or B. As a result, the difference in the collapsed items’ goodness or badness simply stems from variability of the options in each group and the scale used to measure moral ratings. Overall, the options shown in the majority for Condition A had a higher moral badness component than the options shown in the majority in Condition B. As a result, Condition A’s majority options demonstrated a reduction in ratings of moral badness, and Condition B’s majority options saw an augmentation in ratings of moral goodness.
Difference Scores

The effect of the consensus estimates was examined using difference scores in addition to separate ratings for each option. A multivariate analysis of variance (MANOVA) was performed with condition (A or B) as a between subjects factor and the 17 difference scores as the dependent variables. Subtracting the moral quality ratings of the first option from the second option for each vignette and taking the absolute value created the difference scores. A larger difference score indicated that the options were more polarizing with one being more morally good and the other more morally bad. Two participants were excluded from this analysis because they did not answer all of the questions related to each scenario, leaving 152 participants in the experimental conditions that completed each story. The analysis indicated that the consensus estimates significantly affected the perceived morality quality of the options, $F(17,134) = 2.726, p = .001$, partial $\eta^2 = .257$. Overall, the difference scores were influenced by the provided high and low consensus opinions. To understand the trends in reaction to consensus information, it was useful to review the univariate F-tests. According to these individual tests, 8 of the dependent variables were affected by condition, 5 were marginally significant, and 4 were not significant. See Table 2 for MANOVA results.

The influence of consensus on the difference in moral quality ratings depended on the actual option chosen by the majority of participants as well as the moral goodness of this option. Using the control condition, researchers could assess the high consensus option that most people would actually choose and establish the morally worse rated option for each vignette. See Tables 1 and 3 for control condition frequencies and means.
The minority of control participants endorsed the low consensus option, and this usually overlapped with the morally worse option. When the morally worse option was viewed as the majority, the difference score was smaller than when it was seen as the minority. Evidence indicating that more people endorsed the morally suspect option resulted in more moderate ratings of both options. In other words, the morally good option was seen as less good and the morally bad option as less bad, leading to the reduced difference score. Information demonstrating that most people would behave in the morally upright way leads to a polarization of judgment, with increased ratings of the morally good option and decreased ratings of the morally bad option. This trend is seen in ten of the scenarios: Judy, Uncle, Shoplift, Bus, Unplanned Pregnancy, Money, Date, Accident, Life Support, and Nan.

In certain instances, the majority of control participants indicated that they would behave in the less morally good manner. For example, most participants admitted that they would cheat on a test, but still rated cheating as morally worse than not cheating. In this case, the morally bad option is more commonly chosen and results in a similar response pattern. When the morally bad option is viewed as the majority, the option was rated as less morally bad and the other option as less morally good. This is seen in the Van, Cheat, and Job scenarios.

**Changing Opinion**

Chi-square tests of independence were conducted for each vignette to see if condition affected participants’ chosen option. Most of the tests revealed a relationship between choice and condition, indicating that the chosen alternative was not independent
of the consensus information. Specifically, thirteen of the seventeen tests yielded a significant result ($p < .05$), two had marginal significance ($p = .07$), and two did not attain significance. The two insignificant scenarios related to abortion, an issue with well-formed attitudes, making it more resistant to change (e.g. Bassili, 1996; Tormala & Petty, 2002). In all scenarios, results trended in the expected directions with more participants endorsing an option when seen as the majority opinion compared to the minority opinion. See Table 3 for frequencies.
Study 1

The results of the pilot study demonstrate that consensus estimates influence perceived moral quality. Participants rated the same alternatives morally better when seen as the majority opinion compared to the minority opinion. Furthermore, viewing the morally worse alternative as the majority option minimized the difference in ratings of moral quality between the two alternatives. Additionally, more participants endorsed a given option when viewed as the majority choice compared to when seen as the minority choice. This indicates that moral ratings can be swayed by consensus information but does not yet establish the changeability of moral quality ratings.

Study 1 expanded on the pilot study to see if consensus information could drive moral judgments beyond one’s own preferences. This extension would begin to demonstrate that consensus information has the ability to modify moral judgments. If this is the case, then people do not have the static moral system that they seem to believe. This study focused on two possible adjustments in moral judgment following consensus information, specifically changes in perceived moral quality and endorsement of an option.

Whereas the pilot study used a between subjects design, the current study incorporated a within subjects factor to examine the effects of the manipulation individually over time. Furthermore, this design allowed for the creation of conditions where the consensus information ran directly counter to a participant’s chosen course of action. The pilot study had no way of assessing whether the consensus information was in agreement or disagreement with the participant’s initial reaction to the scenario. In the
pilot study, participants rated 17 vignettes, while only responding to a few questions about each one. In the current study, participants responded to only one scenario but answered several questions to gather more information about the thought process of incorporating the consensus estimates. Through pretesting, researchers learned that certain responses were endorsed by over 60% of non-manipulated participants. As such, it is possible to establish the conditions when consensus actually reflects the true opinion of participants compared to when it does not. See Appendix F for control percentages.

When the majority opinion runs counterattitudinal to the participant’s choice, participants are expected to decrease their ratings of the perceived moral quality of their previously chosen option. When consensus differs from the participant’s initial choice, some participants are expected to change their chosen alternative in addition to ratings of perceived moral quality.
Method

Participants and Design

Participants were undergraduate students ($N = 41$) whose participation partially fulfilled a course requirement. The study manipulated consensus opinion by graphically displaying either Option A or Option B as the majority choice. See Table 4 for the Options identified as A and B in each scenario. In each version, participants chose a course of action and viewed consensus information about how their peers would behave in such circumstances.

Materials and Procedure

Participants signed up for the study using the online participant Psychpool. After selecting to participate in the study, they were taken to another window using the Qualtrics Survey Program. Participants viewed an informed consent form and by clicking forward agreed to participate. Participants received instructions indicating that they needed to read a short scenario based on actual events and answer questions related to the situation. They also were reminded to pay close attention to all new information provided during the session and then began the survey.

They read one of four vignettes that involved a target character having to make a difficult decision of a moral nature. Two of the scenarios were classified as standard harm or injustice-based transgressions, while the other two were related to contested value of life issues (Goodwin & Darley, 2012). The standard harm or injustice-based transgressions included a vignette about parents’ efforts to pay for their daughter’s steep college tuition and another about attempting to return a lost wallet with money. The value
of life vignettes addressed abortion and life support termination. The scenarios were chosen for their ambiguous nature, and it was expected that some participants would endorse each potential course of action for every vignette.

After reading the given scenario, participants chose their preferred course of action from the two provided, indicated their confidence in their choice, rated the moral superiority of the options, specified the proportion of Ohio University students who would endorse each option if placed in such a predicament, and rated their general impression of the target character. Participants then learned about the prior participants’ consensus graphically and responded to a manipulation check about the percentages. On the next screen, participants responded again to questions about their chosen course of action, rated the moral superiority of the options, and judged their confidence. Finally, participants indicated their moral conviction on the issue (Wisneski, Lytle, & Skitka, 2009). After completion of these questions, participants were thanked for their participation, debriefed, and closed out of the survey. See Appendix F for vignettes, manipulations, and questions.
Results and Discussion

Two participants failed the manipulation check and their data was removed from the analyses. A mixed model ANOVA, with consensus as the between subjects factors and timing (moral quality ratings before and moral quality ratings after) as the within subjects factor, examined the changes in ratings of moral quality. Ratings of perceived moral quality changed after viewing the consensus information, $F(1, 37) = 4.17, p = .048$, $\eta^2 = .101$. Simple main effects were analyzed to further understand the interaction. No differences were seen in ratings of the options initially. After the consensus manipulations, those who saw Option A in the majority rated this option as marginally more moral ($M = 3.75, SD = 2.61$) compared to those who saw Option B as the majority ($M = 4.95, SD = 2.30$), $F(1,37) = 2.30, p = .138$. Lower scores indicated a preference for Option A and higher scores for Option B. When Option A was seen as the consensus choice, participants’ ratings decreased across the session, $F(1,37) = 2.74, p = .11$, toward judgments of Option A as the morally superior option.

Additionally, due to small expected frequencies, a Fisher’s exact test was used in place of a chi-square test to assess if the change in option endorsed was related to consensus agreement with participant’s initial choice. More participants changed their endorsed option when consensus disagreed with participants’ initially chosen option compared to when consensus agreed, $\chi^2 (1) = 7.46, p = .008$. Overall, moral perceptions were influenced by consensus information with both ratings and decisions shifting toward the majority opinion.
Study 2

Study 2 expanded on Study 1 by adding a new piece of information, the chosen behavior of the target actor, for participants to integrate into their moral evaluations. Informing participants of the target actor’s choice allowed for evaluation of the effects of target and consensus information when they were counterattitudinal to each other and to the participant’s chosen course of action. The sequence of presentation for target and consensus information was counterbalanced because of the conceptual difference between the orders. Learning information about consensus and then seeing the behavior of a target actor may have a different impact compared to learning about the behavior of a target and then finding out this agreed or disagreed with consensus.

The inclusion of target behavior was done to more accurately reflect the bevy of information people have when making moral decisions. Consensus estimates can often be contrasted with knowledge about the behavior of an anecdotal individual (someone an individual knows or has heard of). Research indicates that the impact of large number information can be superseded by comparisons with a small group, in this case the target other. The local dominance effect refers to the tendency for easily available local information to outweigh more general comparison information (Buckingham & Alicke, 2002; Zell & Alicke, 2009; Alicke, Zell, Bloom, 2010). This local target information does not have to be representative or functional in any way to be chosen as useful to a person. This tendency stems from the ease of incorporating and comprehending small numbers, which creates a more manageable comparison target. As a result, researchers included this target behavior condition to see how it alters the impact of consensus. Furthermore,
this allowed for investigation of a motivated use of target information when consensus disagrees with the participant’s chosen alternative.

If either the majority opinion or the target’s behavior is counterattitudinal to the participant’s choice, then participants are expected to decrease their ratings of the perceived moral quality of their previously chosen option. Moreover, the weighted influence of target or consensus on moral ratings is predicted to depend on the order of presentation, specifically when the manipulations contrast one another. Participants are expected to use either an initial agreeing target or consensus to bolster their choice, while dismissing the second information if it disagrees. In addition to changing their ratings of perceived moral quality, some participants are also expected to change their chosen alternative due to the manipulations. Beyond the main predictions, those who are more deontological by nature are expected to be less susceptible to outside influence on ratings of perceived moral quality. Finally, participants with weaker moral convictions on the issues and higher scores on the symbolization moral identity subscale are predicted to be more influenced by the external factors.
Method

Participants and Design

Participants were adults \( (N = 319) \) recruited from Amazon’s Mechanical Turk (MTurk). Participants signed into MTurk and selected this study. Participants received $0.05 for completing the survey. MTurk participants tend to have more diversity than traditional college samples, the data is as reliable as collected with standard methodologies, and compensation does not seem to alter data quality (Buhrmester, Kwang, & Gosling, 2011). The study manipulated target choice (Option A or Option B) and consensus opinion (Option A majority or Option B majority). In each version, participants chose a course of action, learned what course of action the target chose, and viewed consensus information about how their peers would behave in such circumstances.

Materials and Procedure

The procedure was very similar to Study 1 but used MTurk instead of undergraduate students. Once participants selected the study on MTurk, they were taken to the survey in another window using the Qualtrics Survey Program. Participants viewed an informed consent form and by clicking forward agreed to participate. Participants received the same instructions as in Study 1.

Participants read one of the same four vignettes used in Study 1 that involved a target character having to make a difficult decision. The same decisions as in Study 1 were denoted Option A and Option B. Similarly to Study 1, they then chose their preferred course of action from the two provided, indicated their confidence in their
choice, rated the moral superiority of the options, and specified the proportion of their undergraduate peers who would endorse each option in such a situation. Participants then learned about the target’s behavior or the prior participants’ consensus. The order of the consensus and target information was counterbalanced across participants, but every participant saw both pieces of information. The target’s decision, which randomly either agreed or disagreed with their choice, was displayed across the top of the screen. Once participants read about the target’s behavior, they rated the moral acceptability of the target’s choice, provided their general impression of the target, and responded to a manipulation check to ensure that they attended to the target’s decision. Participants also received consensus information about the options previous participants had endorsed, which randomly either agreed or disagreed with their chosen option. As a manipulation check, participants had to retype the percentages from the graph to ensure comprehension of the consensus information.

At this point in the study, participants had encountered all of the manipulations and only needed to answer a few final questions about the situation. Participants again indicated their chosen course of action, rated which option they deemed morally superior and indicated their confidence in their chosen course of action. Additionally, they answered two questions to assess moral conviction about the issue in the scenario (Wisneski, Lytle, & Skitka, 2009). See Appendix G for a sample procedure.

Following this, participants completed three more questionnaires in randomized order: a trolley dilemma, the Reed and Aquino moral identity scale (2002) and the traits section of the Measure of Ethical Viewpoint (MEV) questionnaire (Brady & Wheeler,
The trolley dilemma and the MEV assess participants’ inclination toward deontology or consequentialism, and the moral identity scale measures moral self-importance. See Appendix H for examples of all measures. After completion of these questionnaires, participants were thanked for their participation, debriefed, and closed out of the survey.
Results and Discussion

37 participants failed one or more of the manipulation checks and 9 participants did not complete the majority of the survey. As a result, their data was excluded from analysis. In many of the following analyses, ratings of perceived moral quality are discussed. For each scenario, the 9-point scale had different end points. Lower scores always indicate that Option A is the morally superior option, while higher scores indicate that Option B is the morally superior option.

A 2 (Participant’s choice: A or B) X 2 (Target choice: A or B) X 2 (Consensus: A majority or B majority) factorial ANCOVA was conducted to examine the differences in ratings of perceived moral quality, using responses to the second morally superior option question across all scenarios. The covariate was scores on the moral identity symbolization subscale. A significant main effect of participant choice was found with higher ratings when choosing Option B ($M = 5.24, SD = 2.38$) than Option A ($M = 2.28, SD = 2.06$), $F (1, 231) = 93.67, p < .001$. When participants chose Option A, they rated this course of action as morally superior compared to when they chose Option B. Contrary to expectations, no significant interactions were found.

Planned contrasts were conducted separately based on the participant’s choice to compare the conditions in which the participant and the target agree but disagree with consensus to those in which the participant and the consensus agree but disagree with the target, AAB to ABA and BBA to BAB. Contrasts also compared the conditions where either the target or the consensus disagrees to the conditions where the target and the consensus both disagree with the participant’s choice, ABB and BAA. Few of the
contrasts were significant (they were done both as total and by story). When participants chose to keep the money in the Money scenario, a contrast was significant $t(52) = 2.88, p = .006$. In both conditions, one factor disagrees with the participants’ choice, but the target agreeing demonstrated higher ratings and a preference for keeping the money, BBA ($M = 4.45, SD = 2.02$), compared to when the consensus agreed with the initial choice, BAB ($M = 2.44, SD = 1.59$). Comparisons between one disagreeing factor and two disagreeing factors reached marginal significance for the Life Support scenario, $t(63) = -1.952, p = .055$. When either the target choice (AAB) or consensus opinion (ABA) disagreed with the initial choice of continuing life support, ratings stayed the same, but when both disagreed (ABB) then removing life support was seen to have higher perceived moral quality.

A mixed model ANOVA, with target choice and consensus as the between subjects factors and timing (moral quality ratings before and moral quality ratings after) as the within subjects factor, examined the changes in ratings of moral quality. There was a significant interaction between timing and target choice $F(1, 256) = 6.98, p = .009$. Simple main effects were analyzed to further explain the interaction. Before any of the manipulations, participants’ ratings of the options were very similar. After viewing the target’s choice, participants rated the target endorsed option as marginally morally better leading to a lower score when it is Option A ($M = 3.73, SD = 2.59$) and a higher score when it is Option B ($M = 4.30, SD = 2.72$), $F(1,256) = 2.72, p = .10$. When the target chooses Option A, there is a significant difference across time, $F(1,256) = 6.026, p = .015$, with ratings at the beginning ($M = 4.04, SD = 2.69$) being larger than at the end ($M$
= 3.73, \(SD = 2.59\)). This decrease across the session makes sense, as Option A is always the lower score. When the target chooses Option B, there is not a significant difference across time, \(F(1,256) = 1.687, p = .195\). Consensus ratings did not have a significant main effect or interaction.

**Individual Scenarios**

Four 2 X 2 X 2 Factorial ANOVA’s were conducted to examine the effects of participant’s choice, target’s choice and consensus information for each of the scenarios. For all of the stories, the main effect of participant’s choice was significant indicating that participants rated their choice as morally superior in comparison to those that chose the other option. See Table 5 - 8 for means and standard deviations of moral ratings at the end of the study session for each scenario. No interactions were found in the Income scenario.

In the Abortion scenario, the interaction between consensus and participant’s choice is marginally significant, \(F(1, 57) = 3.44, p = .07, \eta^2 = .057\). When participants chose to keep the baby, they rated having an abortion as a more morally superior option after viewing a consensus indicating this was the past participants majority opinion (\(M = 2.38, SD = 2.25\)) compared to keeping the baby (\(M = 1.50, SD = 1.30\)). Regardless of consensus opinion, there was little difference in ratings of the options when people chose to have an abortion.

The Life Support scenario had a significant interaction between target’s choice and participant’s choice, \(F(1, 63) = 5.11, p = .027, \eta^2 = .075\). When participants chose to extend life support, they rated terminating life support as more moral when this was the
target’s choice ($M = 6.22, SD = 1.72$) compared to when continue life support was the

target’s choice ($M = 3.88, SD = 1.81$). When people chose to terminate life support, their

ratings were not affected by the target’s decision. A similar pattern occurred between

consensus and participant’s choice, but only reached marginal significance, $F(1, 63) =

3.07, p = .085, \eta^2 = .046$. When participants chose life support, they rated terminating life

support as more moral when this was the majority consensus choice ($M = 6.43, SD =

1.90$) compared to when the majority would continue life support ($M = 4.20, SD = 1.75$).

When people chose to terminate life support, their ratings did not alter based on

consensus opinion.

The Money scenario had a significant interaction between target’s choice and

participant’s choice, $F(1, 52) = 6.39, p = .015, \eta^2 = .109$. When participants chose to keep

the money, they rated keeping the money as more moral when this was the target’s choice

($M = 4.19, SD = 2.11$) compared to when the target chose to turn in the money ($M = 2.31,

SD = 1.65$). If participants chose to turn in the money, they rated this choice as morally

superior when the target chose this as well ($M = 1.29, SD = 0.47$) compared to when the

target selected to keep the money ($M = 1.71, SD = 1.44$).

**Agreement and Disagreement**

For many of the results, it would be pertinent to examine the data excluding the

participant’s choice as a factor. Without looking at the choice, it is possible to examine

how agreement or disagreement between your initial chosen course of action, the target

choice, and consensus relate to confidence ratings and moral conviction. In these

analyses, target and consensus conditions were coded for agreement or disagreement with
the participant’s initial chosen course of action. Beyond collapsing across choice, these factorial ANOVA’s considered the impact of order. In this situation, there is a 2 (order: target first, consensus first) x 2 (target: agreement, disagreement) x 2 (consensus: agreement, disagreement) design. Contrary to expectations, none of these factors had an effect on confidence in one’s decision or moral conviction ratings. Participants indicated a fairly high level of confidence in their decisions in all conditions as well as a mildly high, consistent level of conviction.

**Changing opinion.** Chi-square analyses were used to appraise changes in the endorsed option from before the manipulations to after learning consensus and target information. To create a measure of change, participants’ choice at the beginning of the study was subtracted from their choice at the end and then recoded so that a change from one choice to the other in either direction simply represented a change. Agreement with target behavior did seem to be independent of changes in endorsement across all scenarios.

In the Life Support scenario, the Fisher’s test was marginally significant which indicates that changing endorsement is not independent of consensus agreement, \( \chi^2 (1) = 3.28, p = .093 \). When the consensus estimates disagree with participants’ original choice, more people change options than when the consensus agrees.

If all of the change scores are combined into one variable, then one can do the chi-square analyses across scenarios. When this occurs, the results comparing change with consensus agreement are marginally significant, \( \chi^2 (1) = 3.19, p = .074 \). When the
consensus disagrees with participant’s initial choice, more participants switch their endorsement.

**Moral Identity and Ethical Mindset**

To analyze moral identity, the five questions from the moral identity scale that assessed internalization were combined to create one measure of internalization, Cronbach’s $\alpha = .76$. The same thing was done to create one measure of symbolization, Cronbach’s $\alpha = .83$. The Measures of Ethical Viewpoints trait section assesses the strength of each ethical mindset using 13 adjectives. Seven adjectives were combined into one measure of utilitarianism, $\alpha = .85$. Six adjectives were pooled to create a measure of deontology, $\alpha = .87$. Higher scores on the trolley problem indicate a preference for the consequentialist (utilitarian) solution. As a result, it is correlated with scores on the MEV utilitarian scale, $r = .12, p = .047, N = 273$.

Certain choices on these surveys demonstrated a tendency for the deontological or consequentialist solution. In order to assess this, a series of independent samples t-tests were conducted to compare participants’ choice at Time 1 (before manipulations) to their scores on the MIS subscales and the MEV subscales for each scenario. There were no significant results when comparing responses to the Life Support decision and the MEV or MIS subscales. Furthermore, response choice did not affect scores on the consequentialism or the symbolization subscales. Scores on the formalism (deontology) subscale of the MEV are significantly different based on the choice in the Abortion scenario $t(57) = 2.31, p = .025$. Participants who chose to keep the baby ($M = 6.30, SD = \ldots$)
0.76) scored higher on formalism compared to those who chose to have an abortion ($M = 5.76, SD = 1.01$).

Moral Identity Internalization is significantly different based on the choice in the Income scenario $t(57) = 2.21, p = .031$. Participants who chose to report the income ($M = 6.44, SD = 0.49$) scored higher on the internalization subscale compared to those who chose not to report the income ($M = 5.89, SD = 0.94$). Scores on the MEV formalism subscale are significantly different based on the choice in the Income scenario $t(56) = 3.51, p = .001$. Participants who chose to report the income ($M = 6.57, SD = 0.47$) scored higher on formalism (deontology) compared to those who chose to not report the income ($M = 5.78, SD = 0.86$).

Internalization scores differ based on initial choice in the Money scenario $t(53) = 1.95, p = .057$. Participants who chose to inform someone ($M = 6.45, SD = 0.68$) scored higher on the internalization subscale compared to those who chose to keep the money ($M = 6.02, SD = 0.93$). Scores on the MEV formalism subscale are significantly different based on the choice in the Money scenario $t(55) = 3.60, p = .001$. Participants who chose to inform someone ($M = 6.52, SD = 0.53$) scored higher on formalism (deontology) compared to those who chose to keep the money ($M = 5.73, SD = 1.08$).

Two 2 (Consensus Agreement: Agree or Disagree) X 2 (Target Agreement: Agree or Disagree) ANOVAs were conducted to analyze the effects of agreement on deontology and consequentialism scores using the MEV scales. There was a main effect of target agreement on consequentialism, $F(1,238) = 5.034, p = .026$. When the target disagreed with participant’s choice, participants scored higher on the MEV consequentialism scale
Disagreement seemed to result in participants identifying more with the outcome-based mindset. Agreement had no effect on deontology ratings.

**False Consensus Replication**

The false consensus effect was evaluated in each of the scenarios by conducting independent samples t-tests. Participants estimated the percentage of peers that would endorse each option in the scenarios after indicating how they would behave. Participants estimated that a larger percentage of participants would endorse the option that they chose compared to the one that they did not choose in all scenarios except the Abortion scenario. The expected pattern was found in the Abortion scenario, but it did not reach statistical significance.

**Discussion**

This study sought to further disentangle the relationship between perceptions of moral quality, consensus, and self-described opinion. Using hypothetical scenarios, Study 2 examined the effects of peer consensus information and target behavior on changes in moral judgments for two possible courses of action. Comparing across all scenarios, it seems that the most important factor in participants’ ratings of the options is their initial choice. Participants rate the option that they chose as morally superior to the option that they did not endorse. Participants select an option for a reason; usually, the reason relates to thinking one choice represents the better way to behave.

Although participants generally evaluated their chosen option as morally better, they still demonstrated a change in their ratings toward the unchosen option after the
counterattitudinal manipulations. When examining change over the length of the session, participants did seem to alter their ratings of perceived moral quality toward the option seen as chosen by the target actor. In other words, target behavior influenced ratings of perceived moral quality. Unexpectedly, consensus information did not have the same effect on ratings of moral quality. This indicates that in the presence of target behavior, consensus does not have a unique influence on moral quality perceptions. With information about both an individual and a consensus, the information about a specific individual’s actions had more influence on moral quality ratings across the session than consensus estimates. Although not anticipated, this demonstrates the malleability of moral judgment to a situational factor, the behavior of an unknown other.

Looking at the individual scenarios and ratings of the options at the end of the session, there is a relationship between initial choice and the target’s decision in two of the four scenarios. When the target behavior contrasts with participant’s choice, participants had more moderate rating of the moral quality of the chosen option in comparison to the non-chosen option. In other words, the perceptions of moral quality show a shift toward the moral goodness of the non-chosen option. In two of the scenarios, a similar marginal relationship is seen between consensus opinion and initial choice. Consistent with the target behavior, learning about contradictory consensus information leads to more moderate ratings of the superiority of the chosen option. The effect of both a contrasting target and consensus did not seem to have a more powerful effect on perceptions of moral quality than a single disagreeing factor.
Although not affecting ratings of perceived moral quality, consensus did have an influence on whether participants changed their option endorsement. Ratings may not have significantly changed based on the consensus behavior, but this study begins to indicate that it might more directly influence intended choice. Target behavior did not have this effect on option endorsed. It may be possible that target and consensus vary in their impacts based on the way the question is asked.

With its focus on concrete rules, deontological preferences may indicate the superiority of one choice over another. Those who have consistent preferences for certain options in the scenarios score high on deontology: informing someone about lost money, reporting earned income to the government, and keeping the baby in an unexpected pregnancy. If abiding by strict right or wrong rules, then it would be unacceptable to keep someone else’s money, lie to the government, or terminate the life of an unborn child. Those who score high on moral identity internalization tend to highly value behaving morally, and this positively correlates with deontology. As a result, people with similar predilections for certain options also score high on internalization. Specifically, participants that prefer to report earned income and tell someone about lost money value acting moral more than those who chose the other options. Interestingly, the life support scenario did not have a relationship with moral identity internalization or deontology, indicating it may represent more of a gray area.
**General Discussion**

People make judgments about the behavior of others on a regular basis. These judgments often include approval or disapproval, especially when inferring the act has a moral component. The qualifications of what constitutes moral behavior vary from person to person; however, most people do classify certain behaviors as falling in the moral domain, such as actions that harm others (Huebner, Lee, & Hauser, 2010). To increase understanding of the development and limits of moral perceptions, this research has examined the influence of situational, external factors on moral judgments. According to morality by consensus, moral values do not exist in isolation but are affected by peer opinions, specifically when in contrast to one’s opinion.

The findings of these three studies provide support for the idea that moral perceptions, like attitude judgments, can be easily manipulated. The pilot study establishes that consensus estimates impact perceived moral quality, swaying ratings toward majority opinion. Study 1 takes the research a step further by using a within subjects design to see individual changes of opinion across the length of the study session. This study demonstrates that ratings of perceived moral quality may change due to consensus information. In other words, knowing how others would behave can lead individuals to change their moral evaluations of the same situation. In Study 2, the research incorporated an additional outside influence, the behavior of a target actor, to see the effect on perceived moral quality. Although participants did rate their chosen option as morally superior, the behavior of a target did influence their moral ratings across the session. With both target and peer consensus information, participants’ moral
perceptions were more affected by the target behavior. When faced with the intentions of many people or a single individual, the intended action of one seemed to drive the changes in moral judgments.

**Theoretical and Practical Implications**

Overall, these studies demonstrate the influence of external factors on supposedly personal moral judgments. These perceptions of moral quality are affected either by information about a stranger (the target information) or consensus information. It seems that in the presence of both options, people may adhere to the behavior of the target actor in lieu of the consensus information. This indicates that people may be more influenced by individual perception rather than consensus belief, similarly to the local dominance effect.

This notion of changeable moral values further demonstrates the problem with hypocritical thinking and the need to remind people of the fallibility and wavering nature of their own moral judgments. Such knowledge should remind people to think before praising, condemning, or even getting involved in the behavior of others. People’s opinions can change, whether in a short time frame or across generations, and forcing people to consider this inconsistency could potentially help to foster tolerance and understanding.

Furthermore, the manipulations in studies such as these mimic real-world information, as people often receive consensus information from a variety of media outlets. Oftentimes, the media expresses popular opinion on various issues using some form of consensus information (Gardikiotis, Martin, & Hewstone, 2004). As a result, it is
important to understand the influence of these reports on moral opinions. Beyond consensus, people often have anecdotal stories about friends or acquaintances that have faced a difficult moral situation, and this provides people with potential suggestions for the appropriate response to such a scenario. Further unraveling the dynamic between these competing information sources on moral judgments represents an important area of study.

**Limitations and Future Directions**

There are limitations to these studies that could be addressed by future research. The current studies relied on a between subjects manipulation, followed by a within subjects manipulation. However, the within subjects manipulation constituted one sitting with only a few minutes separating the manipulations and questions. The intention was to see if the consensus influence could work in such a short time frame. In the future, it may be beneficial to allow for a longer time lapse, such as several weeks, between asking participants their initial reaction and providing the manipulations. When given more time, it may be increasingly likely that participants will alter their judgments, as they will not recall their previous feelings. Beyond separating the study into two sessions, it is also possible to add a filler task to the study. Again this could avert participants’ focus from the present scenario before rerating the options. Alternatively, participants could be exposed to the manipulation of consensus in the initial session and then brought back for a second session to see the extent and/or duration of change. With this design, researchers could measure whether informational or normative social influence occurs.
The existence of moral convictions emphasizes that certain issues garner more of a reaction than others. As a result, the choice of scenarios has to be considered as a potential limitation. It may be useful to expand the types of scenarios, from more to less divisive, to be more certain of the trends in judgments. In addition, comparing across scenarios can lead to other complications. In the pilot study, the ratings of the options are asked separately making it difficult to weigh the options against one another. In Studies 1 and 2, participants rated the options on one scale with the two options anchoring the endpoints. This scale makes comparing across scenarios extremely difficult as one option arbitrarily represents the high and low end of the scale.

To create natural counterattitudinal factors, the option chosen by participants was incorporated into the design of the study conditions. Agreement or disagreement with the manipulations in Studies 1 and 2 was always randomized across participants, but the initial option chosen was left to the participants. This resulted in certain options being consistently selected more by participants, which led to low sample sizes for some of the comparison conditions.

Furthermore, the present studies always provided participants with consensus information in numerical format, using percentages to demonstrate the majority and minority option. As discussed in an earlier section, consensus information can be conveyed in two other formats, consensus adjectives and social status labels. This study relied exclusively on numerical consensus information, and future studies could examine perceptions of moral quality in the presence of consensus adjectives or social status labels. Other research has shown differential effects due to the presentation of consensus
information making this a worthwhile future endeavor (Gardikiotis et al., 2005). Instead of using graphical percentage information, a study could indicate in words which option the “majority” or “minority” of prior participants have endorsed. To take it a step further, the information could talk about a larger or smaller majority and minority. This more abstract information may influence opinions in a different manner than the measureable numerical information.

This study, like many other psychology studies on morality, relied heavily on scenario based responding. This hypothetical situation is often criticized as being a poor substitute for true human behavior and instead more of a measure of intention (e.g. Bauman, McGraw, Bartels, & Warren, 2014). Furthermore, people do not accurately forecast their behavior in real life when asked hypothetically. Although useful to understand how people anticipate responding to a moral dilemma, future studies could assess a behavioral outcome in a real world situation. For example, other research has created situations where participants have the opportunity to cheat. To learn that after a discussion about the ubiquity of cheating on college campuses, participants overreport winnings or look at answers would create a more powerful demonstration of the influence of consensus.

**Conclusion**

These studies initially demonstrate the susceptibility of moral judgments to external influence. People do not hold the invariable moral views that they may seem to believe. Their moral beliefs more similarly mimic the fickleness and fluidity of regular attitudes. In addition, these studies began to incorporate moral identity and ethical
mindset into the discussion of how moral judgments change. In sum, we believe that the findings of these three studies provide support for the idea that moral perceptions can be easily manipulated.
References


Broeders, R., van den Bos, K., Muller, P.A., & Ham, J. (2011). Should I save or should I not kill? How people solve moral dilemmas depends on which rule is most accessible. *Journal of Experimental Social Psychology, 47*, 923-934. doi:10.1016/j.jesp.2011.03.018


Kant, I. (1959). *Foundation of the metaphysics of morals.* (L. W. Beck, Trans.). Indianapolis, IN: Bobbs-Merrill. (Original work published 1785)


doi:10.1177/0149206306294258


Table 1

Perceived Moral Quality Means & Standard Deviations for the Pilot Study

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Majority</th>
<th>Minority</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nán</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tell Nán</td>
<td>3.35 (1.64)</td>
<td>2.57 (2.46)</td>
<td>3.14 (2.28)</td>
</tr>
<tr>
<td>Not Tell</td>
<td>-2.03 (2.46)</td>
<td>-2.62 (2.16)</td>
<td>-2.43 (2.42)</td>
</tr>
<tr>
<td>Judy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tell Judy</td>
<td>3.28 (1.71)</td>
<td>2.53 (2.34)</td>
<td>2.70 (2.58)</td>
</tr>
<tr>
<td>Keep quiet</td>
<td>-1.57 (2.58)</td>
<td>-2.51 (2.09)</td>
<td>-2.43 (2.52)</td>
</tr>
<tr>
<td>Van</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Take van</td>
<td>0.29 (2.92)</td>
<td>-1.92 (2.50)</td>
<td>0.29 (3.03)</td>
</tr>
<tr>
<td>Refuse van</td>
<td>2.84 (1.82)</td>
<td>1.00 (2.47)</td>
<td>1.16 (2.49)</td>
</tr>
<tr>
<td>Bus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pay fare</td>
<td>3.99 (1.50)</td>
<td>3.79 (1.67)</td>
<td>4.05 (1.25)</td>
</tr>
<tr>
<td>Don’t pay</td>
<td>-2.38 (1.99)</td>
<td>-3.05 (1.89)</td>
<td>-2.88 (2.18)</td>
</tr>
<tr>
<td>Cheat</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cheat</td>
<td>-2.23 (2.25)</td>
<td>-3.18 (1.97)</td>
<td>-2.03 (2.79)</td>
</tr>
<tr>
<td>Don’t Cheat</td>
<td>3.90 (1.38)</td>
<td>3.23 (1.84)</td>
<td>2.78 (2.53)</td>
</tr>
<tr>
<td>Life Support</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remove LS</td>
<td>1.73 (2.40)</td>
<td>0.47 (2.84)</td>
<td>1.79 (2.75)</td>
</tr>
<tr>
<td>Continue LS</td>
<td>0.66 (2.52)</td>
<td>0.19 (2.34)</td>
<td>-0.08 (2.63)</td>
</tr>
<tr>
<td>Herpes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tell him</td>
<td>4.20 (1.30)</td>
<td>4.17 (1.23)</td>
<td>4.42 (1.37)</td>
</tr>
<tr>
<td>Don’t tell</td>
<td>-3.48 (1.92)</td>
<td>-3.91 (1.59)</td>
<td>-4.31 (1.18)</td>
</tr>
<tr>
<td>Down Syndrome</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Keep Baby</td>
<td>3.79 (1.86)</td>
<td>3.11 (2.52)</td>
<td>3.91 (1.89)</td>
</tr>
<tr>
<td>Abortion</td>
<td>-2.78 (2.53)</td>
<td>-3.12 (2.39)</td>
<td>-3.74 (1.94)</td>
</tr>
<tr>
<td>Shoplift</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Report her</td>
<td>3.44 (2.14)</td>
<td>3.32 (1.85)</td>
<td>3.45 (1.94)</td>
</tr>
<tr>
<td>Ignore her</td>
<td>-2.49 (2.00)</td>
<td>-2.85 (1.98)</td>
<td>-2.65 (2.25)</td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Report</td>
<td>3.01 (2.10)</td>
<td>2.43 (2.22)</td>
<td>2.55 (2.47)</td>
</tr>
<tr>
<td>Don’t report</td>
<td>-1.37 (2.49)</td>
<td>-1.86 (2.51)</td>
<td>-1.17 (2.77)</td>
</tr>
<tr>
<td>Date</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date her</td>
<td>-1.58 (2.20)</td>
<td>-2.05 (2.09)</td>
<td>-2.16 (2.34)</td>
</tr>
<tr>
<td>Do not date</td>
<td>2.68 (1.89)</td>
<td>2.10 (2.06)</td>
<td>2.47 (2.18)</td>
</tr>
<tr>
<td>Accident</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reveal acc.</td>
<td>3.65 (1.65)</td>
<td>3.26 (1.82)</td>
<td>3.55 (1.86)</td>
</tr>
<tr>
<td>Hide acc.</td>
<td>-2.21 (2.03)</td>
<td>-3.10 (1.85)</td>
<td>-2.65 (2.24)</td>
</tr>
<tr>
<td>Job</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Give to friend</td>
<td>1.42 (2.11)</td>
<td>-0.13 (2.75)</td>
<td>0.94 (2.52)</td>
</tr>
<tr>
<td>Category</td>
<td>Action</td>
<td>Value 1 (SD)</td>
<td>Value 2 (SD)</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>Money</strong></td>
<td>Give stranger</td>
<td>1.70 (2.47)</td>
<td>0.73 (2.45)</td>
</tr>
<tr>
<td></td>
<td>Keep money</td>
<td>-1.74 (2.77)</td>
<td>-2.87 (1.96)</td>
</tr>
<tr>
<td></td>
<td>Try to return</td>
<td>3.73 (1.68)</td>
<td>3.51 (1.95)</td>
</tr>
<tr>
<td><strong>Unplanned Pregnancy</strong></td>
<td>Have baby</td>
<td>2.78 (2.70)</td>
<td>2.51 (2.63)</td>
</tr>
<tr>
<td></td>
<td>Abortion</td>
<td>-1.99 (2.58)</td>
<td>-2.43 (2.82)</td>
</tr>
<tr>
<td><strong>Rachel</strong></td>
<td>Go to school</td>
<td>0.66 (2.63)</td>
<td>-0.16 (2.81)</td>
</tr>
<tr>
<td></td>
<td>Stay home</td>
<td>3.09 (2.23)</td>
<td>1.89 (2.81)</td>
</tr>
<tr>
<td><strong>Uncle</strong></td>
<td>Help die</td>
<td>-2.14 (2.88)</td>
<td>-2.65 (2.81)</td>
</tr>
<tr>
<td></td>
<td>Refuse</td>
<td>2.61 (2.48)</td>
<td>2.03 (2.95)</td>
</tr>
</tbody>
</table>
Table 2
Univariate Effects by Vignette

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>df&lt;sub&gt;error&lt;/sub&gt;</th>
<th>F</th>
<th>Partial η²</th>
<th>Majority Option</th>
<th>Difference Score Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nan</td>
<td>1</td>
<td>150</td>
<td>2.82†</td>
<td>.018</td>
<td>Tell Nan</td>
<td>6.13</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Not Tell</td>
<td>5.23</td>
</tr>
<tr>
<td>Judy</td>
<td>1</td>
<td>150</td>
<td>5.66*</td>
<td>.036</td>
<td>Tell Judy</td>
<td>6.06</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Keep quiet</td>
<td>4.80</td>
</tr>
<tr>
<td>Van</td>
<td>1</td>
<td>150</td>
<td>17.13**</td>
<td>.10</td>
<td>Take van</td>
<td>3.59</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Refuse van</td>
<td>5.48</td>
</tr>
<tr>
<td>Bus</td>
<td>1</td>
<td>150</td>
<td>4.89*</td>
<td>.031</td>
<td>Pay fare</td>
<td>7.19</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Don’t pay</td>
<td>6.23</td>
</tr>
<tr>
<td>Cheat</td>
<td>1</td>
<td>150</td>
<td>12.90**</td>
<td>.079</td>
<td>Cheat</td>
<td>5.56</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Don’t Cheat</td>
<td>7.25</td>
</tr>
<tr>
<td>Life Support</td>
<td>1</td>
<td>150</td>
<td>3.38†</td>
<td>.022</td>
<td>Remove LS</td>
<td>3.66</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Continue LS</td>
<td>2.75</td>
</tr>
<tr>
<td>Herpes</td>
<td>1</td>
<td>150</td>
<td>.91</td>
<td>.006</td>
<td>Tell him</td>
<td>8.06</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Don’t tell</td>
<td>7.64</td>
</tr>
<tr>
<td>Down Syndrome</td>
<td>1</td>
<td>150</td>
<td>.08</td>
<td>.001</td>
<td>Keep Baby</td>
<td>6.89</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Abortion</td>
<td>6.72</td>
</tr>
<tr>
<td>Shoplift</td>
<td>1</td>
<td>150</td>
<td>3.76†</td>
<td>.024</td>
<td>Report her</td>
<td>6.83</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Ignore her</td>
<td>5.92</td>
</tr>
<tr>
<td>Income</td>
<td>1</td>
<td>150</td>
<td>1.63</td>
<td>.011</td>
<td>Report</td>
<td>5.45</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Don’t report</td>
<td>4.79</td>
</tr>
<tr>
<td>Date</td>
<td>1</td>
<td>150</td>
<td>5.55*</td>
<td>.036</td>
<td>Date her</td>
<td>3.92</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Do not date</td>
<td>5.09</td>
</tr>
<tr>
<td>Accident</td>
<td>1</td>
<td>150</td>
<td>9.40**</td>
<td>.059</td>
<td>Reveal acc.</td>
<td>7.08</td>
</tr>
<tr>
<td>Category</td>
<td>Option</td>
<td>Frequency</td>
<td>Proportion</td>
<td>p-value</td>
<td>Option</td>
<td>Frequency</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------</td>
<td>-----------</td>
<td>------------</td>
<td>---------</td>
<td>--------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Job</td>
<td>Hide acc.</td>
<td>1</td>
<td>150</td>
<td></td>
<td>5.76</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Give to friend</td>
<td></td>
<td></td>
<td>.047</td>
<td>Give stranger</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Give stranger</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Money</td>
<td>Give to friend</td>
<td>1</td>
<td>150</td>
<td>6.78*</td>
<td>.043</td>
<td>Keep money</td>
</tr>
<tr>
<td></td>
<td>Give stranger</td>
<td></td>
<td></td>
<td></td>
<td>Try to return</td>
<td></td>
</tr>
<tr>
<td>Unplanned Pregnancy</td>
<td>Keep money</td>
<td>1</td>
<td>150</td>
<td>3.72†</td>
<td>.024</td>
<td>Have baby</td>
</tr>
<tr>
<td></td>
<td>Try to return</td>
<td></td>
<td></td>
<td></td>
<td>Abortion</td>
<td></td>
</tr>
<tr>
<td>Rachel</td>
<td>Go to school</td>
<td>1</td>
<td>150</td>
<td>.43</td>
<td>.003</td>
<td>Stay home</td>
</tr>
<tr>
<td></td>
<td>Stay home</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncle</td>
<td>Help die</td>
<td>1</td>
<td>150</td>
<td>3.89†</td>
<td>.025</td>
<td>Refuse</td>
</tr>
<tr>
<td></td>
<td>Refuse</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

† p < .10
*p < .05
**p < .01
<table>
<thead>
<tr>
<th>Story</th>
<th>Option</th>
<th>Option A Majority</th>
<th>Option B Majority</th>
<th>Control</th>
<th>$\chi^2$</th>
<th>$\Phi$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nan</strong></td>
<td>A. Tell Nan</td>
<td>65</td>
<td>43</td>
<td>46</td>
<td>14.23**</td>
<td>.247</td>
</tr>
<tr>
<td></td>
<td>B. Keep Quiet</td>
<td>14</td>
<td>34</td>
<td>31</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Judy</strong></td>
<td>A. Tell</td>
<td>63</td>
<td>42</td>
<td>47</td>
<td>11.87**</td>
<td>.225</td>
</tr>
<tr>
<td></td>
<td>B. Keep Quiet</td>
<td>16</td>
<td>35</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Van</strong></td>
<td>A. Refuse</td>
<td>51</td>
<td>18</td>
<td>23</td>
<td>32.12**</td>
<td>.371</td>
</tr>
<tr>
<td></td>
<td>B. Accept</td>
<td>28</td>
<td>59</td>
<td>54</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bus</strong></td>
<td>A. Pay</td>
<td>60</td>
<td>41</td>
<td>56</td>
<td>11.27**</td>
<td>.220</td>
</tr>
<tr>
<td></td>
<td>B. Don’t pay</td>
<td>18</td>
<td>36</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cheat</strong></td>
<td>A. Don’t look</td>
<td>41</td>
<td>18</td>
<td>30</td>
<td>13.47**</td>
<td>.240</td>
</tr>
<tr>
<td></td>
<td>B. Cheat</td>
<td>38</td>
<td>59</td>
<td>47</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Life Support</strong></td>
<td>A. Remove</td>
<td>65</td>
<td>45</td>
<td>56</td>
<td>14.47**</td>
<td>.249</td>
</tr>
<tr>
<td></td>
<td>B. Continue</td>
<td>12</td>
<td>34</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Herpes</strong></td>
<td>A. Tell</td>
<td>76</td>
<td>68</td>
<td>75</td>
<td>6.67*</td>
<td>.169</td>
</tr>
<tr>
<td></td>
<td>B. Keep Quiet</td>
<td>3</td>
<td>9</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Down Syndrome</strong></td>
<td>A. Keep Baby</td>
<td>59</td>
<td>54</td>
<td>65</td>
<td>6.48*</td>
<td>.168</td>
</tr>
<tr>
<td></td>
<td>B. Abortion</td>
<td>17</td>
<td>25</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Shoplift</strong></td>
<td>A. Report</td>
<td>51</td>
<td>35</td>
<td>47</td>
<td>6.54*</td>
<td>.168</td>
</tr>
<tr>
<td></td>
<td>A. Report Income</td>
<td>B. Don’t report</td>
<td>p-value</td>
<td>p-value</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>------------------</td>
<td>-----------------</td>
<td>---------</td>
<td>---------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>30</td>
<td>47</td>
<td>8.26*</td>
<td>.188</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>A. Do not date</td>
<td>60</td>
<td>7.88*</td>
<td>.184</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B. Date her</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accident</td>
<td>A. Tell him</td>
<td>73</td>
<td>10.92**</td>
<td>.217</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B. Keep Quiet</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job</td>
<td>A. Someone else</td>
<td>37</td>
<td>19.78**</td>
<td>.291</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B. Paul</td>
<td>42</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Money</td>
<td>A. Inform</td>
<td>52</td>
<td>15.40**</td>
<td>.258</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B. Keep money</td>
<td>27</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unplanned Pregnancy</td>
<td>A. Keep</td>
<td>49</td>
<td>1.17</td>
<td>.071</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B. Abortion</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rachel</td>
<td>A. Remain home</td>
<td>65</td>
<td>27.82**</td>
<td>.346</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B. School</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncle</td>
<td>A. Refuse</td>
<td>67</td>
<td>3.57</td>
<td>.124</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B. Help</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05

**p < .01
Table 4

*Option Identification by Scenario*

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Option A</th>
<th>Option B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abortion</td>
<td>Keeping the baby</td>
<td>Having an abortion</td>
</tr>
<tr>
<td>Income</td>
<td>Reporting the income</td>
<td>Not reporting the income</td>
</tr>
<tr>
<td>Life Support</td>
<td>Continue life support</td>
<td>Removing life support</td>
</tr>
<tr>
<td>Money</td>
<td>Informing someone</td>
<td>Keeping the money</td>
</tr>
</tbody>
</table>
Table 5

*Ratings of Moral Superiority at Time 2 – Abortion Scenario*

| Participant Choice | Consensus | | | |
|-------------------|-----------|---|---|
| | Abortion | Keep Baby | |
| **M** | **SD** | **M** | **SD** | |
|----------------------------------|
| Target Choice – Abortion | | | |
| *Abortion* | 5.67 | 1.66 | 4.60 | 0.89 |
| *Keep Baby* | 2.33 | 2.43 | 1.00 | 0.00 |
| Target Choice – Keep Baby | | | |
| *Abortion* | 6.00 | 1.53 | 5.80 | 1.55 |
| *Keep Baby* | 2.50 | 1.92 | 1.64 | 1.45 |
### Table 6

**Ratings of Moral Superiority at Time 2 – Income Scenario**

<table>
<thead>
<tr>
<th>Participant Choice</th>
<th>Consensus</th>
<th>Not Report</th>
<th>Report Income</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Target Choice – Not Report</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Not Report</em></td>
<td>3.62</td>
<td>1.41</td>
<td>4.08</td>
</tr>
<tr>
<td><em>Report Income</em></td>
<td>1.50</td>
<td>1.00</td>
<td>1.40</td>
</tr>
<tr>
<td>Target Choice – Report Income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Not Report</em></td>
<td>4.00</td>
<td>2.38</td>
<td>4.00</td>
</tr>
<tr>
<td><em>Report Income</em></td>
<td>1.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>
Table 7

Ratings of Moral Superiority at Time 2 – Life Support Scenario

<table>
<thead>
<tr>
<th>Participant Choice</th>
<th>Consensus</th>
<th>Remove</th>
<th>M</th>
<th>SD</th>
<th>Continue</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Remove</td>
<td>6.89</td>
<td>1.83</td>
<td></td>
<td>6.95</td>
<td>2.48</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Continue</td>
<td>7.50</td>
<td>1.92</td>
<td></td>
<td>5.20</td>
<td>0.45</td>
</tr>
<tr>
<td>Target Choice – Remove Life Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Remove</em></td>
<td></td>
<td></td>
<td>6.57</td>
<td>1.83</td>
<td></td>
<td>6.64</td>
<td>1.80</td>
</tr>
<tr>
<td><em>Continue</em></td>
<td></td>
<td></td>
<td>5.00</td>
<td>0.00</td>
<td></td>
<td>3.20</td>
<td>2.05</td>
</tr>
</tbody>
</table>
Table 8

*Ratings of Moral Superiority at Time 2 – Money Scenario*

<table>
<thead>
<tr>
<th>Participant Choice</th>
<th>Consensus</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Keep Money</td>
<td>M</td>
<td>SD</td>
<td>Inform Someone</td>
<td>M</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Target Choice – Keep Money</td>
<td></td>
<td>3.60</td>
<td>2.41</td>
<td>4.45</td>
<td>2.02</td>
</tr>
<tr>
<td>Keep Money</td>
<td></td>
<td>1.89</td>
<td>1.76</td>
<td>1.40</td>
<td>0.55</td>
</tr>
<tr>
<td>Inform Someone</td>
<td></td>
<td>2.44</td>
<td>1.59</td>
<td>2.00</td>
<td>2.00</td>
</tr>
<tr>
<td>Inform Someone</td>
<td></td>
<td>1.38</td>
<td>0.52</td>
<td>1.22</td>
<td>0.44</td>
</tr>
</tbody>
</table>
Figure 1. This is an example of the graph that experimental participants viewed with each vignette in the pilot study.
Figure 2. This graph represents ratings of the moral badness of the options in the majority in Condition A.
Figure 3. This graph represents ratings of the moral goodness of the options in the majority in Condition B.
Appendix A: Visualizations of the Dilemmas

Trolley Dilemma

Footbridge Dilemma
Appendix B: Pilot Study Vignettes

Nan
Celia is best friends with Nan R. One night while slightly intoxicated, Nan's husband, Bob, confides to Celia that he had an affair with a woman he works with, but that the affair has ended and that she has moved to another state.

Judy
The day after the wedding of her best friend, Judy R., Amy C. meets an old friend from school. In the course of their conversation, Amy learns that her friend has just had a child from a man with whom she had an affair a little over a year ago. As it turns out, the man is the one who Judy R. just married. Apparently, the affair was going on the whole time that the man was engaged to Judy R. However, the relationship is definitely over, and the woman is about to marry a different man.

Uncle
Andrew’s great uncle has pancreatic cancer. The illness is terminal and causes his uncle a great deal of discomfort and pain. The doctor tells Andrew that his uncle has only a couple of months to live. Andrew is a pharmacist who has access to many medications. His uncle asks Andrew to help him commit suicide by providing him with drugs. His uncle is very desperate and begs him.

Van
Adam is the director of an orphanage, which has been having trouble supplying the children with food and clothes due to the state's budget crunch. A local car dealership offers to donate a $25,000 car to the orphanage, which Adam can sell to use the money for the children. The owner of the dealership wants Adam to report to the government that the car was actually worth $40,000. There is virtually no chance that the government would be able to find out about the price discrepancy.

Shoplift
Denise is shopping in a department store. She notices a woman who is stuffing an expensive blouse into her purse.

Bus
Ben is waiting with a few other people to board a bus. The bus pulls up and before he can pay for his fare the driver gets out and goes into the convenience store to get a coffee. Ben is the last person to get on the bus.

Unplanned Pregnancy
Amber Y. is a junior in college. She has been exclusively dating Jimmy B. for a few weeks. One night after an especially nice date, they decide to have sex. A few weeks later, Amber realizes that Jimmy has also been dating one of her good friends. She is appalled and decides to break up with him. Amber soon learns that she is pregnant.
Amber has not graduated from college and has no job. She does not have the financial ability to support a child and does not feel ready to care for one. She also wants nothing to do with Jimmy, the father of the child.

**Money**
John B. was in the parking lot of a football stadium after a game when he found a stack of money with a money clip near his car. In all, he counted about six hundred dollars in the stack.

**Income**
Mr. and Mrs. Carlton's daughter had a good chance of receiving a financial scholarship to a prestigious Ivy League college. Unfortunately, Mr. and Mrs. Carlton made slightly more money than was allowable to qualify for the scholarship. If Mr. and Mrs. Carlton don't report the income that Mrs. Carlton makes from cleaning houses on the side, then they would qualify for the scholarship. Since Mrs. Carlton is paid in cash, there is virtually no way that anyone would know about this source of income.

**Cheat**
Laura M. was a pre-med major at a large Midwestern university. Laura had an important organic chemistry test coming up and it was crucial for her medical school application that she receives an "A" in the course. The course is graded on a curve, and so only a certain number of students will get A's, no matter how well the others do. As it turns out, one of the students in her dorm got a copy of the test from a graduate assistant who she is dating. Seven of the students in the class have seen the test and memorized the answers. If Laura does not look at the test, there is a good chance that she will not do as well as the others and, therefore, will not get an "A."

**Date**
Robert L. and John G. were roommates and best friends in their senior year of college. Robert's fiancée, Melissa V., broke off their relationship about a month previously. John G. and Melissa V. had been friends for years, and John wanted to date Melissa even though he knew that it would make Robert very hurt and angry.

**Accident**
Greg N. was planning to sell his car to someone who answered an ad he had placed in the newspaper. Greg needed the money from the sale of the car to help pay for his college tuition. Greg had been in an accident with the car about a year ago in which the frame had been slightly bent, but the car had been fixed, and everything seemed to be working perfectly. When the person who intends to purchase the car asks Greg whether the car had ever been damaged, Greg has to decide whether to tell him about the accident.

**Herpes**
About two months previously, Barbara C. had ended a relationship with her boyfriend after dating him for almost two years. Early in the relationship, Barbara had caught a
mild case of genital herpes from him, but after an initial flare-up, the problem had never occurred again, although her doctor told her that it could always come back, and there was always a slight danger of passing it to a partner. Recently, Barbara C. had been dating someone who she cared for very much. Barbara C. expects that they are soon going to begin a sexual relationship, and she has to decide whether to tell him about her herpes episode of two years ago.

**Life Support**

Tyrone is struggling to accept his mother’s imminent death. She has suffered a severe and unexpected stroke and is now in the hospital on life support with limited brain activity. The doctors approach Tyrone to inform him that his mother is an organ donor and the sooner they take her off life support, the better the quality of her organs. Tyrone is extremely upset but he knows that his mother is only surviving because of the respirator.

**Rachel**

Rachel has always seen herself as compelled to get a higher education. She has already accomplished more than expected by getting a bachelor’s degree. She recently found out that she has been accepted with a full scholarship into a prestigious graduate school far from her home. During the summer before starting graduate school, Rachel learns that her younger sister is diagnosed with leukemia and needs numerous expensive medical treatments. Her mother already works two jobs to keep them afloat and cannot afford the treatments that her sister needs. Although her dream is to get her Masters, it seems that Rachel may need to stay at home to help support her family.

**Job**

Jim has the responsibility of filling a position in his law firm. His friend Paul has applied and is qualified, but someone else seems even more qualified. When they were in law school together, Paul really helped Jim with his studying and encouraged him to continue when Jim thought maybe he wasn’t cut out for being a lawyer. Jim wants to give the job to Paul, but he feels guilty, believing that he ought to be impartial.

**Down Syndrome**

Anna and Carl have been trying to have a baby for some time. They struggled initially and have finally learned Anna is pregnant. At her first sonogram, the doctor notices that something does not appear normal and suggests amniocentesis. Anna agrees and the doctor discovers that her baby has Down syndrome. It is early in the pregnancy and still possible to abort the child.
Appendix C: Options in the Majority in Conditions A and B in the Pilot Study

Options in Majority in Condition A
- Not tell Judy
- Keep Quiet
- Help uncle die
- Agree to take van
- Ignore shoplifter
- Board without paying
- Have an abortion
- Keep the money
- Report the income
- Cheat on the test
- Date her
- Do not tell about herpes
- Do not tell about accident
- Remove life support
- Remain at home
- Give friend the job
- Have the baby

Options in Majority in Condition B
- Tell Judy
- Tell Nan
- Refuse to assist in uncle’s suicide
- Refuse van
- Report shoplifter
- Pay your bus fare
- Keep the baby
- Inform someone about lost money
- Do not report the income
- Do not cheat on test
- Do not date friend’s ex
- Tell about herpes
- Tell about the accident
- Continue life support
- Go to school
- Give someone else the job
- Have an abortion of a baby with Down syndrome
Appendix D: Full Instructions for the Pilot Study

Experimental Instructions:
On the following few pages, you will read some stories and answer questions about them. The stories are simplifications of actual stories that people have reported when asked about difficult decisions they have to make in their lives. These stories have also been shown to previous students during past quarters. Before each story, we have included, for your information, the results that the other students gave about what they would choose to do in each situation. Sometimes people find this information useful in making their own decisions, and sometimes they prefer to ignore this information. Please read the stories and answer the corresponding questions. Please make sure to answer all of the questions associated with each scenario.

Control Instructions:
On the following few pages, you will read some stories and answer questions about them. The stories are simplifications of actual stories that people have reported when asked about difficult decisions they have to make in their lives. Please read each story carefully and closely before answering any questions to ensure that you understand what happened and who was involved. Also make sure to answer all of the questions associated with each scenario.
Appendix E: A Sample of the Pilot Study Questions for Each Vignette

Manipulation Check (Only in the experimental conditions)

According to the previous students and the graph above, what percent of people chose each option?

_______ Tell Nan R.

_______ Keep Quiet

Perceived Moral Quality

Please rate each option below:

Tell Nan R.: (Please circle one number)

-5  -4  -3  -2  -1  0  1  2  3  4  5
Morally bad  Morally good

Keep quiet: (Please circle one number)

-5  -4  -3  -2  -1  0  1  2  3  4  5
Morally bad  Morally good

Chosen Course of Action

What would you do in these circumstances? (Please check one)

___ Tell Nan R.

___ Keep quiet
Appendix F: Procedure for Study 1 and Control Percentages

Instructions:
On the following few screens, you will read a story and then answer questions about it. The story is a simplification of an actual situation that someone reported when asked about making a difficult life decision. Please read the story carefully and answer the corresponding questions. Please make sure to pay attention to all of the information available.

Story
Mr. and Mrs. Carlton were so happy to learn that their daughter was accepted to a prestigious Ivy League university. Shortly after her acceptance, they were completing the financial scholarship information and realized that they made slightly more money than was allowable to qualify for the scholarship. Without the scholarship, it will be impossible for them to afford the university’s steep tuition and fees. Mrs. Carlton cleans houses on the side and receives payment in cash. If Mr. and Mrs. Carlton don’t report this income, then they would qualify for the scholarship. Since Mrs. Carlton is paid in cash, there is virtually no way that anyone would know about this source of income.

1. What would you do in the above circumstances?
Report income or Not Report

2. Please rate the decision to be made on the following scale:
Not reporting the income is the morally superior option (1) to Reporting the income is the morally superior option (9)

3. How confident are you in your decision?
Not at all confident (1) to Extremely confident (9)

4. Please indicate the percentage of Ohio University students who would choose each option. (Make sure that your percentages add up to 100. Only include the number and not the %)
Report
Not report

5. What is your general impression of the Carlton’s?
Extremely negative (1) to Extremely positive (9)

New Computer Screen
This story has been shown to previous students during past semesters. Below, we have included the results that the other students gave about what they would choose to do in the described situation. Sometimes people find this information useful in making their own decisions, and sometimes they prefer to ignore this information.
Graph – Either Report or Not Report is in the majority
6. MC: According to the graph above, what percentage of Ohio University students chose each option? (Only type in the number and not the %)
   Report
   Not Report

*New Computer Screen*
Please think about all the information that you received and answer the following questions.

7. What would you do in the Carlton’s situation?
   Report
   Not report

8. Please rate the decision to be made on the following scale
   Not reporting the income is the morally superior option (1) to Reporting the income is the morally superior option (9)

9. How confident are you in the choice that you made?
   Not at all confident (1) to Extremely confident (9)

10. To what extent do you consider the issue of accurate income reporting to involve your fundamental beliefs about right and wrong?
    Not at all (1) to Very Much (9)

11. To what extent do you consider the issue of accurate income reporting to be a reflection of your core moral beliefs and convictions?
    Not at all (1) to Very Much (9)

**Other Stories**

John B. was in the parking lot of a football stadium after a game, when he found a stack of money with a money clip near his car. John had stayed until the end of the game and then ran into a work colleague while leaving the stadium. As a result, the parking lot was fairly empty by the time he arrived at his car and found this money. In all, he counted about six hundred dollars in the stack.

*Potential Courses of Action:*
1. Inform someone about the money to try and find the owner
2. Keep the money

Amber Y. is a junior in college. She has been exclusively dating Jimmy B. for a few weeks. One night after an especially nice date, they decide to have sex. They continue a sexual relationship. A few weeks later, Amber realizes that Jimmy has also been dating
one of her acquaintances. She and Jimmy had talked about being exclusive, so this news left her appalled. She decided to break up with him. Soon after the break up, Amber learns that she is pregnant. Amber has not graduated from college and has no job. She does not have the financial ability to support a child and does not feel ready to care for one. She also wants nothing to do with Jimmy, the father of the child.

**Potential Courses of Action:**
1. Have an abortion
2. Keep the baby

Tyrone is struggling to accept his mother’s imminent death. She has suffered a severe and unexpected stroke and is now in the hospital on life support with limited brain activity. The doctors approach Tyrone to inform him that his mother is an organ donor and the sooner they take her off life support, the better the quality of her organs. Tyrone is extremely upset but he knows that his mother is only surviving because of the respirator.

**Potential Courses of Action:**
1. Continue life support
2. Remove life support

**Percentage of Control Participants that Chose Each Option**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Option A – Control Percentages</th>
<th>Option B – Control Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abortion</td>
<td>Keeping the baby 60.5%</td>
<td>Having an abortion 39.5%</td>
</tr>
<tr>
<td>Income</td>
<td>Reporting the income 24.7%</td>
<td>Not reporting the income 75.3%</td>
</tr>
<tr>
<td>Life Support</td>
<td>Continue life support 27.3%</td>
<td>Removing life support 72.7%</td>
</tr>
<tr>
<td>Money</td>
<td>Informing someone 60.5%</td>
<td>Keeping the money 39.5%</td>
</tr>
</tbody>
</table>
Appendix G: Example of the Study and the Other 3 Vignettes

Instructions:
On the following few screens, you will read a story and then answer questions about it. The story is a simplification of an actual situation that someone reported when asked about making a difficult life decision. Please read the story carefully and answer the corresponding questions. Please make sure to pay attention to all of the information available.

Story
Mr. and Mrs. Carlton were so happy to learn that their daughter was accepted to a prestigious Ivy League university. Shortly after her acceptance, they were completing the financial scholarship information and realized that they made slightly more money than was allowable to qualify for the scholarship. Without the scholarship, it will be impossible for them to afford the university's steep tuition and fees. Mrs. Carlton cleans houses on the side and receives payment in cash. If Mr. and Mrs. Carlton don't report this income, then they would qualify for the scholarship. Since Mrs. Carlton is paid in cash, there is virtually no way that anyone would know about this source of income.

1. What would you do in the above circumstances?
   Report income or Not Report

2. Please rate the decision to be made on the following scale:
   Not reporting the income is the morally superior option (1) to Reporting the income is the morally superior option (9)

3. How confident are you in your decision?
   Not at all confident (1) to Extremely confident (9)

4. Please indicate the percentage of Ohio University students who would choose each option. (Make sure that your percentages add up to 100. Only include the number and not the %)
   Report
   Not report

New Computer Screen
Target Behavior
After extensive consideration of their options, the Carlton’s decided not to report the cash income from Mrs. Carlton's cleaning job because they thought their daughter deserved to receive the scholarship.
OR
After extensive consideration of their options, the Carlton’s decided to report the cash income from Mrs. Carlton's cleaning job. They will try to find another way to pay for their daughter's tuition.
5. How would you rate the moral acceptability of the Carlton’s' decision not to report/to report the income?
Morally unacceptable (1) to Morally acceptable (9)

6. What is your general impression of the Carlton’s?
Extremely negative (1) to Extremely positive (9)

7. MC: What did the Carlton’s choose to do?
Report
Not Report

*New Computer Screen*
This story has been shown to previous students during past semesters. Below, we have included the results that the other students gave about what they would choose to do in the described situation. Sometimes people find this information useful in making their own decisions, and sometimes they prefer to ignore this information.

Graph – Either Report or Not Report is in the majority

8. MC: According to the graph above, what percentage of Ohio University students chose each option? (Only type in the number and not the %)
Report
Not Report

*New Computer Screen*
Please think about all the information that you received and answer the following questions.

9. What would you do in the Carlton’s situation?
Report
Not report

10. Please rate the decision to be made on the following scale
Not reporting the income is the morally superior option (1) to Reporting the income is the morally superior option (9)

11. How confident are you in the choice that you made?
Not at all confident (1) to Extremely confident (9)

12. To what extent do you consider the issue of accurate income reporting to involve your fundamental beliefs about right and wrong?
Not at all (1) to Very Much (9)

13. To what extent do you consider the issue of accurate income reporting to be a reflection of your core moral beliefs and convictions?
Not at all (1) to Very Much (9)
Appendix H: Other Measures

*Moral Identity Scale*
Instructions: Here are some characteristics that might describe a person: *Caring, Compassionate, Fair, Friendly, Generous, Helpful, Hardworking, Honest, Kind*

The person with these characteristics could be you or it could be someone else. For a moment, visualize in your mind the kind of person who has these characteristics. Imagine how that person would think, feel, and act. When you have a clear image of what this person would be like, answer the following questions on a scale from 1 - Strongly disagree to 7 - Strongly agree. Your responses to these questions will be tied to your OhioID.

1. It would make me feel good to be a person who has these characteristics.
2. Being someone who has these characteristics is an important part of who I am.
3. I often wear clothes that identify me as having these characteristics.
4. I would be ashamed to be a person who had these characteristics.
5. The types of things I do in my spare time (e.g., hobbies) clearly identify me as having these characteristics.
6. The kinds of books and magazines that I read identify me as having these characteristics.
7. Having these characteristics is not really important to me.
8. The fact that I have these characteristics is communicated to others by my membership in certain organizations.
9. I am actively involved in activities that communicate to others that I have these characteristics.
10. I strongly desire to have these characteristics.

Internalization – 1,2,4R,7R, 10
Symbolization – 3, 5,6,8,9

*Trolley Problem*
Your responses to this question will be tied to your OhioID. Imagine the following scenario:
“A runaway trolley is headed for five people who will be killed if it proceeds on its present course. The only way to save them is to hit a switch that will turn the trolley onto an alternate set of tracks where it will kill one person instead of five.”
Is it morally appropriate to flip the switch?

-2 no   -1   1   2 yes

*Measure of Ethical Viewpoints*
Please think about the importance of the traits below to you and then rate each one on the following scale:
1 = not at all important to me to 7 = very important to me

Innovative
Resourceful
Effective
Influential
Results-oriented
Productive
A winner
Principled
Dependable
Trustworthy
Honest
Noted for integrity
Law-abiding