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PERCEPTIONS OF HARM MEDIATE MULTIPLE EMOTIONAL RESPONSES AND

MORAL JUDGMENT

by

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Abstract

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The role of emotion in moral judgment has received increased attention in the literature

as contemporary moral psychology has suggested that moral judgment is largely

understood as an intuitive process. Specifically, strong emotional responses are often

associated with more severe moral condemnation. Previous research using the Dyadic

Morality framework has found that the perceived harmfulness of a disgust-inducing

behavior mediates the relationship between feelings of disgust and moral judgment.

Using these findings as a reference, the present study investigated whether perceived

harmfulness of a behavior mediates the relationship between multiple emotional

responses and moral judgment. It was found that the perceived harmfulness of a behavior

does indeed mediate the relationship between ten emotion items and moral judgment

across various types of moral violations. It was also found that political affiliation and

empathic concerns for others also predicts moral judgments for certain types of

behaviors.

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Introduction

The history of the psychology of morality has been dominated by theories suggesting that morality-related issues are the products of rational deliberation. However, within the past few decades moral psychologists have begun to investigate the role of intuitive and emotional responses in moral judgments, subsequently rejecting the idea that morality is primarily a rational process. Out of this newfound interest has come theories of morality that suggest that intuitive processes are primarily responsible for moral judgments and decision making. This has created a more holistic understanding of human morality by suggesting that emotional responses have significant causal influence in moral judgments. While these theories have overlapping similarities, there remain significant differences between them that make it difficult to accurately distinguish the role of emotion in moral judgment. The present study attempts to unify these theories by suggesting that perceptions of harm are a mediator of the effect of emotion on moral judgment.

Social Intuitionist Model

The Social Intuitionist Model of moral judgment (Haidt, 2001) was the first theory to significantly challenge traditional, rationalist approaches to morality (Kohlberg, 1969; Piaget 1932/1965; Turiel, 1983, Figure 1), which suggested that deliberate, rational processes are the causal factor of moral judgment, and that intuitions and emotional responses are an a posteriori product of the moral judgment. Rather than moral judgment being the product of a deliberate, rational process, the social intuitionist model suggests that quick, effortless, and intuitive responses are the primary causal factors responsible for moral judgments, and that rational justifications come after the judgment is made, and

are a useful tool for influencing and persuading others (see Figure 2). Whereas a

rationalist approach to morality would argue that people act as impartial and objective

judges when faced with a morally-relevant situation, the social intuitionist model argues

that people act as lawyers, starting at a conclusion and then using rational justifications to

support these conclusions (Haidt, 2001).

The primary research supporting the social intuitionist model comes from

research on "moral dumbfounding," which occurs when people have strong moral

attitudes about a certain situation or behavior, yet fail to give any rational justification of

why they find it morally wrong. This has been typically studied using vignettes

describing taboo and norm violations that describe objectively victimless violations, such

as consensual incest, cannibalism, and selling one's soul for money (Haidt, Björklund, &

Murphy, 2000). In one consensual incest vignette, participants read about a brother and

sister who mutually agree to have sex, ensuring to use multiple forms of birth control.

Even though there is no possibility of harm or negative outcomes for the siblings, people

judge this behavior as morally wrong, yet they fail to provide rational justifications for

their condemnation (Haidt, 2001). At the heart of moral dumbfounding is that people may

have strong intuitions *that* a behavior is morally wrong, but they simply cannot explain

why it is morally wrong.

The social intuitionist theory does not provide a possible mechanism for the

emotion-morality link. Intuition in this model is not synonymous with emotional

responses, but rather with an automatic process that is inaccessible to conscious

awareness (Haidt, 2001). However, based on an effortless good-bad, like-dislike

assessment of the behavior, the initial intuition may carry with it an affective overtone

(Haidt, 2001), which may be associated with distinct emotions. For example, a negative intuition is elicited from hearing about consensual incest, which may be associated with and contextualized as the distinct emotion of disgust.

Incorporating the social intuitionist model of morality with previous research suggesting that moral concerns are universal and important for group functioning (Shweder, 1990; Shweder, Much, Mahapatra, & Park, 1997; Waal, 1996), moral psychologists began to search for a collective morality, that is, moral concerns that are shared across different groups and cultures. Contemporary moral psychology has incorporated this research in various ways. While this research is broad in scope, examples of this include investigating moral values across cultures, studying core moral values, and investigating the role of emotion, rather than merely intuition, as a causal factor in moral judgment.

Moral Foundations Theory

Originally designed to study cultures rather than individuals (Haidt, Graham, & Joseph, 2009), Moral Foundations Theory (Graham, Haidt, & Nosek, 2009; Haidt & Graham, 2007; Haidt et. al, 2009; Haidt & Joseph, 2004) suggests there are core moral concerns shared across humanity, similar to virtue ethics, which provide a foundation for all moral attitudes and ideals. It was first suggested that there are four core moral concerns, specifically regarding suffering, hierarchy, reciprocity, and purity (Haidt & Joseph, 2004). However, the moral foundations were later modified to include a concern regarding loyalty to one's group, resulting in a total of five moral foundations: harm/care, fairness/reciprocity, in-group/loyalty, authority/respect, and purity/sanctity (Haidt & Graham, 2007).

These moral concerns are understood to be innate within humans and are intuitively activated by certain behaviors and situations. For example, the foundation of harm/care is argued to be an evolved intuition originally designed to ensure the wellbeing of one's immediate offspring, but then later developed into a concern for avoiding harm towards and caring for other humans and non-humans (Haidt & Graham, 2007). An important distinction is made between the five moral concerns regarding whether there is an objective victim of these actions. Specifically, whereas harm-, fairness-, and authority-related concerns all involve an objective victim, loyalty- and purity-related concerns are considered victimless, yet still immoral. For example, dissent towards one's country is an objectively victimless act, yet still considered highly immoral to many people (Haidt & Joseph, 2004).

This distinction between objective and subjective violations may explain why moral judgments are often split along political partisan lines, as it has been found that liberals and conservatives value certain foundations more than others. Specifically, those with liberal-leaning political affiliations primarily value the harm/care and fairness foundations, possibly because liberals have been shown to have greater trait empathy than conservatives (Loewen, Cochrane, & Arsenault, 2017), whereas those with conservative-leaning political affiliations value all five foundations to some extent (Graham et. al, 2009). A possible reason for conservatives valuing loyalty and respect more than liberals is likely due to conservatives valuing the safeguarding and upholding of social order and stability more than liberals (McCann, 2008; Jost, Glaser, Sulloway, & Kruglanski, 2003). A real-life example of this distinction in value systems can be seen in the strong difference of opinions when it comes to professional athletes protesting the

maltreatment of minorities by kneeling during the national anthem at sporting events. While there is no objective harm to this action, many people find it to be subjectively harmful because they believe the athletes are disrespecting and rebuking traditional value systems such as military veterans or the American flag.

Similar to the Social Intuitionist Model, Moral Foundations Theory suggests that automatic intuitions link the situation and the moral judgment. While intuitions are considered to be related to both moral judgments and foundation-related concerns, intuitions are the primary activators of moral foundation-related concerns, and activating these concerns influences moral judgments (Figure 3; Haidt & Graham, 2007; Haidt et. al, 2009; Haidt & Joseph, 2004). The activation of each variable in this relationship is not static, such that the strength of the activation of one variable can change how one appraises the same situation at a different time. In other words, just as the intuition influences the moral judgment and moral concern, the moral judgments and moral concerns can consequently influence the intuition. For example, the subsequent appraisal of a behavior that is judged as permissible may lead to less intense intuitive responses when a similar behavior is presented in the future.

In this model, the link between the initial intuition and the moral judgment may be one of the five moral foundations, thus removing distinct emotions as causal factors of moral judgments. However, distinct emotions are still suggested to be generally associated with each moral foundation, mostly being merged with the automatic intuition (Haidt & Joseph, 2004). For example, compassion is the specific emotion associated with upholding and maintaining the harm/care foundation, whereas anger is elicited when fairness related concerns are violated (Haidt & Joseph, 2004).

Using the connection between the pillars of foundations and moral judgment, the influence of emotion in moral judgment has received increased attention in the literature. This has been typically accomplished by manipulating specific emotions to trigger certain moral foundation concerns, and ultimately moral judgments. Some of the research on this topic has focused on anger and moral judgment (Russel & Giner-Sorolla, 2011a; Russell & Giner-Sorolla, 2011b), however, the relationship between disgust and moral judgment has been the most extensively researched in the literature.

In general, feelings of disgust are associated with purity-related concerns (Rozin, Haidt, McCauley, 2008; Rozin, Lowery, Imada, & Haidt, 1999), and its elicitation is suggested to "moralize" these concerns, that is, disgust amplifies moral condemnation of objectively victimless acts that violate purity-related concerns as a means to protect the body and soul (Graham et. al, 2009; Horberg, Oveis, Keltner, & Cohen, 2009). Not only is disgust considered a protector of the body from potentially threatening contaminants, but it is also considered to act as a socio-behavioral immune system by protecting oneself from people who are perceived as threatening (Eskine, Kacinik, & Prinz, 2011; Inbar, Pizarro, Bloom, 2012; Inbar, Pizarro, Iyer, Haidt, 2012; Terrizzi, Helzer & Pizarro, 2011; Shook, & Ventis, 2010). Additionally, it has been found that conservatives have a higher disgust sensitivity than liberals (Inbar, Pizarro, Knobe, & Bloom, 2009; Inbar et. al, 2012; Olatunji, 2008), which may explain why conservatives condemn purity violations, and place an overall higher value on the purity foundation than liberals (Graham et. al, 2009).

This amplification of moral judgments is not limited to purity-related violations, instead, by means of inducing feelings of disgust in the laboratory or assessing trait disgust sensitivity, disgust has been suggested to be an amplifier of *all* moral judgments

(Inbar & Pizarro, 2014; Inbar et. al, 2009; Rozin & Haidt, 2013; Schnall, Haidt, Clore, &

Jordan, 2008), meaning that moral judgments of all behaviors are made more severe

when one experiences disgust.

 While Moral Foundations Theory does provide a framework for understanding the

structure and presence of universal and collective moral concerns, it does not explain the

underlying processes and mechanisms that drive moral judgments. In other words, Moral

Foundations Theory explains *that* universal moral concerns exist, but it does not explain

how these concerns operate. The theory of Dyadic Morality (Gray, Waytz, & Young,

2012; Schein & Gray, 2016; Schein & Gray, 2017) addresses this distinction, and offers

an avenue for future research to explore the role of emotion in moral judgment.

Dyadic Morality

 The Theory of Dyadic Morality proposes that the foundation to moral judgment is

a mindful agent causing harm towards a vulnerable patient (Gray et. al, 2012; Schein &

Gray, 2016; Schein & Gray, 2017), ultimately suggesting that the basis of morality is

avoiding and condemning intentional harm towards a victim. Similar to other intuition-

based theories of morality, perceptions of harm are understood to be intuitively and

effortlessly perceived in the dyadic morality framework (Gray, Schein, & Ward, 2014;

Schein & Gray, 2017). The link between harm and immorality creates a cognitive

"feedback loop" in the moral dyad, that is, the presence of harm towards a victim creates

judgments of immorality, and judgments of immorality signal the harm towards a victim

(Schein & Gray, 2016; Schein & Gray, 2017).

 One important distinction to be made regarding Dyadic Morality compared to

other theories of moral judgment, is that both harm and the victim in the dyadic loop can

be real or perceived, meaning that certain actions that are both harmless and victimless

may still be considered immoral because they signal harm towards a perceived victim

(Gray et. al, 2014; Gray et. al, 2012; Schein & Gray, 2015). In other words, certain

actions may not objectively harm a victim, but are nonetheless considered to be immoral

because there is a perceived victim of the action. One example is consensual incest, a

commonly used example by previous research. While both parties in this scenario take

precautionary measures to protect themselves and are both willing to engage in the act,

there is no objective victim, yet this action is still judged as highly immoral because there

are perceived victims to this type of taboo-related action.

The dyadic loop reveals why certain moral foundations, notably loyalty and

purity-related violations, are considered morally wrong even when these violations are

objectively victimless. Simply put, purity and loyalty concerns are moralized because

they signal perceived harm (Gray et. al, 2014; Schein & Gray, 2015), contrary to what

Moral Foundations Theory suggests. An example of a loyalty domain violation would be

someone privately burning his or her country's national flag. For this behavior, there is

no harm towards an objective victim, but this action is condemned by many because it

may be considered a harmful action towards one's country or military veterans (Gray et.

al, 2012). At the core of Dyadic Morality lies the theory that a "harmless wrong" does not

exist, that is, any behavior considered harmful towards a victim is also considered

morally wrong, and any behavior that is considered morally wrong signals harm towards

a victim (Gray et. al, 2014; Gray et. al, 2012; Schein & Gray, 2015; Schein & Gray,

2016; Schein & Gray, 2017). Specific moral foundations can still be present in the

Dyadic Morality framework, however, rather than each concern being the product of a

distinct psychological process, these concerns all share a common goal of identifying and assessing behaviors that signal the presence of harm (Gray et. al, 2012).

Harm, Emotion, and Moral Judgment

Other research appears to support the notion that the foundation of human morality is avoiding and condemning harming a vulnerable victim. For example, empathy has been suggested to be the central emotive and intuitive process necessary for moral judgment (Hoffman, 2001; Pizarro, 2000), as empathic concerns for others allow one to identify with a potential suffering victim. In fact, it has been found that low levels of empathy are associated with an increased willingness to harm a victim to obtain a utilitarian outcome (Gleichgerrcht & Young, 2013; Patil & Silani, 2014). Additionally, performing a harmful action towards a victim is considered morally worse than letting a victim be harmed, even though harm occurs to a victim in both instances (Cushman, Murray, Gordon-McKeon, Wharton, & Greene 2012; Cushman, Young, & Hauser, 2006; Ritov & Baron, 1999; Rozyman & Baron, 2002).

Using sacrificial moral dilemmas as a reference, it has also been found that dilemmas that require the actor to use personal force to sacrifice a single victim to save a group of others are judged differently than dilemmas that do not require the actor to use personal force to sacrifice a single person. Specifically, most people decide *not* to sacrifice the single person in dilemmas that require personal force, whereas most people *do* decide to sacrifice the single person in dilemmas that do not require personal force (Greene, Nystrom, Engell, Darley, & Cohen, 2004; Greene, Sommerville, Nystrom, Darley, & Cohen, 2001; Hauser, Cushman, Young, Jin, & Mikhail, 2007). The differences in responses in these dilemmas are likely due to whether personal force is

used to harm the single victim (Cushman et. al, 2006; Greene et. al, 2004; Greene et. al,

2009; Hauser et. al, 2007).

Emotional and visceral responses also appear to be a causal factor in condemning

and avoiding harmful behavior. Intentional harm elicits more neural activity in areas

associated with emotional processing than cognitive processing (Borg, Hynes, Van Horn,

Grafton, & Sinnott-Armstrong, 2006), and increases in cardiovascular arousal have been

linked to avoiding harmful actions (Cushman, Gray, Gaffey, & Mendes, 2012), whereas

difficulties in neuro-visceral integration are associated with endorsing harmful actions

(Park, Kappes, Rho, & Van Bavel, 2016). Finally, the dual process theory of moral

judgment (Greene, 2007; Greene et. al, 2009; Greene, Morelli, Lowenberg, Nystrom, &

Cohen, 2008; Greene et. al, 2004; Greene et. al, 2001; Shenhav & Greene, 2014) suggests

that strong emotional responses are associated with deontological responses in sacrificial

dilemmas, whereas weak emotional responses are associated with utilitarian responses in

sacrificial dilemmas. Viewing responses in these dilemmas as whether a harmful action

was endorsed reveals that strong emotional responses are associated with avoiding a

harmful action, whereas weak emotional responses are associated with endorsing a

harmful action (Gawronski & Beer, 2016).

In regards to the relationship between emotion and moral judgment of other types

of violations, compared to only judgments of physical harm towards a victim, much of

the research on the emotion-morality link has studied domain-specific emotional

responses, investigating the role that distinct emotions, such as disgust, anger, or guilt,

have on making moral judgments. However, an underrepresented approach to studying

the role of emotion in moral judgment is to view emotional responses through a domain-

general lens. Rather than suggesting that distinct emotions are the product of distinct

cognitive appraisals and neural mechanisms, domain-general approaches to emotion,

notably constructionist models, suggest that distinguishing between specific emotions is

the product of conceptualizing one's core affective state based on one's current context

and language (Lindquist, 2013; Russell, 2003). In other words, core affect contains the

basic ingredients that are used to label distinct emotions based on the context (Lindquist,

2013; Russell, 2003). These basic ingredients of core affect are emotional arousal, which

is the intensity of the experienced emotion, and emotional valence, which is the positivity

or negativity of the experienced emotion (Cameron, Lindquist, & Gray, 2015).

Those supporting a construction approach to understanding the role of emotion in

moral judgment suggest that the appraisal of the core affective state can lead to different

classifications of moral emotions based on the context, and thus rejecting the theory that

specific emotions are the product of specific moral content violations (Cameron et. al,

2015). For example, hearing stories about consensual sibling incest and instances of

racial discrimination may both result in a negative valence and high arousal affective

state, but the affective state may be labeled as "disgust" for the incest story and "anger"

for the discrimination story. With this idea it has been argued that research manipulating

specific moral emotions to investigate how moral judgments are altered (e.g., Inbar &

Pizarro, 2014; Inbar, Pizarro, Bloom, 2012; Schnall et. al, 2008) failed to take this into

account, that is, this research merely introduced negative core affective states, rather than

distinct emotions (Cameron et. al, 2015). While there remains a debate in the literature on

whether domain-specific or domain-general perspectives provide a better picture of

emotional responses, the present study does not attempt to provide support for either.

Instead, rather than suggesting that one model is superior to the other, the present study

investigates how both domain-specific and domain-general emotions influence moral

judgment, as this remains an underrepresented topic in the literature.

The role of emotion in moral judgment is not a pillar of the Dyadic Morality

model, rather, the primary assertion of the Dyadic Model of morality is that moral

judgment is grounded in the dyadic loop, which is concerned with agents causing harm to

victims. However, using the moral dyad as a reference, understanding the role that

perceived harmfulness of an action has on moral judgment may be a significant causal

link between emotion and morality. Specifically, perceived harmfulness may be a

mediating link between emotional responses and moral judgment.

To date, there have been two studies on how emotion, specifically disgust, is

involved in the moral dyad (Gray & Schein, 2016; Schein, Ritter, & Gray, 2016). Despite

that, investigating the causal role of emotion in the moral dyad was not a primary focus

of these studies, rather, these studies revealed that perceived harmfulness of an action

offers a better explanation of moral judgments than the emotion elicited from the action.

In one study, it was found that perceived risk/harm offered a significantly better

prediction of moral judgments than feelings of disgust for those who were morally

opposed to genetically modified organisms (Gray & Schein, 2016). By focusing on purity

violations and the subsequent elicitation of disgust, it was found in a separate study that

the perceived harmfulness of the purity violation was a mediating link between disgust

and moral judgment, while also predicting moral judgments better than disgust alone (see

Figure 4; Schein et. al, 2016). These results revealed that experiencing disgust did not

automatically moralize certain actions, notably purity violations, as previous research has

suggested (Horberg et. al, 2009). Instead, moral condemnation of a disgust-eliciting

action was dependent on the extent to which that action was considered harmful.

It is clear that a strong relationship exists between emotion and moral judgment,

and the moral dyadic framework reveals that perceived harm mediates between disgust

and moral judgment (Gray & Schein, 2016; Schein et. al, 2016). However, there remains

a lack of research on whether perceived harm mediates the relationship between moral

judgment and *all* emotional responses, including domain-specific emotions and core

affective states. The present study addresses this gap in the literature.

The Present Study

The present study will investigate whether perceived harm mediates the

relationship between moral judgments and multiple self-reported emotional responses. To

accomplish this, the present study will incorporate vignettes that describe foundation-

related violations as a way to elicit various relevant emotional responses. In addition,

vignettes that describe morally neutral, yet emotionally salient situations will be used to

compare to vignettes describing foundation-related violations. Self-reported domain-

specific and domain-general emotional responses to these vignettes will also be collected,

in addition to measures of moral judgment and perceived harm that have been used by

previous research (Schein et. al, 2016). Measures of affective- and cognitive-based

empathic concerns for others and political affiliation will also be collected, as both have

been shown to be closely related to both emotion and moral judgment. The primary

hypothesis is that perceived harm will mediate the relationship between all emotional

responses and moral judgment for all vignettes, because the emotion-eliciting behavior

will be considered morally wrong only to the extent that the behavior is considered

harmful. In other words, intense emotional responses will signal a high degree of harm,

which will result in moral condemnation, whereas weaker emotional responses will not

signal a high degree of harm, thus resulting in no moral condemnation.

Due to a lack of research on the subject, there will be no a priori hypothesis on

whether domain-specific or domain-general perspectives of emotion will better predict

moral judgments. Instead, the present study will use exploratory analyses to determine

which type of emotional response better predicts moral judgments, with the hope that

future research can further explore this effect. In addition, the present study will

investigate the differences of moral judgments between each type of vignette. It is

hypothesized that Harm/Care violations will receive the strongest ratings of moral

condemnation and perceived harm compared to the other violations. However, there will

not be an a priori hypothesis for how other violations will be judged in comparison to

each other, due to a lack of research on the subject. It is also hypothesized that specific

emotions will best predict moral judgments for certain types of vignettes. Attempting to

replicate or support previous research (Graham et. al, 2009; Haidt, 2004; Haidt et. al,

2009), it is hypothesized that ratings of compassion will best predict judgments in

vignettes that describe objectively harmful behaviors, ratings of anger will best predict

judgments in vignettes that describe unfair or unjust behaviors, ratings of disgust will best

predict judgments in vignettes that describe disgusting or taboo-related behaviors, and

ratings of contempt will best predict judgments in vignettes that describe behaviors that

violate or disrespect authority.

There are also multiple hypotheses regarding the relationship between empathy,

political affiliation, and moral judgment. First, as a way to replicate previous research

(Graham et. al, 2009; Graham et. al, 2013), it is hypothesized that political affiliation will predict moral judgments for each type of behavioral violation. Specifically, it is hypothesized that liberal leaning political affiliations will predict more severe judgments of harm- and fairness-related violations, while conservative leaning political affiliations will predict more severe judgments of purity- and loyalty-related violations. It is also hypothesized that empathic concerns for others will predict moral judgments for harm- and fairness-related violations (Graham et. al, 2009), as both of these types of violations involve an innocent victim being hurt or taken advantage of, thus making those with a higher propensity of empathy for suffering victims more likely to condemn these behaviors. Finally, replicating previous research (Loewen, Cochrane, & Arsenault, 2017), it is also hypothesized that empathic concerns for others will also be related to political affiliation. Specifically, it is hypothesized that higher levels of empathy will be associated with a more liberal-leaning political affiliation, whereas a conservative-leaning political affiliation will be predicted by lower levels of empathy.

Method

Participants

An a priori power analysis ($F = 0.25$; α error probability = .05) revealed that 323 participants were needed to ensure adequate statistical power (95%), therefore, 355 participants (173 men; 180 women, 1 Other; age range: 19-74, $M = 38.25$, $SD = 12.49$) were recruited from TurkPrime's online survey platform (Littman, Robinson, & Abberbock, 2016), and received monetary compensation ($0.35) for their participation. TurkPrime is an online platform that distributes surveys on Amazon's Mechanical Turk,

a crowdsource funding website where individuals receive monetary compensation for

participating in studies and performing certain tasks.

Materials

   Vignettes. Participants were randomly assigned to one of six conditions that

differed regarding what type of vignette they read: harm violations ($n = 58$; Gray et. al,

2014), fairness violations ($n = 62$; Graham et. al, 2009), purity violations ($n = 54$; Gray

et. al, 2014), loyalty violations ($n = 62$; Graham et. al, 2009), non-moral, emotionally

salient vignettes ($n = 58$), and non-moral, emotionally neutral vignettes ($n = 61$; Gray et.

al, 2014). Harm-related vignettes described situations where an agent causes physical or

emotional harm to a victim. Examples include, "sticking a stranger with a pin" and

"insulting an overweight colleague." Fairness-related vignettes described situations

where an individual performs unjust or unfair actions towards another person, and

examples include "stealing from a poor person and using the money to buy a gift for a

rich person" and "throwing out a box of ballots during an election to help one's favored

candidate win." Purity-related vignettes described taboo violations where an agent

performs victimless, but impure violations. Examples include, "having sex with a corpse"

and "covering a Bible with feces." Loyalty-related vignettes described situations where

an individual performs disloyal, but objectively victimless actions, such as "burning

one's country's flag in private" and "publicly betting against one's favorite sports team."

Non-moral, but emotionally salient vignettes described situations meant to elicit

emotional responses, but would not be considered immoral, such as "cleaning vomit off

one's child" and "attending a funeral." Finally, examples of non-moral and emotionless

vignettes include "eating toast" and "riding the bus."

Moral judgments and perceived harm. Items assessing moral judgments and perceived harm for each behavior were replicated from previous research (Schein et. al, 2016). Moral judgments were measured as the mean of three items asking how *morally wrong*, *blameworthy*, and *immoral* participants believe the behavior to be, on a Likert-type scale from 1 (*Not at all*) to 7 (*Extremely*). The perceived harmfulness of each behavior was measured as the mean of three items asking how *threatening*, *dangerous*, and *harmful* participants believe the behavior to be, on a Likert-type scale from 1 (*Not at all*) to 7 (*Extremely*).

Emotional responses. All self-reported emotional responses were measured by having participants report the strength of the emotion or emotional state they were experiencing at the current moment on a Likert-type scale from 1 (*Not at All*) to 7 (*Very Much So*). The target emotions were presented in a random order for each vignette. Discrete emotions included *compassion*, *anger*, *contempt*, *disgust*, *shame*, and *guilt*. To obtain a complete measure of core affect, one affective state was chosen from each of the four quadrants on the arousal-valence spectrum (Russell, 2003; Russell & Barrett, 1999). Specifically, participants reported the extent to which they felt *tense*, *excited*, *calm*, and *depressed* at the current moment.

Empathy. The Basic Empathy Scale (Jolliffe & Farrington, 2006) was used to measure participants' level of both cognitive and affective empathy. Cognitive empathy can be understood as the capacity to comprehend or intellectually understand the emotions of another person, whereas affective empathy is the capacity to viscerally experience the emotional state of another person (Jolliffe & Farrington, 2006). Participants answered a 20-item questionnaire asking them to self-report their ability to

empathize with others on a Likert-type scale from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). Examples include, "my friends' emotions don't affect me much" and "when someone is feeling 'down' I can usually understand how they feel." Answers were recoded such that numerically higher scores indicated a greater ability to empathize with others, and numerically lower scores indicated less of an ability to empathize with others.

Political Affiliation. Replicating previous research, participants were asked to report their political affiliation on a sliding scale from 1 (*Strongly Liberal*) to 7 (*Strongly Conservative*), with 4 (*Moderate*) serving as a midpoint (Graham, Haidt, & Nosek, 2009).

Procedure

Participants were randomly assigned to one of six conditions, which differed on what type of vignette they read (Appendix A). To attempt to help participants experience and recognize their emotional responses and attitudes regarding each vignette, participants were instructed to mentally visualize the situation described in the vignette for seven-seconds. The behavior was listed on a blank screen, and the screen automatically advanced after the allotted seven seconds passed. After reading and visualizing each vignette, participants were asked to report their experienced emotional responses, moral judgments, and perceptions of harm. Upon completion of the final vignette, participants responded to the Basic Empathy Scale (Jolliffe & Farrington, 2006), with all questions being presented in random order. Once finished with the final question, demographic information was collected, including participants' political affiliation. Participants were then thanked, debriefed, and compensated.

Results

Mediation Analyses. Using Figure 5 as a reference, a mediation analysis compares the predictor variable's influence on the outcome variable when the mediator is included and when it is not included. Specifically, a full mediation occurs when the mediator variable is added to the predictor-outcome model and the model is no longer significant, thus revealing that the mediator explains *all* of the relationship. A partial mediation occurs when the mediator variable is added to the model and the predictor-outcome relationship is still significant, but is weaker, meaning the mediator explains *some* of the relationship. It is also important to recognize that c' is the direct effect of the predictor variable on the outcome variable when the mediator is included as a predictor.

In the case of the present study, a full mediation will occur, and perceived harm will explain the entirety of the emotion-morality relationship, if perceived harm independently predicts moral judgment (i.e., the *b* coefficient), but the direct effect of emotion on moral judgment is no longer significant when perceived harm is added to the model (i.e., the c' coefficient). A partial mediation will occur if perceived harm predicts a significant relationship with moral judgment (i.e., the *b* coefficient), and the direct effect of emotion on moral judgment is still significant, but weaker, when perceived harm is added to the model (i.e., the c' coefficient).

Moral judgments. Separate mediation analyses via regression were completed for all emotion items to determine if harm is a significant mediator between emotion and moral judgment. Political affiliation and trait empathy were controlled for in all mediation analyses by being added in the model as covariates. As shown in Figure 5 and Table 1, every emotion item significantly predicted perceived harm, and all emotion

items except for *compassion* and *excited* significantly predicted moral judgment. When

both predictors of emotion and perceived harm were included in the model, perceived

harm predicted moral judgment for the emotions of *tense* ($t = 25.98$, $p < .001$) and

depressed ($t = 31.54$, $p < .001$), but each emotion no longer solely predicted moral

judgment ($ps > .05$), revealing that perceived harm fully mediated the relationship

between *tense* and moral judgment and *depressed* and moral judgment. As again shown

in Table 1, perceived harm also partially mediated the relationship between *anger,*

disgust, contempt, shame, guilt, and *calm*, such that adding perceived harm to the model

did not alter the significant relationship between emotion and morality, but it did make

this relationship weaker. Overall, as revealed in Table 2, bootstrapped analyses confirmed

these effects of emotion on moral judgment through perceived harm, in that perceived

harm was a significant mediator between moral judgment and all emotion items,

including *anger, disgust, contempt, compassion, shame, guilt, tense, excited, calm*, and

depressed. Specifically, when responding to each behavior, elicitation of each emotion

predicted perceived harm, which in turn predicted more severe moral judgments of the

behavior. These results replicate Schein and colleagues' (2016) findings that perceived

harm mediates the relationship between disgust and moral judgment, while also

supporting the primary hypothesis that perceived harm mediates the relationship between

multiple emotions and moral judgment.

Overall, moral judgments ($\alpha = .96$) and perceived harm ($\alpha = .95$) showed strong

internal consistency. A between-subjects ANOVA revealed a significant difference in

moral judgments between all six conditions, $F(1,5) = 140.56$, $p < .001$, $\eta_p^2 = .67$ [95% CI:

0.65, 0.98]. Supporting one of the hypotheses, all morally salient vignettes were

considered morally worse than morally neutral vignettes ($ps < .001$; see Table 3 and

Figure 6). A separate between-subjects ANOVA also revealed a significant difference in

perceived harm between all six conditions, $F(1,5) = 76.70$, $p < .001$, $\eta_p^2 = .52$ [95% CI:

0.48, 0.97]. Similar to the differences in moral judgments and supporting another of the

hypotheses, morally salient vignettes were considered more harmful than morally neutral

vignettes ($ps < .01$; see Figure 6). Partially supporting one of the hypotheses, harm-

related vignettes were judged to be morally worse when compared to loyalty violations,

emotionally salient vignettes, and emotionally neutral-vignettes ($ps < .05$), but not

vignettes describing fairness violations or purity violations ($ps > .05$). However, all

morally salient vignettes were considered to be more harmful than morally-neutral

vignettes ($ps < .05$).

Politics and Empathy. The data were split by condition and multiple linear

regressions were performed to find if political affiliation predicted moral judgments in

each condition. Supporting the hypothesis that certain types of violations will be

predicted by specific political affiliations, it was found that political affiliation predicted

moral judgments for harm-related violations, $F(1,56) = 4.33$, $p = .042$, $\beta = -.27$, and

loyalty-related violations, $F(1,59) = 17.14$, $p < .001$, $\beta = .47$. Predictions of moral

judgments for fairness-related violations trended towards significance, $F(1,59) = 3.20$, p

$= .079$, $\beta = -.27$. However, failing to support part of this hypothesis, political affiliation

did not predict moral judgments for purity-related violations, $F(1,51) = 2.80$, $p = .100$.

Overall, these results reveal that more liberal-leaning political affiliations are associated

with more severe condemnation of harm-related violations and fairness-related violations,

and more conservative-leaning affiliations are associated with more severe condemnation

of loyalty-related violations.

The data were again split by condition and individual multiple regressions were

performed to determine whether empathic concern for others would predict moral

judgments. Specifically, the affective empathy subscale and cognitive empathy subscales

were both included as predictors of moral judgments. Supporting the hypothesis that

higher empathy scores would predict moral judgments for harm-related violations and

fairness-related violations because of empathic concerns for suffering victims, significant

overall models were found for harm violations, $F(2,55) = 8.68$, $p = .001$ and fairness-

violations, $F(2,61) = 10.89$, $p < .001$. Unexpectedly, a significant overall model was also

found for loyalty-violations, $F(2,61) = 5.04$, $p = .010$. Within the condition describing

harm violations, both affective empathy, $t = 2.18$, $\beta = .27$, $p = .034$, and cognitive

empathy, $t = 2.84$, $\beta = .35$, $p = .006$ predicted moral judgments. Within fairness

violations, only cognitive empathy predicted moral judgments, $t = 3.41$, $\beta = .43$, $p = .001$,

and within loyalty violations, both affective empathy, $t = 2.38$, $\beta = .31$, $p = .021$ and

cognitive empathy, $t = -2.85$, $\beta = .-37$, $p = .006$, predicted moral judgments. Overall,

these results reveal that greater empathy is associated with more severe condemnation of

harm-related and fairness-related violations which describe situations where a victim is

suffering. Interestingly, these results also reveal that reduced cognitive empathy is

associated with more severe judgments of loyalty-related violations. In other words,

when one does not cognitively take the perspective of others, he or she is more likely to

condemn the behavior of another person who is unfaithful to their group.

Finally, a linear regression was performed to test whether empathic concerns for others predicted political affiliation. Affective and cognitive empathy sub-scales were included as predictors of political affiliation. A significant overall model was found, $F(2,347) = 17.96$, $p < .001$, such that both affective empathy, $t = -2.19$, $\beta = -.12$, $p = .029$, and cognitive empathy, $t = -4.10$, $\beta = -.23$, $p < .001$, predicted inverse relationships with political affiliation. These results support the hypothesis that less empathic concerns for others is associated with a conservative-leaning political affiliation and greater empathic concerns for others is associated with a liberal-leaning political affiliation.

Emotion. All emotion measures showed acceptable to strong internal consistency (see Table 4). Separate multiple regressions were performed to test the hypotheses that specific emotions will best predict moral judgments for specific types of violations, specifically compassion will best predict judgments relating to harm violations, disgust will best predict judgments relating to purity violations, anger will best predict judgments of fairness violations, and contempt will best predict judgments of loyalty violations. While the combination of all emotion items predicted significant overall models for each condition ($ps < .05$), only disgust was found to best predict judgments of purity violations ($t = 5.95$, $\beta = .70$, $p < .001$), whereas compassion did not specifically predict harm violations, anger did not specifically predict fairness violations, and contempt did not specifically predict loyalty violations ($ps > .05$).

Next, a multiple regression was performed to determine which emotion item best predicts moral judgment, in addition to determine whether domain-specific or domain-general emotional responses best explain this process. A significant overall model was found when all emotion items were included to predict moral judgment, $F(10,344) =$

128.12, $p < .001$, and this model explained 78% of the variance in moral judgments. A number of specific emotion items significantly predicted moral judgments, including *anger* ($\beta = .14$, $p = .020$), *disgust* ($\beta = .48$, $p < .001$), *contempt* ($\beta = .17$, $p = .001$), *shame* ($\beta = .20$, $p = .010$), *guilt* ($\beta = .24$, $p < .001$), *tense* ($\beta = -.11$, $p = .032$), and *depressed* ($\beta = -.23$, $p < .001$). Overall, disgust was found to be the best predictor of all types of moral judgments, which lends support to a large amount of previous research on the importance of disgust within moral judgments. Not surprisingly, these results also reveal that emotions or affective states that are negatively valanced are best associated with strong condemnation of certain behaviors.

Discussion

The present study investigated the mediating role that perceived harm of a behavior plays in the relationship between emotion and moral judgment. Supporting the primary hypothesis, it was found that perceived harm mediates the relationship between multiple emotions and emotional states and moral judgment, such that stronger and more negative emotions predicted more severe moral condemnation because the judged behavior was signaled as harmful. In other words, if the behavior was not considered harmful, there was no strong emotional elicitation and therefore, the behavior was not judged as immoral. These results replicate and add to Schein and colleagues' (2016) findings that the perceived harmfulness of a behavior mediates the relationship between disgust and moral judgment.

In addition, supporting one of the secondary hypotheses, it was also found that morally salient vignettes that described harm, fairness, purity, and loyalty violations were considered morally worse than morally neutral vignettes. Similarly, it was also found that

morally salient vignettes were considered more harmful than morally neutral vignettes. However, only partially supporting one of the hypotheses, vignettes describing harm-related violations were not judged to be morally worse than all other types of violations, but rather, they were only considered to be morally worse than loyalty violations and non-moral vignettes.

The present study also found that political affiliation predicted moral judgments for harm-related violations and loyalty-related violations, and predictions of moral judgments for fairness violations trended towards significance. Specifically, it was found that more liberal-leaning political affiliations were associated with more severe condemnation of harm-related violations and fairness-related violations, and more conservative-leaning political affiliations were associated with more severe condemnation of loyalty-related violations.

Finally, the present study investigated the differences in moral judgments between discrete emotions and general emotional states, as there has been little previous research on this topic. While the hypothesis that certain emotions will best predict specific behavioral violations was not completely supported, with only disgust being the best predictor of purity violations, there were interesting findings that future research should expand upon. For example, it was found that cumulatively, all emotion items predicted a rather large variance in moral judgments, which parallels previous research on how emotion and moral judgment are closely related. Individually, of the discrete emotions it was found that anger, disgust, contempt, shame, and guilt predicted moral judgments, whereas the general emotional states of tense and depressed predicted moral judgments. Statistically, disgust was found to be the best individual predictor of all moral judgments,

and the statistical strength of this prediction was at least double the size of all other

emotion items. This parallels previous research on the importance and prevalence of

feelings of disgust in moral judgments (Inbar & Pizarro, 2014; Inbar et. al, 2012; Rozin

et. al, 1999; Schnall et. al, 2008).

Overall, the present study's findings that perceived harm mediates the relationship

between multiple types of emotions and moral judgment appears to be a significant

finding in terms of the emotion-morality link. In addition, these results may be a unifying

link between the Social Intuitionist Theory, Moral Foundations Theory, and the Dyadic

Morality Model by seemingly bridging the unaddressed gaps between these theories. For

example, while the Social Intuitionist Theory and Moral Foundations Theory go into

great depth about moral judgments being immediate, intuitive processes, neither theory

offers clear mechanisms for *why* certain behaviors are considered immoral. In addition,

while the Dyadic Morality Model does offer the suggestion that perceptions of harm are

the mechanism underlying all moral judgments, it does not offer a clear link between

emotion and moral judgment. Using the Dyadic Morality model's methodological

framework, the present study's results reveal that the underlying mechanisms of moral

judgment may be that certain behaviors are subjectively perceived to be harmful, with

emotion guiding and reinforcing these judgments. This supports previous research on the

importance of the perceived harmfulness of behaviors being a key driver of various moral

and political judgments, such as judgments of impure behaviors (Gray & Keeney, 2015;

Schein et. al, 2016) and differences in political affiliations (Schein & Gray, 2015).

Overall, the well-established link between emotion and moral judgment may be rooted in

the psychological process of effortlessly calculating the harmfulness of behaviors.

While there are numerous important findings within this study, there are important limitations to keep in mind. For example, the most pressing limitation may be that it is difficult to empirically parse out emotion from moral judgment because they are so closely related and have such shared variance. This may explain why it is difficult to distinguish between which emotion or affective state best predicts moral judgment, and ultimately why there is a continual debate about whether emotional responses are better understood as discrete processes or general affective states (Lindquist, 2013). Perhaps that is why there has been little research attempting to distinguish between the differences in moral judgments when comparing different perspectives of emotional responses.

In addition, another limitation may be found in that judgments of morality and harmfulness in the present study were based on visualizations of hypothetical, and often bizarre, behaviors. These bizarre behaviors within the morally salient vignettes may have been perceived as being so severe or bizarre that they created ceiling effects for all measures, including emotional responses and the perceived harmfulness of the behaviors. Previous research has suggested this is a problem within the moral judgment literature, finding that sampling biases of overly "weird" and severe vignettes do not accurately assess moral judgments and visceral responses (Gray & Keeney, 2015). Alternatively, while participants were instructed to imagine the behavior for seven seconds, this may not have been enough of a manipulation to elicit an authentic or strong visceral response. In other words, even though the vignettes described bizarre taboo behaviors, the lack of realism may have limited participants' abilities to experience strong emotional responses.

Despite these limitations, future research on moral judgment should continue to investigate the psychological mechanisms and processes underlying moral judgments and

political affiliations. Paralleling the present study and similar previous research (Schein et. al, 2016), future research should continue to investigate the role of how the perceived harmfulness of a behavior influences both the emotion elicited and subsequent moral judgment of that behavior. Overall, it is important for future research to investigate moral judgment as a combination of emotional, intuitive, motivational, and cognitive processes, as it is becoming increasingly clear that moral judgments are influenced by the interplay of these processes.

In addition, future research should continue to investigate how different emotions or affective states are associated with moral judgments. While the current study found that disgust is very active in moral judgments, a reoccurring finding within the moral judgment literature, other emotions were also found to significantly predict moral judgments, including anger, contempt, shame, guilt, tense, and depressed. There has been little research investigating the role that emotions other than anger and disgust play in moral judgments. Additionally, within the literature there has been only suggestions on how other specific emotions are related to moral judgments for certain behaviors, such as contempt being primarily related to loyalty violations and compassion being related to harm/care violations (Haidt & Joseph, 2004). The results of the present study did not support these suggestions. However, the present study's findings of the extent to which different emotions and affective states are active in moral judgments is worthy of further research. In summary, future research should continue to investigate different approaches and perspectives to understanding emotional responses and how they ultimately influence moral judgment.

This study reveals that the perceived harmfulness of a behavior mediates the relationship between multiple emotions and moral judgment, a finding that helps explain the causal mechanism underlying the emotion-morality link. In addition, it was found that political affiliation and empathic concern for others also predict moral judgments for certain types of violations. Moral judgment is a complicated process that is influenced by a number of psychological processes, and the present study's findings offer an explanation for why emotional responses are so closely related to moral judgment. It is hoped that these results help advance our understanding of how these responses are involved in important intrapersonal processes.

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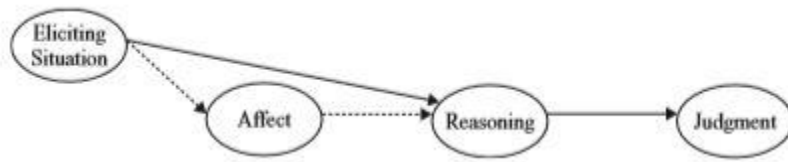
Figure 1. A visual representation of rationalist approaches to moral judgment. Reprinted from "The emotional dog and its rational tail: A social intuitionist approach to moral judgment," by J., Haidt, 2001, *Psychological Review, 108*, 814-834. Copyright 2016 by the American Psychological Association.
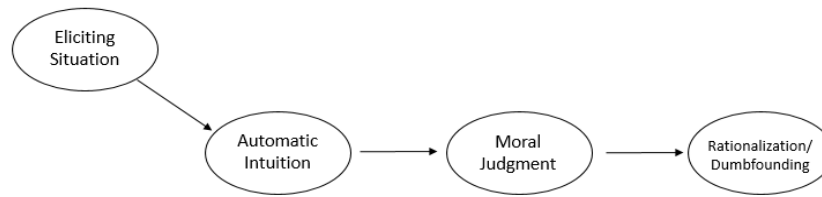
Figure 2. A visual representation of the Social Intuitionist Model of moral judgment. Adapted from "The emotional dog and its rational tail: A social intuitionist approach to moral judgment," by J. Haidt, 2001, *Psychological Review, 108*, 814-834. Copyright 2016 by the American Psychological Association.
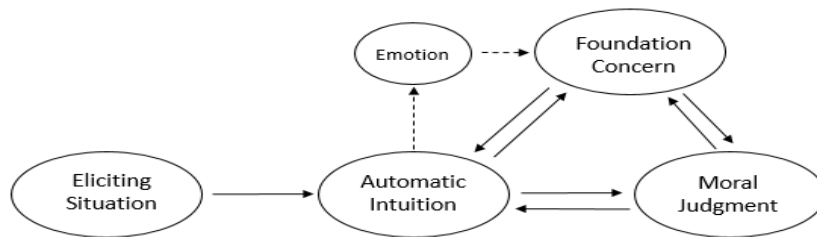
Figure 3. A visual representation of the Moral Foundations Theory model of moral judgment. Adapted from "When morality opposes justice: Conservatives have moral intuitions that liberals may not recognize," by J. Haidt, and J. Graham, 2007, *Social Justice Research, 20*(1), 98-116. Copyright 2007 by Springer Science & Business Media, LLC
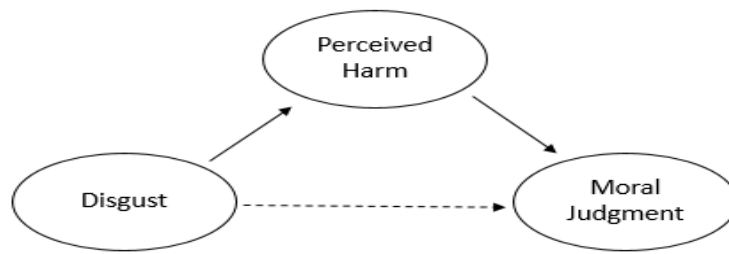
Figure 4. Using the dyadic model, perceived harm was found to be a mediator of the effect of disgust on moral judgment. Adapted from "Harm mediates the disgust-immorality link," by C. Schein, R. S. Ritter, and K. Gray, *Emotion, 16*(6), 862-876. Copyright 2016 American Psychological Association.
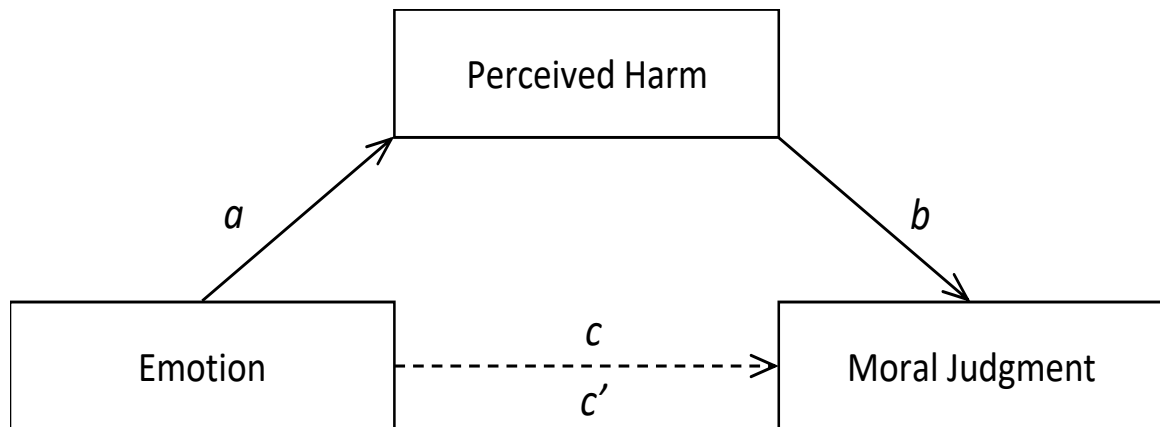
Figure 5. Mediation model used to assess the mediating role that perceived harm plays in the relationship between emotion and moral judgment. Figure corresponds with Tables 1 and 2.

Table 1. Standardized regression coefficients for the relationship between multiple separate emotions and moral judgment as mediated by the perceived harm of the behavior. Table corresponds with Figure 5 and Table 2.

Emotion	*a (t)*	*b (t)*	*c (t)*	*c' (t)*
Anger	0.80 (22.46)***	0.86 (21.59)***	0.91 (22.34)***	0.22 (5.26)***
Disgust	0.76 (24.27)***	0.70 (18.64)***	0.93 (29.56)***	0.39 (10.73)***
Contempt	0.73 (18.98)***	0.85 (23.97)***	0.86 (20.85)***	0.24 (6.73)***
Compassion	0.23 (3.95)***	1.06 (41.23)***	0.06 (0.81)	-0.19 (-6.56)***
Shame	0.76 (24.82)***	0.82 (19.61)***	0.86 (24.77)***	0.24 (5.96)***
Guilt	0.75 (22.74)***	0.93 (22.44)***	0.82 (20.56)***	0.12 (3.09)**
Tense	0.82 (19.61)***	1.00 (25.98)***	0.86 (16.67)***	0.04 (0.92)
Excited	0.18 (2.64)**	1.04 (40.29)***	0.01 (0.15)	-0.18 (-5.26)***
Calm	-0.23 (-3.57)***	1.00 (38.24)***	-0.39 (-5.55)***	-0.17 (-5.22)***
Depressed	0.71 (13.63)***	1.04 (31.54)***	0.71 (11.29)***	-0.03 (-0.66)

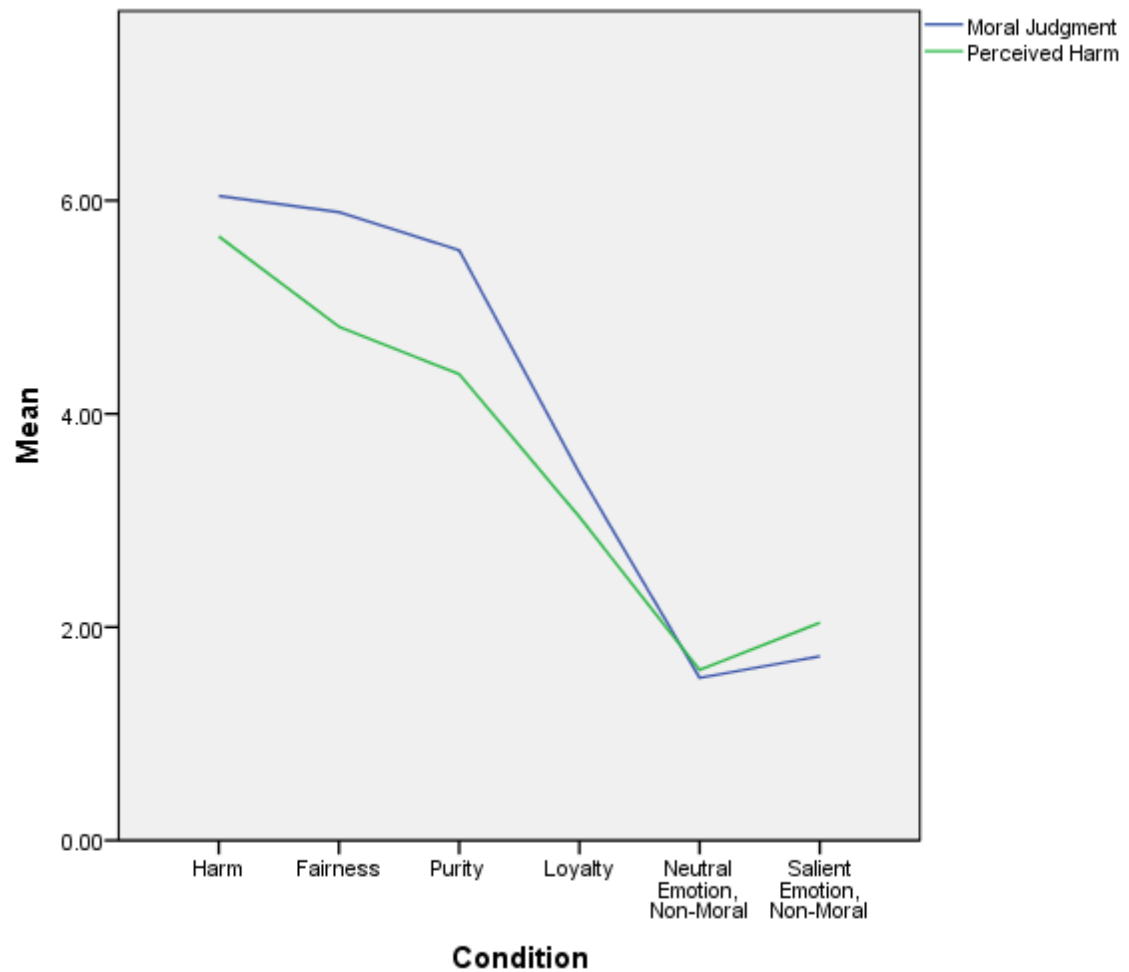*Note*: * $p < .05$, ** $p < .01$, *** $p < .001$

Figure 6. Graph depicting the differences in moral judgments and perceived harm between conditions. Both moral judgment and perceived harm are measured on a 7-point Likert scale with greater numerical scores indicating more severe judgments and greater perceptions of harm.

Table 2. Bootstrapped analysis on the effect of perceived harm in the relationship between emotion and moral judgment. Table corresponds with Figure 5 and Table 1.

Emotion	Indirect B	95% BCa CI
Anger	0.69	[0.58, 0.81]*
Disgust	0.54	[0.44, 0.65]*
Contempt	0.62	[0.54, 0.71]*
Compassion	0.24	[0.11, 0.38]*
Shame	0.62	[0.53, 0.72]*
Guilt	0.69	[0.62, 0.78]*
Tense	0.82	[0.73, 0.92]*
Excited	0.19	[0.05, 0.33]*
Calm	-0.23	[-0.36, -0.09]*
Depressed	0.73	[0.63, 0.84]*

Note: * denotes a significant mediation

Table 3. Descriptive statistics for moral judgments and perceptions of harm between conditions.

Condition	Moral Judgment M (SD)	Harm M (SD)
Harm	6.04 (0.93)	5.66 (1.00)
Fairness	5.89 (1.38)	4.82 (1.45)
Loyalty	3.44 (1.73)	3.03 (1.67)
Purity	5.53 (1.43)	4.37 (1.83)
Non-moral, neutral emotion	1.52 (1.10)	1.60 (1.06)
Non-moral, salient emotion	1.73 (1.38)	2.04 (1.36)

Table 4. Cronbach's α for all emotion measures.

Emotion	Cronbach's α
Anger	.87
Disgust	.89
Contempt	.89
Compassion	.85
Shame	.92
Guilt	.91
Tense	.84
Excited	.78
Calm	.83
Depressed	.81

Appendix A

Vignettes used to study moral judgments, perceived harm, and emotional responses

<u>Harm Violations (Gray, Schein, & Ward, 2014).</u>

1) sticking a stranger with a pin

2) insulting an overweight colleague

3) kicking a dog hard

4) beating one's wife

<u>Fairness Violations (Graham, Haidt, & Nosek, 2009)</u>

1) Cheating in a game of cards played for money with acquaintances

2) Stealing from a poor person and using the money to buy a gift for a rich person

3) Throwing out a box of ballots during an election to help one's favored candidate win

4) Signing a secret-but-binding pledge to only hire people of one's race in his or her

company

<u>Purity Violations (Gray et. al, 2014)</u>

1) Masturbating to a picture of one's dead sister

2) Watching animals have sex to become sexually aroused

3) Having sex with a corpse

4) Covering a Bible with feces

<u>Loyalty Violations (Graham et. al, 2009)</u>

1) Burning one's country's flag in private (nobody else sees this done)

2) Renouncing one's citizenship and become a citizen of another country

3) Leaving the social group, club, or team that one values most

4) Publicly betting against one's favorite sports team

Non-Moral, Emotionally Neutral (Gray et. al, 2014)

1) Eating toast

2) Riding the bus

3) Folding a letter

4) Reading an article

Non-Moral, Emotionally Salient

1) Cleaning vomit off one's child

2) Attending a funeral

3) Watching your favorite sports team win a championship

4) Noticing someone start choking

Appendix B

Measures to assess moral judgments, perceived harm, and emotional responses.

Moral Judgments

Using a Likert-scale from 1 (*Not at all*) to 7 (*Extremely*):

1) How morally wrong is this behavior?

2) How blameworthy is this behavior?

3) How immoral is this behavior?

Perceived Harm

Using a Likert-scale from 1 (*Not at all*) to 7 (*Extremely*):

1) How threatening is this behavior?

2) How dangerous is this behavior?

3) How harmful is this behavior?

Emotional Responses

Using this behavior as a reference, report how much you are experiencing the following

emotions or emotional states using a Likert-scale from 1 (*Not at all*) to 7 (*Extremely*).

1) Anger

2) Disgust

3) Contempt

4) Compassion

5) Shame

6) Guilt

7) Tense

8) Excited

9) Calm

10) Depressed

Appendix C

Basic Empathy Scale (Jolliffe & Farrington (2006)

Instructions: Rate each statement on a 5-point scale from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*).

1. My friends' emotions don't affect me much

2. After being with a friend who is sad about something, I usually feel sad

3. I can understand my friend's happiness when they do well at something

4. I get frightened when I watch characters in a good scary movie

5. I get caught up in other people's feelings easily

6. I find it hard to know when my friends are frightened

7. I don't become sad when I see other people crying

8. Other people's feeling don't bother me at all

9. When someone is feeling 'down' I can usually understand how they feel

10. I can usually work out when my friends are scared

11. I often become sad when watching sad things on TV or in films

12. I can often understand how people are feeling even before they tell me

13. Seeing a person who has been angered has no effect on my feelings

14. I can usually work out when people are cheerful

15. I tend to feel scared when I am with friends who are afraid

16. I can usually realize quickly when a friend is angry

17. I often get swept up in my friends' feelings

18. My friend's unhappiness doesn't make me feel anything

19. I am not usually aware of my friends' feelings

20. I have trouble figuring out when my friends are happy

Appendix D

Informed Consent Form
Emotion and Moral Judgment

This study is being conducted by Alan Leigh as research to be completed in the curriculum for the Experimental Psychology Master's Degree program at Towson University. The purpose of this study is to investigate the differences in individuals' judgments of certain behaviors. If you agree to participate, you will be asked to read four short vignettes that describe various behaviors, and then you will be asked to respond to a number of questions that assess both your opinions on the behaviors and your emotional state while considering these behaviors. In addition, you will be asked to respond to a number of questions regarding your ability to empathize with others. You should know that social science research sometimes involves the researcher concealing some aspects of the study from participants. It is hoped that the results of this study will further our understanding of how emotion regulation is related to moral judgment.

For your participation you will be compensated $0.35, which will be distributed to you through Amazon's Mechanical Turk website. You do not have to participate in this research, and you have the right to withdraw at any time during this research without penalty. Taking part in this study is entirely up to you, and no one will penalize you in any way if you decide not to do so. You will receive compensation regardless if you complete the study in its entirety. There are no known risks associated with participating in this study, however, if you should become distressed in any way, you have the right to terminate your participation immediately. If the vignettes used in this study cause intense discomfort or distress, please stop participating immediately. Should you agree to participate in this study, your responses will be filed in a manner that will ensure complete anonymity and confidentiality. You will be assigned a code number such that the data will be stored with no record of your name kept along with the answers you provide. The study will last approximately 10 minutes.

If you want to know more about this research project, please contact Alan Leigh via email at aleigh1@students.towson.edu or the faculty advisor of this project, Dr. Jessica Stansbury at jstansbury@towson.edu or (410) 704-3196. This project has been reviewed by the Institutional Review Board for the protection of human participants at Towson University. The Institutional Review Board of Towson University has approved this project. If you have questions about Towson University's rules for research, please contact Dr. Elizabeth Katz, Chairperson of the Institutional Review Board for the Protection of Human Participants at Towson University at (410) 704-2236.

By clicking "I agree" below you are indicating that you are at least 18 years old, have read and understood this consent form, and agree to participate in this research study.

-Yes, I am at least 18 years old. I have read and agree to the terms of this study.

-No, I do not agree to the terms of this study.

THIS PROJECT HAS BEEN REVIEWED BY THE INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION OF HUMAN PARTICIPANTS AT TOWSON UNIVERSITY.

Appendix E

IRB Approval Form

Leigh, Alan*

From:	IRB
Sent:	Thursday, January 11, 2018 10:46 AM
To:	Leigh, Alan*
Cc:	IRB; Stansbury, Jessica A.
Subject:	IRB Approval 1712027081

The IRB has approved your protocol "Perceived Harm as a Potential Mediator between Emotion and Moral Judgment" as **expedited, effective 1/11/2018 and expiring 1/10/2019.**

Your IRB protocol can now be viewed in MyOSPR. **Student investigators: protocols can be viewed by your faculty advisor.** For more information, please visit: http://www.towson.edu/academics/research/sponsored/myospr.html

**Please Note:** _Formal approval letters are now provided upon request. If you would like to have one drafted, please notify the IRB staff._

If you should encounter any new risks, reactions, or injuries to subjects while conducting your research, please notify IRB@towson.edu. If your research has been approved as expedited and will extend beyond one year in duration, you will need to submit an annual renewal notice. Should there be substantive changes in your research protocol, you will need to submit another application.

**Regards,**
**Towson IRB**

Curriculum Vitae

Alan Leigh

Education:

M.A. 2016-	**Experimental Psychology**, Towson University, Towson, Maryland
Present	Thesis: *Perceptions of Harm Mediate Multiple Emotional Responses and Moral Judgment*
	Co-Advisors: Dr. Jessica Stansbury & Dr. Geoffrey Munro
	GPA: 3.92
B.A. 2014	**Psychology**, Lincoln Christian University, Lincoln, Illinois
	Cum Laude
	Honors Program
	GPA: 3.65

Manuscripts:

Leigh, A. O., Stansbury, J. A., Munro, G. D., & McGinley, J. J. (2018). *To push or not to push? Actions, omissions, and their emotional responses in modified moral dilemmas.* Manuscript in preparation.

Leigh, A. O., Stansbury, J. A., Munro, G. D., & McGinley, J. J. (2018). *Perceptions of harm mediate the emotion-morality link*. Manuscript in preparation.

Presentations:

Symposium Presentations

Leigh, A. O., Stansbury, J. A., Munro, G. D., & McGinley, J. J. (March, 2018). *To Push or Not to Push? Responses in Moral Dilemmas Reveal Aversion to Harmful Actions Rather than Moral Preferences*. Single paper session presented at the annual convention of the Society for Personality and Social Psychology, Atlanta, GA.

Posters

Leigh, A. O., Stansbury, J. A., Munro, G. D., & McGinley, J. J. (April, 2018). *Feeling Partisan: Empathy (or lack thereof) Predicts Political Affiliation and Moral Judgment*. Poster presented at the conference for the Towson University Psychology Graduate Student Association, Towson, MD.

Sher, N., **Leigh, A. O.** (April, 2018). *The Moral Concerns of Whistleblowers*. Poster presented at the conference for the Towson University Psychology Graduate Student Association, Towson, MD.

De Andrade, F., Jackson, D., & **Leigh, A. O.** (April, 2018). *"I Feel You:" Intellectual Humility and Physiological Reactions to Counterattitudinal Views about Immigration*. Poster presented at the conference for the Towson University Psychology Graduate Student Association, Towson, MD.

Leigh, A. O., Stansbury, J. A., Munro, G. D., & McGinley, J. J. (March, 2018). *Emotion and "Simple" Morality: Avoiding and Condemning Negative Immediate Outcomes*. Poster presented at the Justice and Morality Pre-Conference at the annual convention of the Society for Personality and Social Psychology, Atlanta, GA.

Kopin, A. & **Leigh, A. O.**, Stansbury, J. A., & Munro, G. D. (March, 2018). *Moral Judgments in Sacrificial Dilemmas: The Avoidance of Negative Immediate Outcomes*. Poster presented at the annual convention of the Eastern Psychological Association, Philadelphia, PA.

Chen, B. & **Leigh, A. O.** (March, 2018). *Emotion Regulation Difficulties and Moral Judgment*. Poster presented at the annual convention of the Eastern Psychological Association, Philadelphia, PA.

Leigh, A. O., St. Pierre, M. E., Earnest, D. R., Munro, G. D., & Stansbury, J. A. (May, 2017). *The Angry Gamer: The Relationship between in-Game Difficulty Level and Negative Affect in a Violent Video Game*. Poster presented at the annual convention of the Association for Psychological Science, Boston, MA.

Talks

Leigh, A. O. (April, 2016). *Emotional Judges: The Role of Emotion in Moral Judgment*. Presentation at the Three Minute Thesis Competition at Towson University. Towson, MD.

Leigh, A. O. (April, 2016). *How to Navigate your Undergraduate Experience and What to do After You Graduate: A Graduate Student's Perspective*. Presentation accepted for Towson University's Psychology Department Conference. Towson, MD.

Leigh, A. O. & Myers, N. S. (November, 2017). *Attitudes of Towson University Graduate Assistants*. Presentation of survey results for Towson University's Graduate Student Association, Dean of Graduate Studies, and Provost. Towson, MD.

Leigh, A. O., Stansbury, J. A., Earnest, D. R. (October, 2017). *Improving Student Engagement and Learning via Small Group Analysis*. Invited teaching talk for Towson University's Department of Mathematics. Towson, MD.

Internal Funding and Grants:

2017 (Fall)	Travel Grant ($500) Graduate Student Association, Towson University
	Research Grant ($500) Graduate Student Association, Towson University

2017 (Spring)	Technology Grant ($1,000)- Using Virtual Reality Environments to Study Moral Judgment
	    Department of Psychology, Towson University
	    Research Coordinator

	Research Grant ($500) Graduate Student Association, Towson University
	Travel Grant ($500) Graduate Student Association, Towson University

Research Experience:

2016- Present	*Lab Manager & Research Assistant*, Teaching and Gaming Lab, Towson University
2016 Maryland	*Qualitative Research Assistant*, Baltimore Research, Baltimore,
2014-15 Illinois	*Intern & Research Assistant*, Watchfire Signs Inc., Danville,

Assistantships:

2017 (Fall) University	*Teaching Assistant*, Research Methods in Psychology, Towson
2017 (Spring) University	*Teaching Assistant*, Research Methods in Psychology, Towson
2017-Present University	*Graduate Assistant*, Office of Graduate Studies, Towson

Organizations and Committees:

2017- Present	*Co-President*, Psychology Graduate Student Association, Towson University
	Graduate Student Representative, Graduate Studies Committee, Towson University
	Graduate Student Reviewer, Graduate Research Awards Committee, Towson University
	Graduate Student Representative, College of Liberal Arts Curriculum Committee, Towson University
	Advisory Board Member, Graduate Assistant Advisory Committee, Towson University
	Advisory Board Member, College of Liberal Arts Student Advisory Panel, Towson University
2016-2017	*Towson University Representative*, Maryland Psychological Association for Graduate Students (MPAGS)
	Undergraduate Mentor, MPAGS