MORAL VIOLATIONS IN GROUPS: HOW GROUP RELATIONSHIPS REGULATE

INDIVIDUAL MORALITY

by

Erin Cowart, B.S.

A thesis submitted to the Graduate Council of
Texas State University in partial fulfillment
of the requirements for the degree of
Master of Arts
with a Major in Psychological Research
May 2019

Committee Members:

      Roque Mendez, Chair

      Yueqin "Jean" Hu

      Kristen Tooley

      Jennifer Clegg

FAIR USE AND AUTHOR'S PERMISSION STATEMENT

Fair Use

Duplication Permission

DEDICATION

To my partner in life, Mike, for his endless support and patience, and to Rorschach and Exner, my feline companions through many long nights. Thank you for your love and for only eating some of my notes.

TABLE OF CONTENTS

LIST OF ABBREVIATIONS

Abbreviation	Description
MFT	Moral Foundations Theory
RRT	Relationship Regulation Theory

ABSTRACT

This study assessed the underlying dynamics of group relationships and individual moral beliefs. Sociorelational contexts, based on relationship regulation theory (Rai & Fiske, 2011), in-group/out-group dynamics, and the moral foundations theory (Haidt & Graham, 2007) were investigated to expand the understanding of how social situations might influence moral judgments of unacceptable social behaviors. The researcher used an online survey, administered to 952 participants from the United States in order to address this. Results from the analyses of various 2 x 3 x 5 ANOVA models found a consistent significant main effect of group dynamic and a consistent significant interaction effect between group dynamic and the moral foundations. The effect of sociorelational context was significant within only one model. The influence of additional variables, including importance of political beliefs, religiosity, gender, age, native language, which region of the U.S. the individual lives in, and social sensitivity, are discussed. The results suggest that salient social relationships can and do influence individual judgments of morality.

1. INTRODUCTION

The rules of right and wrong, of how we should and ought to treat those around us, are governed by the rules of morality. As defined by American psychologist Elliot Turiel, the moral domain is the "prescriptive judgments of justice, rights, and welfare pertaining to how people ought to relate to each other" (Turiel, 1983, p. 3). Every day we are faced with situations that force us to make a choice of how we ought to act – we should move seats on the bus to make room for the elderly and disabled, we should not cut in line at the coffee shop, we should donate to charity, and so on. Moral principles are the glue that binds us together into a functioning society – it dictates how we interact and interconnect with those around us, providing the foundations upon which to build societies.

We know that morality is concerned with how we ought to treat each other, but is it more than that? How do culture and our relationships with others influence or even dictate the moral rules of society? The following study aims to answer these questions by critically assessing the psychological literature of morality as well as the concepts that underlie human interaction, and then testing these concepts empirically.

Defining the Moral Domain

Morality has been at the cornerstone of philosophical debate for centuries, made famous by Aristotle's Nichomachean Ethics (Aristotle, Ross, & Brown, 2009). However, concentrated psychological research into morality only began in the 1960s, when complex, hypothetical dilemmas were at the crux of moral debate. Philosophers Philippa Foot and Judith Thomson pioneered this area of research by developing the classic moral dilemmas: the Trolley Problem (Foot, 1967), and the Footbridge Problem (Thomson,

1

1985). In her essay, Foot asks readers to consider whether it is morally permissible to allow a trolley to hit (and kill) five unsuspecting individuals working on the track, or if the observer is obligated to change the course of the trolley to instead hit and kill a single unsuspecting individual on a different portion of the track (1967). Thomson's Footbridge Problem amplifies the observer's action by asking the reader to consider if they would push an innocent individual in front of a trolley to save five others (1985). These moral dilemmas provide researchers unique insight into the reasoning behind moral judgments by having individuals first make a decision and then explain their reasoning. However, in studying morality using these moral dilemmas, researchers assume that moral decisions are made rationally and logically. Further, researchers assume that the moral domain is limited to issues of justice and care (Kolhberg, 1969, 1971; Gilligan, 1982). Societal values, such as loyalty to groups, respect for authority, and purity of the body and soul, were conceptualized as personal choices and, ultimately, nonmoral concepts (Turiel, Hildebrandt, & Wainryb, 1991).

In 2001, Jonathan Haidt proposed a new theory of morality, known as the *Social Intuitionist Theory*. This theory, which was a social psychological perspective to conceptualize morality, suggests that judgments of morality are made automatically, emotionally, and irrationally as post-hoc reasoning processes (2001). Furthermore, this theory suggests that morality is influenced by social and cultural norms, a concept referred to as moral systems (Haidt, 2001). Haidt defines moral systems as the "interlocking sets of values, virtues, norms, practices, identities, institutions, technologies, and evolved psychological mechanisms that work together to suppress or regulate selfishness and make social life possible" (Haidt & Kesebir, 2010, p. 800). When

an individual, or group of individuals, threaten these moral systems, others are quick to remind the offenders about what they should and ought to do instead.

From this social intuitionist theory, Haidt and his colleagues reassessed the classic moral domain, and proposed three additions to better address morals equally important to the issues of harm and fairness. These five domains, described as the five moral foundations, are used to universally by societies develop moral rules in order to regulate social interactions (Graham & Haidt, 2012; Graham, Haidt, & Nosek, 2009c; Graham et al., 2011; Haidt, 2001, 2012; Haidt & Graham, 2007). This theory, known as the *Moral Foundations Theory* (MFT), suggests that all moral values are based on issues of being free from harm (1. Harm foundation), maintaining equality and fairness (2. Fairness foundation), loyalty to the group one belongs to (3. Ingroup foundation), respect for traditions and authority (4. Authority foundation), and reserving the purity of the body, mind, and spirit (5. Purity foundation; Graham et al., 2011). In other words, morals tend to converge on these five domains across cultures, but responses to particular violations within these domains are impacted by the level of value an individual places upon each of these domains. The study of these foundations have implicated political beliefs, religiosity, gender, age, whether or not someone is reading a moral dilemma in their native language, and which region of the U.S. an individual is from as being related to moral decisions (Graham & Haidt, 2012; Costa et al., 2014; Fiske & Rai, 2014). Even though MFT encompasses how we should and ought to treat others with an important emphasis on social relationships, it does not address how these moral issues are understood within our relationships with one another. Before we can address this question, we must first understand how we form and navigate our social world.

Relating to Others

Humans categorize themselves into social groups based on specific characteristics. Social groups that we identify with are referred to as in-groups. In-groups represent social identities, and mean that we belong to a group that shares the same characteristic. However, recognizing that we share a characteristic with a group also means recognizing that we do *not* share that same characteristic with other groups, known as the out-groups (DeLamater, Myers, & Collett, 2014; Hogg, Terry, & White, 1995; Tajfel & Turner, 1979). Forming these groups means that we also closely associate our own attitudes and behaviors as consistent with the in-group that we identify with, and inconsistent with the out-group that we do not identify with (Terry & Hogg, 1996; White, Hogg, & Terry, 2002). Thus, when we recognize an out-group, we also tend to develop negative beliefs or unfavorable comparisons about the out-group in order to further justify our own attitudes as correct (Hogg, 2013). Maintaining consistent standards of behavior, established as social norms, becomes an important part of one's personal identity within large social groups (Hechter & Opp, 2001). But how do we navigate these group relationships in order to maintain social norms?

In the early nineties, anthropologist Alan Fiske proposed a unifying theory of social relationships (Fiske, 1991, 1992). His *Relational Models Theory* suggests that individuals in all societies understand and navigate social relationships according to four relational mental models: communal sharing, authority ranking, equality matching, and market pricing (Fiske, 1991, 1992, 2000; Fiske & Haslam, 2005). In the communal sharing model, our relationship with others is built upon a common bond that results in unconditional care and support of one another. The authority ranking model is built upon

linear hierarchies, such that no two individuals are of equal status. In contrast, the equality matching model involves equal reciprocity in relationships, resulting in strict adherence to maintaining balance and fairness between individuals. Finally, the use of complex ratios and rates to compare non-comparable items and situations using a common scale (e.g., trading money for food, or sentencing a murderer to jail) makes up the foundation of the market pricing model.

Fiske suggests that we employ these models both individually and in varying combinations to navigate simple and complex social situations. The relational models theory not only addresses the nuances of different social relationships and situations, but also the innate want and need humans have to sustain, maintain, and create these types of relationships. Ultimately, Fiske suggests that we seek out these relationships with others, that we create new relationships based on these models, and that we expect others to also adhere to these models (Fiske, 1991). Importantly, Fiske also suggested that we make our moral judgments using these models (Fiske, 1991).

With this important implication for understanding morality, researchers Tage Rai and Alan Fiske merge the *Relational Models Theory* with Haidt's *Social Intuitionist Theory* of morality to formulate a new theory of morality, known as the *Relationship Regulation Theory* (RRT; Rai & Fiske, 2011). RRT suggests that our moral judgments are embedded in how we organize and navigate our social relationships. Building upon Fiske's original relational models theory, Rai and Fiske suggest that there are four corresponding fundamental moral motives that individuals employ to make moral judgments: unity (i.e., communal sharing), hierarchy (i.e., authority ranking), equality (i.e., equality matching), and proportionality (i.e., market pricing).

The crux of this theory states that individuals are motivated to maintain and uphold these relational models within moral situations (Rai & Fiske, 2011). For instance, those utilizing the unity model are morally motivated to care for, protect, and support those that they share the unity-based relationship with. If a group member is harmed or threatened, the entire group feels a moral responsibility to care for the individual or respond to that threat. Similar to a hive, a threat to one is a threat to all, and caring for one member is caring for the entire group. Individuals utilizing the hierarchy model are morally motivated to create and maintain the established social rankings of those that they share the hierarchy-based relationship with. If a group member rebels against his or her superiors, then the group is morally obligated to punish them for their disrespect. For instance, if a new recruit is disrespectful to a drill sergeant, then the drill sergeant feels morally motivated to discipline the new recruit in order to maintain the hierarchical relationship that should be in place.

Importantly, RRT predicts that moral judgments of situations are dependent on the social context, which is the basis of more recent research. In 2016, Simpson, Laham, and Fiske examined how these relational contexts influence our decisions of moral violations within dyads. More specifically, they analyzed how RRT was related to MFT. Although their results were somewhat inconclusive across the five moral foundations, they ultimately concluded that the results were strong enough to suggest that moral judgments are dependent on the larger, sociorelational context. They state, "To understand the nature of moral motives and actions, we must appreciate that social relationships are rarely isolated from each other; what is right or wrong depends not only on the [moral motives] coordinating the dyad, but how that dyad is embedded in a larger

configuration of relationships" (Simpson et al., 2016, p.607). In order to better understand how individual morality differs within social situations, this research needs to be continued.

The Current Study

The purpose of the current study was to expand on the findings from Simpson et al. (2016) by conducting a detailed examination of how individual judgments of moral wrongness within social situations (hereafter, "violations") differ within distinct sociorelational contexts, within various group dynamics, and within the five moral foundations proposed by MFT. This was addressed by specifically asking how unacceptable is a moral violation within various social contexts? Only the unity and hierarchy models were examined in this study since previous research showed these models as having the most influence. Three levels of in-group/out-group dynamics were examined: the individual alongside other group members, the individual observing other group members, and the individual observing non-group members (hereafter, "individual," "group," and "stranger," respectively). Four main hypotheses were developed:

Hypothesis 1

How unacceptable a violation is will differ between the unity and hierarchy contexts, without any specific prediction for which sociorelational context would social violations be considered most unacceptable.

Hypothesis 2

How unacceptable a violation is will differ between the moral foundations depending on which sociorelational context the violation occurred in. More specifically,

7

violations within the harm and ingroup foundations will be considered more unacceptable in the unity context, but violations of the fairness foundation will be less unacceptable. In contrast, violations within the fairness, authority, and purity foundations will be considered more unacceptable in the hierarchy context.

Hypothesis 3

How unacceptable a violation is will differ between the three group dynamics. Specifically, violations made by strangers will be considered the most unacceptable compared to the other two group dynamics. Additionally, violations made by the individual will be considered less unacceptable than violations made by the group and by strangers.

Hypothesis 4

How unacceptable a violation is will differ between group dynamics depending on which sociorelational context the violation occurred in. More specifically, violations made by strangers will be considered most unacceptable within the unity context, and, within the hierarchy context, violations made by the group will be considered most unacceptable.

In addition to these primary hypotheses, this study also sought to expand on current research by including a number of additional variables related to morality. Of particular interest was the influence of the importance of political beliefs, religiosity, gender, age, whether an individual was an English native or not, which region of the United States an individual lived in, and social sensitivity. Social sensitivity and age were merely exploratory, while all other additional variables were considered due to their previously established relationship with morality.

Hypothesis 5

The importance of political beliefs, religiosity, gender, age, whether an individual was an English native or not, which region of the United States an individual lived in, and social sensitivity should explain some of the variation observed in how unacceptable a violation is.

2. METHOD

Participants

The original sample included $n = 1,427$ participants, recruited from five sources, including Texas State University – San Marcos undergraduates taking Introduction to Psychology ($n = 314$) or Introduction to Criminal Justice ($n = 340$), as well as the university's faculty/staff members ($n = 61$). A further $n = 54$ participants were recruited online using the Social Psychology Network.com, an international survey-based website maintained by Wesleyan University. The final participants of the sample were recruited using Amazon's Mechanical Turk (MTurk) system, specifically from the United States (n = 639) and from Nigeria (n = 19).

The undergraduate students completed the survey for course credit, the faculty/staff members and Social Psychology Network.com participants completed the survey without compensation, and all MTurk participants were compensated $2.75 for their time.

From this original sample, $n = 475$ participants were excluded from analysis for: not consenting to participate ($n = 6$), leaving more than 30% of the target questions unanswered ($n = 137$), completing the survey in less than 5 minutes ($n = 13$), submitting nonsense responses to open-ended questions ($n = 3$), and failing 2+ of the 4 manipulation checks or missing 3+ of the 6 attention checks ($n = 298$). Though the researcher intended to analyze data from international participants, only $n = 18$ international participants completed the study in its entirety. Due to this small sample size, international participants could not be assessed, and were therefore excluded from the analyses.

The final sample of $n = 952$ participants was composed of Texas State University – San Marcos undergraduates taking Introduction to Psychology ($n = 187$) or Introduction to Criminal Justice ($n = 223$), the university's faculty/staff members ($n = 31$), Social Psychology Network.com participants ($n = 13$), and United States MTurk participants ($n = 498$). The ages of these participants ranged from 18 to over 70 ($M = 30.39$, $SD = 12.59$), with the median age of 27. Participants indicated their gender as female ($n = 540$, 55.7%), male ($n = 416$, 42.9%), or other/nonbinary ($n = 14$, 1.4%). The majority of participants were white/Caucasian ($n = 600$, 61.9%), with the next largest group being Hispanic/Latino/Latina ($n = 194$, 20.0%).

Recruitment

With five different sources, participants were recruited for this survey in a variety of ways. Texas State University undergraduate students accessed the survey via an online university portal that features behavioral research projects recruiting participants. Texas State University faculty/staff were recruited via email, after randomly selecting 900 faculty/staff from the university directory database. A link and Twitter announcement (the title of the study plus university affiliation) was made by the Social Psychology Network.com; participants from this source accessed the link via the main website.

A developer site, TurkPrime.com (Litman, Robinson, & Abberbock, 2016), was used to manage the project via the Amazon Mechanical Turk system. Using this developer site, eight participants were invited to participate the survey every 60 minutes, until the recruitment number was met. Participants who had already completed the survey were automatically excluded from participating in the survey again. Further, Mechanical Turk workers were only invited to participate if they lived in either the United States or in

Nigeria. U.S. workers needed to have completed a minimum of 50 HITs, with an approval rating of 80%, while Nigerian workers needed to have completed a minimum of 50 HITs, with an approval rating of 50%. After two weeks of low recruitment numbers from Nigeria, this approval rating was dropped to 1%.

Design

The current study was administered as an online experimental survey to all participants. Three variables were examined as predictors of morally unacceptable actions within social situations: sociorelational contexts (unity and hierarchy) from the *Relational Models Theory*, group dynamics (individual, group, and stranger), and the moral foundations (harm, fairness, ingroup, authority, and purity) from the *Moral Foundations Theory*.

Materials

Predictor: Sociorelational Context

To measure the influence of sociorelational context, two stories were developed by the researcher to prime participants. These stories each described a hypothetical community based on either the unity context or the hierarchy context, and were equivalent in style and length. Modeled after paragraphs in previous research (Haslam & Fiske, 1992), each story asked participants to imagine that they willingly and happily lived in a community with at least 50 other people. The description of the community either depicted the unity context (e.g., "… share a common bond that keeps you tightly knit.") or the hierarchy context (e.g., "…are ranked in social order such that no one is at the same level.").

Predictor: Group Dynamics

Similar to the sociorelational context stories, we developed three brief scenarios to prime for group dynamic. These scenarios, equivalent in style and length, each described a hypothetical social situation based within the story of the sociorelational context. The scenario primed participants by asking them to imagine committing a social, moral violation against the community with some of their fellow group members ("Individual"), observing other group members committing the violation ("Group"), or observing non-group members, visitors to the community, committing the violation ("Stranger"). The scenario concluded that the rest of the community became aware of the violation after it occurred.

Predictor: Moral foundations and violation statements. Social, moral violation statements were used to measure the moral foundations (harm, fairness, ingroup, authority, and purity). These violation statements were adapted from the Moral Foundations Sacredness Scale (4 items; Graham & Haidt, 2012) and from an earlier version of the same scale: the Taboo Trade-Off Measure (1 item; Graham, Haidt, & Noseck, 2009a). For each moral foundation, five violation statements were adapted (e.g., "…take turns kicking a dog in the head, hard.") for a total of twenty-five violation statements. Further, one set of violation statements, consisting of twenty-five statements, was developed for each of the group dynamics being measured, for a total of seventy-five equivalent violation statements. This was accomplished by altering the instigators of the action (e.g., Individual = "We take turns kicking a dog in the head, hard," Group = "These community members take turns kicking a dog in the head, hard," Stranger = "These visitors take turns kicking a dog in the head, hard.").

The basis of the violation statements, the Moral Foundations Sacredness Scale, consists of twenty total items with four items per moral foundation. This scale has an low reliability, with an average Cronbach's $\propto$ = 0.64 (Graham & Haidt, 2012). The Taboo-Trade Off Measure had similar Cronbach's alphas: harm = 0.69, fairness = 0.69, ingroup = 0.69, authority = 0.67, and purity = 0.58 (Graham, Haidt, & Nosek, 2009c). For this reason, we included the additional fifth item from the Taboo Trade-Off Measure to base the violation statements on in hopes of raising the overall reliability (Graham, Haidt, & Noseck, 2009a).

Criterion: Moral Judgment of Social, Moral Violations

To measure judgments of moral wrongness for certain actions within social situations, participants rated how unacceptable the violation statements were using a seven-point Likert scale (1 = "Completely acceptable," 7 = "Completely unacceptable").

Other Constructs Under Examination

Moral foundations baseline. A second measure of the moral foundations, the Moral Judgments Scale (Graham, Haidt, & Noseck, 2009b), was included to act as a baseline comparison for the moral foundations measured by the violation statements. The Moral Judgments Scale consists of twenty total items with four items per moral foundation (e.g., "If I saw a mother slapping her child, I would be outraged."). Participants were asked to rate how much they agreed or disagreed with the statement using a six-point Likert scale (1 = "Strongly disagree," 6 = "Strongly agree"). The Cronbach's alphas for the foundation subscales were 0.50 (harm), 0.39 (fairness), 0.24 (ingroup), 0.64 (authority), and 0.74 (purity) (Graham, Haidt, & Nosek, 2009c).

Importance of political beliefs. We developed three statements to measure the strength of importance of political beliefs to participants (e.g., "It is important that my family shares the same political beliefs as I do;" "My political beliefs are important to me."). Participants were asked to rate these statements using a five-point Likert scale (1 = "Strongly disagree," 5 = "Strongly agree").

Religiosity. Three statements were used to measure the strength of participants' religiosity. Two statements were borrowed from previous research on religiosity (e.g., "I believe in a divine being who is involved in my life;" Willard & Norenzayan, 2017), while the third statement was researcher-created (i.e., "My religious/spiritual beliefs are an important part of my life."). Participants were asked to rate these statements using a five-point Likert scale (1 = "Strongly disagree," 5 = "Strongly agree").

Gender. All participants were given four options to indicate their gender: Male, Female, Nonbinary/Gender fluid, or Other.

Age. All participants were asked to indicate their age, which was assessed by year starting from Under 18 and ending with Over 70.

English native. Participants were asked to answer Yes or No to indicate whether English was their native language (hereafter "English native"). This concept was clarified by including the following statement, "You've been exposed to it since birth, and did not learn another language before English."

U.S. region. United States participants were asked to indicate which region of the country they had spent the most years of their life living in (hereafter "U.S. region"). Participants selected from the Midwest (IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI), the Northeast (CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT) the Southeast

(AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, VA, WV), the Southwest (AZ, NM, OK, TX), and the West (AK, CA, CO, HI, ID, MT, NV, OR, UT, WA, WY).

Social sensitivity. To measure social sensitivity, participants were asked to complete a shortened version of the Self-Report Measure of Social Sensitivity (Chen et al., 2018). This scale asked participants to read eight statements about personal social opinions (e.g., "I like to know what other people think of me."), and to indicate how true each statement was for them using a 5-point Likert scale (1 = "Not true all," 5 = "Always true").

Biographical Information Questions

Six additional biographical information questions were included in order to better understand the peoples participating in this study. These included questions about ethnicity, political affiliation, religious affiliation, working status, living environment (i.e., rural, urban, suburban), and highest level of education completed. Participants from Texas State University were asked three additional biographical questions related to their role at the university and their area of study. Participants recruited from the Social Psychology Network website had one additional question asking for their current country of residence.

Manipulation Checks

We developed four manipulation check questions to ensure that participants were carefully reading and understanding the sociorelational context stories as well as the group dynamic scenarios. For the sociorelational context story, the question asked participants to identify the key relational aspect of the story (e.g., "You all share a common bond, which results in a community built upon unconditional trust, care, and

support"). For the group dynamic scenarios, the participants were asked to identify the instigators of the actions (e.g., "Myself and other community members," vs. "Several other community members," vs. "Visitors to the community").

Attention Checks

Due to the content-heavy nature of the survey, six attention checks were developed to ensure that participants were carefully reading instructions. Five of the attention checks were simple statements asking participants to select a particular answer (e.g., "Please select the choice 'Somewhat agree' for this statement."). The sixth, instructional attention check was adapted from a study conducted by Oppenheimer, Mayvis, and Davidenko (2009). This instructional paragraph, balanced to have the same word length as the sociorelational context stories, asked participants not to answer the next immediate question, which asked about the types of sports they participated in regularly.

Follow-Up Questions

Four follow-up questions ended the survey, giving participants the opportunity to provide open-ended feedback to the researcher, specifically regarding any discomfort or confusion they might have experienced while taking the survey.

Procedure

All participants completed the survey online via a Qualtrics.com link and followed the same general procedure. The survey took $25 - 35$ minutes to complete, and consisted of two parts. Part 1 involved the informed consent process, one of the sociorelational context stories, all three of the group dynamic scenarios with the seventy-five corresponding violation statements, and the baseline measure of the moral

foundations. Part 2 included the instructional attention check, the measures for importance of political beliefs, religiosity, and social sensitivity, as well as the biographical information questions and the follow-up questions.

Part 1

After completing the informed consent process, half of the participants were first asked to read one of the two the sociorelational context stories. Next, participants were randomly presented with one of the three group dynamic scenarios and rated how unacceptable each of the corresponding twenty-five action statements were. The second and third group dynamic scenarios, each with their corresponding twenty-five action statements, were randomly presented next. Following this, participants completed the baseline measure of the moral foundations.

The other half of participants were asked to complete the baseline measure of the moral foundations first, before reading one of the two sociorelational context stories. As with the first group, participants were then randomly presented with all three group dynamic scenarios, each matched with their corresponding twenty-five action statements.

A manipulation check question was included immediately after the sociorelational context story and immediately after each group dynamic scenario, for a total of four manipulation check questions. One simple attention check was included within each of the twenty-five action statements, as well as within the baseline moral foundations measure, for a total of four attention check questions. Excluding the manipulation check questions, all other items/statements were presented randomly within the appropriate scales.

Part 2

After completing the Part 1, participants were presented with the instructional attention check. Following this were the measures for importance of political beliefs, religiosity, and social sensitivity. These items were presented randomly within the appropriate scales. Participants received the biographical information questions next, which also included our measures for gender, age, English native, and U.S. region. The questions within this section were not randomized, but, when appropriate, the answer choices were (e.g., the answer choices for age were not randomized, but the answer choices for gender were). The survey concluded with the follow-up questions, and then the debriefing information.

3. RESULTS

Preliminary Analysis

Moral Foundations and Violation Statements

The moral foundations and violation statements were analyzed for increased reliability prior to averaging the subscales for later analysis. The reliability of the ingroup and purity foundation subscales each increased from including the additional Item 5 from the earlier version of the base scale (average Cronbach's $\alpha = 0.84$ and 0.79, respectively). Similarly, the authority foundation subscale also showed an increase in reliability (average Cronbach's $\alpha = 0.74$). Removing Item 4 from the authority subscale would have increased the reliability even more (average Cronbach's $\alpha = 0.77$); however, since the reliability for all five items was within acceptable means, Item 4 was retained. For the analyses of our models, the averages of these items ($n = 5$, Items $1 - 5$) were each taken for the ingroup, authority, and purity foundation subscales.

In contrast, the reliability of the harm foundation decreased when the additional Item 5 was included (average Cronbach's $\alpha = 0.65$). Therefore, keeping the original four items from the Moral Foundations Sacredness Scale gave the harm foundation subscale the highest reliability (average Cronbach's $\alpha = 0.82$). For the analyses of our models, the average of these items ($n = 4$, Items $1 - 4$) was taken for the harm foundation subscale.

The reliability of the fairness foundation subscale increased when the additional Item 5 was included. However, the analysis revealed that including Item 2, from the Moral Foundations Sacredness Scale, lowered the reliability of the subscale. Removing this Item 2 from the fairness foundation raised the reliability of the subscale to acceptable means (average Cronbach's $\alpha = 0.72$). For analyses of our models, the average of these

items ($n = 4$, Items 1, 3, 4, and 5) was taken for the fairness foundation subscale. Table A1 of Appendix A shows the reliability results for each subscale, and how the reliability differs by removing specific items.

Group Dynamic: Within and Between

Group dynamic was measured twice as both a within-subjects factor and between-subjects factor for different models. As a within-factor, group dynamics was measured by taking the average of each moral foundation, based on the reliability analyses previous, for each group dynamic scenario. This resulted in fifteen averages per participant, five averages for each of the moral foundations within each of the three group dynamic scenarios. The descriptive statistics for these variables are shown in Table A2 of Appendix A.

As a between-factor, group dynamic was measured by taking the average of the moral foundations for only the first group dynamic scenario the participant was presented with. This resulted in five averages per participant, one for each of the moral foundations, based within the group dynamic scenario the participant read immediately following the sociorelational context story. The descriptive statistics for these variables are shown in Table A3 of Appendix A.

Moral Foundations Baseline

The Moral Judgments Scale was used to measure baseline moral foundations. Each of the moral foundations (harm, fairness, ingroup, authority, and purity) consisted of 4 items, and had relatively low reliability. As was consistent with previous research, only the purity foundation ($\alpha = 0.73$) had an acceptable Cronbach's alpha, while harm ($\alpha = 0.53$), fairness ($\alpha = 0.39$), ingroup ($\alpha = 0.18$), and authority ($\alpha = 0.67$) foundations all

had low, unacceptable reliabilities. Removing specific items from each of these subscales did not raise the reliability above $\alpha = 0.70$. For this reason, we removed the moral foundations baseline from the analyses of our models.

Importance of Political Beliefs

Three items were developed to measure the importance of political beliefs. The Cronbach's alpha for these three items was 0.23, which was unacceptably low. Therefore, only the one item, ("My political beliefs are important to me.") was included in the analyses of our models.

Religiosity

Three items were used to measure the strength of participants' religious beliefs. The Cronbach's alpha for these three items was 0.92. Therefore, the average of these three items was used in the analyses of our models.

Social Sensitivity

Eight items, from the Self-Report Measure of Social Sensitivity, were used to measure social sensitivity. The Cronbach's alpha for these items was 0.95. Therefore, the average of these eight items was used in the analyses of our models.

The means and other descriptive statistics for these additional variables can be found in Tables A4 and A5 of Appendix A.

<div align="center">

Model Design

</div>

Four 2 x 3 x 5 mixed factorial models were developed to test the hypotheses: Model A, Model B, Model B2, and Model C.

Model A assessed whether the unacceptableness of a violation (Y) could be predicted from the sociorelational context (2; between-subjects factor: A_1 = Unity

context, A_2 = Hierarchy context), the group dynamic (3; within-subjects factor: B_1 = Individual acting with group members, or "Individual," B_2 = Individual observing group members, or "Group," B_3 = Individual observing non-group members, or "Stranger"), and the moral foundations (5; within-subjects factor: C_1 = Harm, C_2 = Fairness, C_3 = Ingroup, C_4 = Authority, C_5 = Purity) using a 2 x 3 x 5 mixed factorial ANOVA.

Model B re-assessed Model A with our additional variables (importance of political beliefs, religiosity, gender, age, English native, U.S. region, and social sensitivity) as covariates using a 2 x 3 x 5 mixed factorial ANCOVA. This model, however, violated assumptions of independence between the predictor variables and covariates. Instead, Model A was re-assessed seven times with each of the additional variables individually included as a new, independent variable. Once the individual influence of each additional variable was assessed, Model B2 re-examined the collective influence of all of the variables of interest.

Model C again re-assessed Model A, but with group dynamic as a between-subjects factor instead of a within-subjects factor (3; between-subjects factor: B_1 = Individual, B_2 = Group, B_3 = Stranger) using a 2 x 3 x 5 mixed factorial ANOVA.

Model A

A 2 x 3 x 5 mixed factorial ANOVA was performed using SPSS GLM to assess whether the unacceptableness of a social violation (Y) could be predicted from the sociorelational context (between-subjects: A_1 = Unity context, A_2 = Hierarchy context), the group dynamics (within-subjects: B_1 = Individual, B_2 = Group, B_3 = Stranger), and the moral foundations (within-subjects: C_1 = Harm, C_2 = Fairness, C_3 = Ingroup, C_4 = Authority, C_5 = Purity). The two-way interactions between sociorelational context and

group dynamics, sociorelational context and moral foundations, and group dynamics and moral foundations were also assessed as predictors. The three-way interaction between sociorelational context, group dynamics, and moral foundations was not assessed since it was non-significant and irrelevant to our hypotheses.

Preliminary data screening was done to assess whether the assumptions for ANOVA were seriously violated. Examination of histograms of scores on the outcome variable by moral foundation showed that the unacceptableness of violation scores were negatively skewed within the harm and fairness foundations; however, no data transformation was applied. The Levene's Test of Equality of Error Variances indicated no significant violation of the homogeneity of variance assumption. The Mauchly's Test of Sphericity indicated that the assumption of sphericity had been violated for group dynamic ($\chi^2(2) = 98.9$, $p < 0.001$), for moral foundations ($\chi^2(9) = 1937.7$, $p < 0.001$), and for the interaction between group dynamic and moral foundations ($\chi^2(35) = 1825.1$, $p < 0.001$). Degrees of freedom were correct using Greenhouse-Geisser estimates of sphericity for group dynamic ($\varepsilon = 0.91$), for moral foundations ($\varepsilon = 0.53$), and for the interaction between group dynamic and moral foundations ($\varepsilon = 0.60$).

Analyses revealed main effects of group dynamic, $F(1.8, 1728.9) = 54.18$, $p < 0.001$, $\eta^2_p = 0.05$, and of moral foundation, $F(2.1, 2014.1) = 1360.83$, $p < 0.001$, $\eta^2_p = 0.59$, but no main effect of sociorelational context, $F(1, 950) = 1.52$, $p = 0.22$.

Pairwise comparisons of the estimated marginal means for the group dynamic main effect showed significant differences between the three groups, all $p < 0.001$, Bonferroni-adjusted for multiple comparisons. These results, pictured in Figure B1 of Appendix B, show that violations committed by the individual were considered most

24

unacceptable, violations committed by strangers the least unacceptable, and violations committed by the group fell in between these.

Unexpectedly, a significant interaction was found between group dynamic and moral foundations, $F(4.8, 4591.4) = 79.98$, $p < 0.001$, $\eta^2_p = 0.08$, showing that how unacceptable a social, moral violation was differed between moral foundations depending on which group dynamic the violation occurred in. All other interactions were non-significant, all $F \leq 0.92$, $p \geq 0.40$.

Pairwise comparisons of the estimated marginal means of the significant interaction showed that violations committed in the fairness foundation were considered the most unacceptable for strangers in comparison to the individual ($p = 0.012$) and the group ($p = 0.003$). Within the ingroup foundation, all three group dynamics were significantly different from one another, all $p < 0.001$, showing that violations committed by the individuals were considered most unacceptable, violations committed by strangers considered least unacceptable, and violations committed by the group fell in between these. Results for the authority and purity foundations showed that violations committed by the individual and violations committed the group were significantly more unacceptable than those same violations committed by strangers, all $p < 0.001$. No differences between these group dynamics were found within the harm foundation. All reported p-values were Bonferroni-adjusted for multiple comparisons, and are depicted in Figure B2 of Appendix B.

Model B

Model A was re-assessed by including all of the additional variables as covariates. A 2 x 3 x 5 mixed factorial ANCOVA was performed using SPSS GLM to assess

whether importance of political beliefs, religiosity, gender, age, English native, U.S. region, and social sensitivity could better explain Model A. The results of these analyses showed interactions between each of these additional variables and the predictor variables, violating assumptions of independence between the predictor variables and covariates.

In order to assess the individual influence of each of these variables as they related to Model A, six 2 x 3 x 5 x 2 mixed factorial ANOVAs and one 2 x 3 x 5 x 5 mixed factorial ANOVA were performed using SPSS GLM to assess whether the unacceptableness of a social violation (Y) could be predicted from the predictor variables (between-subjects: sociorelational context $= A$; within-subjects: group dynamic $= B$; within-subjects: moral foundations $= C$) and a new variable D:

- importance of political beliefs (between-subjects: $D_1 =$ Low, $D_2 =$ High; grouped by median $= 4.00$),

- religiosity (between-subjects: $D_1 =$ Low, $D_2 =$ High; grouped by median $= 3.67$),

- gender (between-subjects: $D_1 =$ Male, $D_2 =$ Female; $n = 14$ Other/Nonbinary were excluded),

- age (between-subjects: $D_1 =$ Young, $D_2 =$ Old; grouped by median $= 27$),

- English Native (between-subjects: $D_1 =$ Native English Speaker, $D_2 =$ Non-Native English speaker),

- U.S. region (between-subjects: $D_1 =$ Midwest, $D_2 =$ Northeast, $D_3 =$ Southeast, $D_4 =$ Southwest, $D_5 =$ West), and

- social sensitivity (between-subjects: $D_1 =$ Low, $D_2 =$ High; grouped by median $= 2.75$).

As with Model A, there were no violations of assumptions, other than the Mauchly's Test of Sphericity, which indicated that the assumption of sphericity had been violated for group dynamic, for moral foundations, and for the interaction between group dynamic and moral foundations. Degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity for group dynamic, for moral foundations, and for the interaction between group dynamic and moral foundations.

Similar to the results from Model A, there was a main effect of group dynamic (all $F \geq 20.46$, $p < 0.001$, $\eta^2_p \geq 0.02$), and of moral foundations (all $F \geq 388.99$, $p < 0.001$, $\eta^2_p \geq 0.29$), as well as an interaction between group dynamic and moral foundations (all $F \geq 26.50$, $p < 0.001$, $\eta^2_p \geq 0.03$).

Significant main effects were also found for religiosity, gender, age, English native, and U.S. region, all $F \geq 10.54$, $p < 0.001$, $\eta^2_p \geq 0.02$. The results also showed significant two-way interactions between the moral foundations with importance of political beliefs, with religiosity, with age, with English native, and with U.S. region, all $F \geq 2.19$, $p \leq 0.02$, $\eta^2_p \geq 0.004$. Any three- and four-way interactions were either non-significant and/or irrelevant to the hypotheses. The specific p-values and effect sizes of each of these analyses can be found in Tables C6 – C8 of Appendix C.

Model B2

Model B2 was developed to understand the collective impact of each of the significant additional variables with the original predictors. Since the sociorelational context and social sensitivity remained non-significant in the analyses of Model B, they were removed from Model B2. A mixed factorial ANOVA was performed using SPSS

GLM to assess whether the unacceptableness of a social violation (Y) could be predicted from:

- group dynamic (3; within-subjects: A_1 = Individual, A_2 = Group, A_3 = Stranger),

- moral foundations (5; within-subjects: B_1 = Harm, B_2 = Fairness, B_3 = Ingroup, B_4 = Authority, B_5 = Purity),

- importance of political beliefs (2; between-subjects: C_1 = Low, C_2 = High),

- religiosity (2; between-subjects: D_1 = Low, D_2 = High),

- gender (2; between-subjects: E_1 = Male, E_2 = Female),

- age (2; between-subjects: F_1 = Young, F_2 = Old),

- English native (2; between-subjects: G_1 = Native English Speaker, G_2 = Non-Native English speaker), and

- U.S. region (5; between-subjects: H_1 = Midwest, H_2 = Northeast, H_3 = Southeast, H_4 = Southwest, H_5 = West).

All main effects as well as two-way interactions were assessed as predictors of the unacceptableness of a social, moral violation. All other interactions beyond two-ways were either non-significant and/or irrelevant to the hypotheses. As was previously found, preliminary data screening revealed a violation of sphericity for group dynamic ($\chi^2(2) = 82.5, p < 0.001$), for moral foundations ($\chi^2(9) = 1548.3, p < 0.001$), and for the interaction between group dynamic and moral foundations ($\chi^2(35) = 1573.6, p < 0.001$). Degrees of freedom were correct using Greenhouse-Geisser estimates of sphericity for

group dynamic ($\varepsilon = 0.91$), for moral foundations ($\varepsilon = 0.56$), and for the interaction between group dynamic and moral foundations ($\varepsilon = 0.61$).

As was found with Model A and Model B, the results showed significant main effects of group dynamic ($F(1.8, 1512.4) = 6.15$, $p = 0.003$, $\eta^2_p = 0.007$), moral foundations ($F(2.2, 1846.8) = 133.87$, $p < 0.001$, $\eta^2_p = 0.14$), and an interaction between group dynamics and moral foundations ($F(4.9, 4035.3) = 8.55$, $p < 0.001$, $\eta^2_p = 0.01$). The main effect of group dynamic and the interaction effect are pictured in Figures D3 and D4 of Appendix D. The remaining results of the Model B2 analysis are as follows, with all pairwise comparison reported p-values Bonferroni-adjusted for multiple comparisons…

Importance of Political Beliefs

No main effect of importance of political beliefs was found, $F(1, 828) < 0.001$, $p = 0.99$. Results, however, indicated a marginally significant two-way interaction between the moral foundations and importance of political beliefs, $F(2.2, 1846.8) = 2.83$, $p = 0.053$, $\eta^2_p = 0.003$. Pairwise comparisons of the estimated marginal means of this interaction showed significant differences between participants with low importance of political beliefs and high importance of political beliefs within the harm ($p = 0.003$) and fairness ($p = 0.002$) foundations. Participants with high importance of political beliefs considered violations of harm and fairness more unacceptable than participants with low importance of political beliefs. No significant differences existed between these two groups for the ingroup ($p = 0.68$), authority ($p = 0.60$), or purity ($p = 0.19$) foundations. See Figure D5 of Appendix D for a graph of these results.

Religiosity

Results indicated a main effect of religiosity, $F(1, 828) = 5.51$, $p = 0.019$, $\eta^2_p = 0.007$, as well as an interaction between the moral foundations and religiosity, $F(2.2, 1846.8) = 2.83$, $p = 0.053$, $\eta^2_p = 0.003$. Pairwise comparisons of the estimated marginal means of this interaction showed significant differences between participants with low religiosity and high religiosity for the fairness ($p = 0.052$), ingroup ($p < 0.001$), authority ($p < 0.001$), and purity ($p < 0.001$) foundations. Participants with high religiosity considered violations of fairness, ingroup, authority, and purity more unacceptable than participants with low religiosity. No significant difference existed between these two groups within the harm ($p = 0.15$) foundation. See Figure D6 of Appendix D for a graph of the interaction results.

Gender

No main effect of gender was found, $F(1, 828) = 1.09$, $p = 0.30$. A significant two-way interaction was found, however, between group dynamic and gender, $F(1.8, 1512.4) = 5.86$, $p = 0.004$, $\eta^2_p = 0.007$. Pairwise comparisons of the estimated marginal means of this interaction showed that, for both men and women, violations made by the individual were most unacceptable compared to violations made by the group or strangers. Violations committed by the individual compared to the same violations committed by the group were considered less unacceptable for men (Individual $M = 5.47$ and Group $M = 5.38$, $p \leq 0.001$) than for women (Individual $M = 5.64$ and Group $M = 5.54$, $p < 0.014$). Violations committed by strangers followed a similar pattern of being considered less unacceptable in comparison to the individual for both men (Individual $M = 5.47$ and Stranger $M = 5.35$, $p = 0.008$) and women (Individual $M = 5.64$ and Stranger

$M = 5.45$, $p < 0.001$). Women generally considering these violations more unacceptable than men. No significant difference existed between the group or strangers for both men and women ($p = 1.00$, $p = 0.065$, respectively). See Figure D7 of Appendix D for a graph of these results.

Age

The results indicated no main effect of age, $F(1, 828) = 3.30$, $p = 0.07$. A significant two-way interaction, however, was found between moral foundation and age, $F(2.2, 1846.8) = 3.28$, $p = 0.033$, $\eta^2_p = 0.004$. Pairwise comparisons of the estimated marginal means of this interaction showed significant differences between younger participants and older participants for the ingroup ($p < 0.001$), authority ($p = 0.013$), and purity ($p < 0.001$) foundations. Younger participants considered these violations more unacceptable than older participants. No significant differences existed between younger and older participants for the harm ($p = 0.83$) or fairness ($p = 0.95$) foundations. A graph of these results are pictured in Figure D8 of Appendix D.

English Native and U.S. Region

No main effects of English native, $F(1, 828) = 0.09$, $p = 0.76$, or U.S. region, $F(4, 828) = 0.41$, $p = 0.80$, were found. Similarly, no significant two-way interactions were found for either of these variables.

Model C

Model C re-assesses Model A with group dynamic as a between-subjects factors, instead of a within-subjects factor. A 2 x 3 x 5 mixed factorial ANOVA was performed using SPSS GLM to assess whether the unacceptableness of a social violation (Y) could be predicted from the sociorelational context (between-subjects: $A_1 =$ Unity context, $A_2 =$

Hierarchy context), the group dynamic (between-subjects: B_1 = Individual, B_2 = Group, B_3 = Stranger), and the moral foundations (within-subjects: C_1 = Harm, C_2 = Fairness, C_3 = Ingroup, C_4 = Authority, C_5 = Purity). All main effects, two- and three-way interactions were assessed for significance.

Preliminary data screening indicated no major violations of assumptions, with the exception of the Mauchly's Test of Sphericity, indicating that the assumption of sphericity had been violated for moral foundations ($\chi^2(9) = 1505.1$, $p < 0.001$). Degrees of freedom were correct using Greenhouse-Geisser estimates of sphericity ($\varepsilon = 0.59$).

Unlike in previous models, the analysis showed a main effect of sociorelational context, $F(1, 946) = 5.37$, $p = 0.021$, $\eta^2_p = 0.006$, revealing that violations committed within the hierarchy context were considered more unacceptable than those same violations committed within the unity context, $p = 0.021$. Figure E9 of Appendix E graphs this result.

Despite altering group dynamic to a between-subjects variable, the same significant main effects of group dynamic, $F(2, 946) = 8.51$, $p < 0.001$, $\eta^2_p = 0.018$, and of moral foundations, $F(2.4, 2242.5) = 1650.06$, $p < 0.001$, $\eta^2_p = 0.58$, were found. As with previous models, there was a significant two-way interaction between group dynamic and moral foundations, $F(4.7, 2242.5) = 9.64$, $p < 0.001$, $\eta^2_p = 0.02$. See Figures E10 and E11 of Appendix E for graphs of these results. The interaction between sociorelational context and group dynamics was approaching significance, $F(2, 946) = 2.75$, $p = 0.065$, $\eta^2_p = 0.006$, while all other interactions were non-significant, all $F \leq 1.72$, $p \geq 0.16$.

Findings Across Models

All models revealed a significant main effect of group dynamic, moral foundations, and a significant interaction between group dynamic and moral foundations. Tables F9 and F10 of Appendix F show the Bonferroni-adjusted p-values of the pairwise comparisons for the main effect of group dynamic and the interaction effect within each model.

4. DISCUSSION

The current study assessed the influence of sociorelational context, group dynamic, and the moral foundations on individual judgments of moral wrongness within social situations. Specifically explored were the unity and hierarchy sociorelational contexts, three variations of in-group/out-group dynamics, as well as the original five moral foundations. The current study also explored a number of additional factors, including the importance of political beliefs, religiosity, gender, age, whether someone was an English native or not, what region of the U.S. someone lived in, and social sensitivity. Five hypotheses were developed to answer how each of these factors influenced the moral judgments of specific social violations.

Hypotheses

Hypothesis 1

The first hypothesis predicted that how unacceptable a violation is would differ between the unity and hierarchy contexts, without any specific prediction for direction of influence. The results of Models A, B, and B2 did not support this hypothesis. The results of Model C, however, did support this hypothesis, but only just, suggesting that the sociorelational context of a situation can influence individual morality, but not as strongly as originally thought.

Hypothesis 2

The second hypothesis predicted that how unacceptable a violation is would be dependent on both the sociorelational context and the moral foundation that the social violation occurred in. The results from each of the models did not support this hypothesis. While these results consistently supported a significant influence of the moral

34

foundations, the results did not support the prediction that the influence of the moral foundations was also regulated by the sociorelational context. As with Hypothesis 1, this suggests that the sociorelational context does not strongly influence individual morality.

Hypothesis 3

The third hypothesis predicted that how unacceptable a violation is would differ between the three group dynamics. We further predicted that violations made by strangers would be considered the most unacceptable compared to the other two group dynamics, and that violations committed by the individual would be considered more acceptable compared to the other two group dynamics. While the first portion of the hypothesis was supported by the results, the specifics of direction of influence were not. Models A, B2, and C each found that violations made by the individual were considered the most unacceptable, and violations made by both the group and strangers were more acceptable. Although Model A found a significant difference between the group and stranger dynamic, Models B2 and C did not indicate a significant difference. These results suggest not only that the unacceptableness of a violation is strongly dependent on the group dynamic that the violation occurred in, but also that violations made by individuals are more unacceptable than violations made by either the group or strangers.

Hypothesis 4

The fourth hypothesis predicted that how unacceptable a violation is would be dependent on both the sociorelational context and the group dynamic the social violation occurred in. Consistent with previous hypotheses, none of the results from the analyses supported this hypothesis, suggesting that there is not strong influence of sociorelational context on individual moral judgments.

Hypothesis 5

The final hypothesis predicted that the importance of political beliefs, religiosity, gender, age, whether an individual was an English native or not, which region of the U.S. the individual lived in, and social sensitivity all explained some of the variation observed in how unacceptable a violation is. Results from Model B showed that almost each of these variables had a significant influence on the overall outcome of how unacceptable a violation was, except for social sensitivity. These results from Model B suggest, then, that the hypothesis is somewhat supported. However, analyses of the collective influences of these constructs in Model B2 revealed that only religiosity maintained both a significant main effect and interaction effect, while the other constructs merely maintained interaction effects. These results suggest that religiosity plays an important role in how unacceptable a social, moral violation is, and that the importance of political beliefs, gender, age, whether an individual was an English native or not, and which region of the U.S. the individual lived in acted as moderators, contributing marginal influences to individual morality.

Though not predicted by the aforementioned hypotheses, a significant interaction between group dynamic and moral foundation was also found from the results of each model. This strong and consistent finding suggests that how unacceptable a violation is depends on both the group dynamic and the moral foundation that the social violation occurred in.

Summary

This study found some evidence to suggest that sociorelational context is marginally important when making moral judgments of social situations. However, the

study ultimately supported that sociorelational context is mostly negligible in these situations. In contrast, this study provides strong evidence that the more immediate, group dynamics are highly influential when making moral judgments of social situations. It is believed that the process through which participants were primed for both the sociorelational context and the group dynamic influenced how morally wrong participants considered the social violations. The influence of the sociorelational context was not strong enough to persistent across all three group dynamics, and only influenced the first dynamic that was seen immediately following the context story. In other words, these results suggest that the more salient group relationship, the group dynamic since it followed after the sociorelational context, influences moral judgments. Therefore, salient awareness of the social situation and the interlocking relationships within a social situation influences moral judgments if an inappropriate action is taken against the group one belongs to.

This study also consistently found that inappropriate actions committed by the individual alongside other group members were considered more unacceptable than those same actions taken by group members or non-group members. The original predictions were based on the assumption that individuals would be more forgiving of their own moral wrongness. Instead, we found that individuals considered their own actions as the most unacceptable and were more forgiving of others, regardless of their status as another group member or as a non-group member. This suggests that individuals tend to judge their own immoral actions more harshly in comparison to others who are committing the exact same actions. It might also be that individuals hold themselves to a higher, personal moral standard than they do for others.

One of the more interesting, but unexpected, findings of this study was the interaction between the group dynamic and moral foundations. The general trends from the models showed that, regardless of group dynamic, violations harm were considered the most unacceptable. This suggests that individuals consider any type of harm, no matter the social context or the perpetrator, to be morally wrong. Violations of fairness were generally considered most unacceptable when made by strangers, suggesting that individuals are more forgiving of group members, including themselves, than of non-group members when someone is being unfair.

The general trends for the ingroup foundation showed some of the most extreme differences between the group dynamics, suggesting that violations of group loyalty, while still not as morally wrong as harm or fairness violations, play an important role in making judgments about unacceptable social situations. More specifically, individuals considered their own actions against the group as most unacceptable, and, in contrast, were most forgiving of strangers committing the same violations. Ingroup violations made by just group members were still considered more unacceptable than strangers but more acceptable than individuals. This suggests that individuals who are a part of a group are held to higher moral standards when maintaining group loyalty than non-group members; individuals, especially, are expected to act consistently with the group, not against it, in comparison to other members.

As with the ingroup foundation, violations of authority and purity were considered more acceptable than violations of harm or fairness. However, these violations were considered more unacceptable than ingroup violations, authority violations more so than purity violations. Both of these foundations followed a similar

trend, wherein the actions by the individual were considered most unacceptable and actions by the group or strangers were considered more acceptable. This suggests that individuals consider their own actions within these foundations, such as being disrespectful to authority figures or violating the sanctity of life, as most unacceptable and hold other group and non-group members at a lower, moral standard. Taken as a whole, this interaction between the group dynamic and the moral foundations suggests that the judgments of moral actions differ based on both the type of immoral action as well as the group situation it occurred in.

Finally, this study found that a number of additional variables act as moderators, explaining some of how social situations influence moral judgments. Each of these variables (the importance of political beliefs, religiosity, gender, age, whether an individual was an English native or not, and which region of the U.S. the individual lived in) were significant predictors when addressed singularly. As a collective, however, only religiosity maintained this significant influence as a predictor, suggesting that level of religiosity plays an important role in how individuals make moral judgments about social violations. Taken as a whole, these inconsistent findings suggest that each of the variables in question contribute some piece to our understanding of judgments of moral wrongness within social situations. Further, it is also implied that there is an unknown combination of these variables within a comprehensive model that best explains judgments of moral wrongness within social situations.

Implications

Our results showed consistent significant effects of the moral foundations, thus supporting Haidt's *Moral Foundations Theory* that individuals tend to group their moral

beliefs on five specific moral domains. Even though this result was consistently significant, there was not much difference in the general trends between the individual domains. Violations of harm and fairness were typically rated as most unacceptable, while violations of ingroup, authority, and purity were rated as more acceptable. This trend, however, closely resembles trends of liberal individuals found in previous research, which analyzed the moral foundations based on liberal versus conservative political viewpoints (Haidt & Graham, 2007). The current study did not measure political beliefs in this way, but rather measured the strength of an individual's beliefs. Therefore, the influence of MFT might be inexact since political beliefs were not assessed and controlled for as it has been in previous research.

The methods in which we relate to and understand one another, specifically in-group/out-group dynamics and *Relationship Regulation Theory* (Rai & Fiske, 2011), played key roles in the results of this study. The influence of in-group/out-group dynamic remained consistent throughout the study, thus strongly supporting in-group/out-group theory. In comparison, sociorelational context was significant only once, thus only somewhat supporting RRT. Previous research by Simpson et al. (2016) found more consistent influences of the unity and hierarchy contexts than the current study. We, therefore, believe that it is the salient group relationship, be it the in-group-/out-group dynamic or the sociorelational context, which has the greater influence on the wrongness of a moral violation. Ultimately, the results of this research study imply that individual moral beliefs are influenced by the social contexts. However, we caution at the strength of this implication. Though consistent significant effects were found throughout the

study, the sizes of these effects were very small. It is possible that these significant effects were inflated due to the large sample size of this study.

Limitations and Future Directions

Though the current study has attempted to prevent, or mitigate, as many limitations as possible, unforeseen complications still arose. Probably the most prominent issues resulting from this study were the lack of a concise model to explain how the additional variables influenced judgments of moral wrongness within social situations, and the exceedingly small effect sizes. It was concluded that each of the variables explored, excluding social sensitivity, had some part in the overall understanding of judgments of moral wrongness. However, combinations of which of these variables best explain the outcome as well as their individual contribution to the outcome needs to be determined. Further, political beliefs were measured in terms of strength rather than in terms of worldview. Rather than assessing strength or specific political beliefs, especially in the current political climate, a fundamentalist scale might be a better assessment of worldview. Therefore, future research should explore a fundamentalist scale, should explore power analyses in order to determine the importance of each of the additional variables, and should also compare and refine various models in order to assess which of the additional variables best explains how we understand moral wrongness within social situations.

Another issue we encountered was the lack of international, specifically Nigerian, participants recruited for this study. We set out to recruit equal numbers of Nigerian and U.S. citizens. The use of Amazon's Mechanical Turk system provided the researcher access to a number of U.S. participants that would have otherwise been inaccessible.

41

However, using the Mechanical Turk system to access Nigerian participants ultimately fell through. To the best of our knowledge, Amazon does not keep or make available records describing their Mechanical Turk workers. It has been estimated, however, that the majority of Mechanical Turk workers hail from either the United States or from India, thought to be largely in part because of the automatic payment system these individuals can set up between their Turk account and their bank account (Moss & Litman, 2018). In contrast, all other workers receive Mechanical Turk payments as an Amazon gift card, which complicates payment and reduces overall incentive to join the Turk system. Amazon's claim to provide access to a worldwide survey group is therefore misleading in that limited numbers of workers are available outside of the United States and India. With the important universal, cultural implication made by both MFT and RRT, future research should examine these constructs cross culturally through means other than Amazon Mechanical Turk.

The lengthy, text-heavy nature of the survey procedure also proved to be an issue. Participant fatigue and the large amount of information participants were expected to understand resulted confusion for a number of participants. Future researchers should explore other methods for measuring sociorelational contexts and group dynamics. More specifically, an easily administered and validated measure and/or prime of sociorelational context should be developed. Understanding how individuals navigate the various social relationships they encounter is an important cornerstone of social psychology; however, research into the various sociorelational contexts remains stilted due to the lack of available materials.

5. CONCLUSION

The current study provided important foundational work into the overlap of relationship regulation theory, in-group/out-group dynamics, and moral foundations theory by expanding on findings from recent research. It also provided a starting point for future research into aspects that might strengthen our understanding of how these variables are related. While a number of the hypotheses remain to be fully answered, this study provided compelling evidence that social relationships can and do influence individual morality.

Appendix A: Preliminary Results Tables

Table A1

Cronbach's Alpha: Reliability Analysis of the Moral Foundations Subscales

	Subscale	Group Dynamic		
		Individual	*Group*	*Stranger*
	Harm	0.640	0.671	0.633
∝ if item is deleted	*Item 1*	*0.548*	*0.579*	*0.537*
	Item 2	*0.508*	*0.556*	*0.500*
	Item 3	*0.549*	*0.572*	*0.541*
	Item 4	*0.538*	*0.588*	*0.552*
	Item 5	***0.822***	***0.828***	***0.798***
	Fairness	0.640	0.660	0.636
∝ if item is deleted	*Item 1*	*0.546*	*0.583*	*0.541*
	Item 2	***0.717***	***0.741***	***0.706***
	Item 3	*0.545*	*0.573*	*0.560*
	Item 4	*0.556*	*0.578*	*0.571*
	Item 5	*0.569*	*0.568*	*0.548*
	Ingroup	**0.836**	**0.852**	**0.827**
∝ if item is deleted	*Item 1*	*0.780*	*0.800*	*0.767*
	Item 2	*0.817*	*0.831*	*0.807*
	Item 3	*0.803*	*0.828*	*0.805*
	Item 4	*0.803*	*0.823*	*0.790*
	Item 5	*0.809*	*0.824*	*0.794*
	Authority	**0.739**	**0.752**	**0.718**
∝ if item is deleted	*Item 1*	*0.650*	*0.666*	*0.625*
	Item 2	*0.677*	*0.690*	*0.659*
	Item 3	*0.716*	*0.737*	*0.701*
	Item 4	***0.781***	***0.782***	***0.738***
	Item 5	*0.647*	*0.660*	*0.625*
	Purity	**0.783**	**0.800**	**0.789**
∝ if item is deleted	*Item 1*	*0.723*	*0.745*	*0.722*
	Item 2	*0.715*	*0.746*	*0.722*
	Item 3	*0.763*	*0.774*	*0.761*
	Item 4	*0.721*	*0.740*	*0.728*
	Item 5	*0.780*	*0.796*	***0.798***

Note: Cronbach's alpha is listed for each subscale, by Group Dynamic, as well as the subscale's reliability if an item were deleted; Items 1 – 4 within each subscale represents the 4 original items from the Moral Foundations Sacredness Scale. Item 5 for each subscale represents the item borrowed from the Taboo Trade-Off Measure.

Table A2

Descriptive Statistics for Moral Foundations by Group Dynamics, Within-Factor

	Individual		Group		Stranger	
Moral foundation	*Mean*	*SD*	*Mean*	*SD*	*Mean*	*SD*
Harm	6.64	*0.74*	6.61	*0.77*	6.63	*0.72*
Fairness	6.40	*0.82*	6.40	*0.83*	6.46	*0.78*
Ingroup	4.70	*1.50*	4.60	*1.51*	4.21	*1.46*
Authority	5.31	*1.14*	5.24	*1.14*	5.20	*1.11*
Purity	4.77	*1.44*	4.60	*1.42*	4.56	*1.41*

Note: n = 952. How unacceptable violations were was rated on a Likert scale from 1 to 7. Ratings closer to 7 indicate that the violation was considered more unacceptable.

Table A3

Descriptive Statistics for Moral Foundations by Group Dynamics, Between-Factor

	Individual n = 328		Group n = 314		Stranger n = 310	
Moral foundation	*Mean*	*SD*	*Mean*	*SD*	*Mean*	*SD*
Harm	6.63	*0.74*	6.58	*0.72*	6.56	*0.86*
Fairness	6.33	*0.81*	6.35	*0.84*	6.44	*0.83*
Ingroup	4.76	*1.32*	4.34	*1.38*	4.22	*1.40*
Authority	5.26	*1.07*	5.01	*1.06*	5.20	*1.07*
Purity	4.79	*1.30*	4.33	*1.41*	4.44	*1.32*

Note: How unacceptable violations were was rated on a Likert scale from 1 to 7. Ratings closer to 7 indicate that the violation was considered more unacceptable.

Table A4

Descriptive Statistics for Additional Continuous Variables

Variable	Mean	SD	Median	Range
Political Belief	3.98	*1.08*	4.00	1 – 5
Religiosity	3.31	*1.47*	3.67	1 – 5
Age	30.38	*12.61*	27	18 – 70+
Social Sensitivity	2.79	*1.08*	2.75	1 – 5

Note: n = 952. For Political Belief, Religiosity, and Social Sensitivity, smaller values closer to 1 indicate less (i.e., political beliefs are less important, less religious, less socially sensitive), while larger values closer to 5 indicate more (i.e., political beliefs are more important, more religious, more socially sensitive).

Table A5

Frequencies and Percentages for Additional Discrete Variables

	Male	Female	Genderfluid/ Nonbinary	Other
Gender	405 *(42.5%)*	535 *(56.2%)*	5 *(0.5%)*	7 *(0.7%)*

	Yes		No	
English Native	865 *(90.9%)*		86 *(9.0%)*	

	Midwest	Northeast	Southeast	Southwest	West
U.S. Region	122 *(12.8%)*	110 *(11.6%)*	150 *(15.8%)*	462 *(48.5%)*	100 *(10.5%)*

Note: n = 952. For U.S. Region, n = 8 (0.8%) participants indicated that they had spent the majority of their life outside of the U.S.
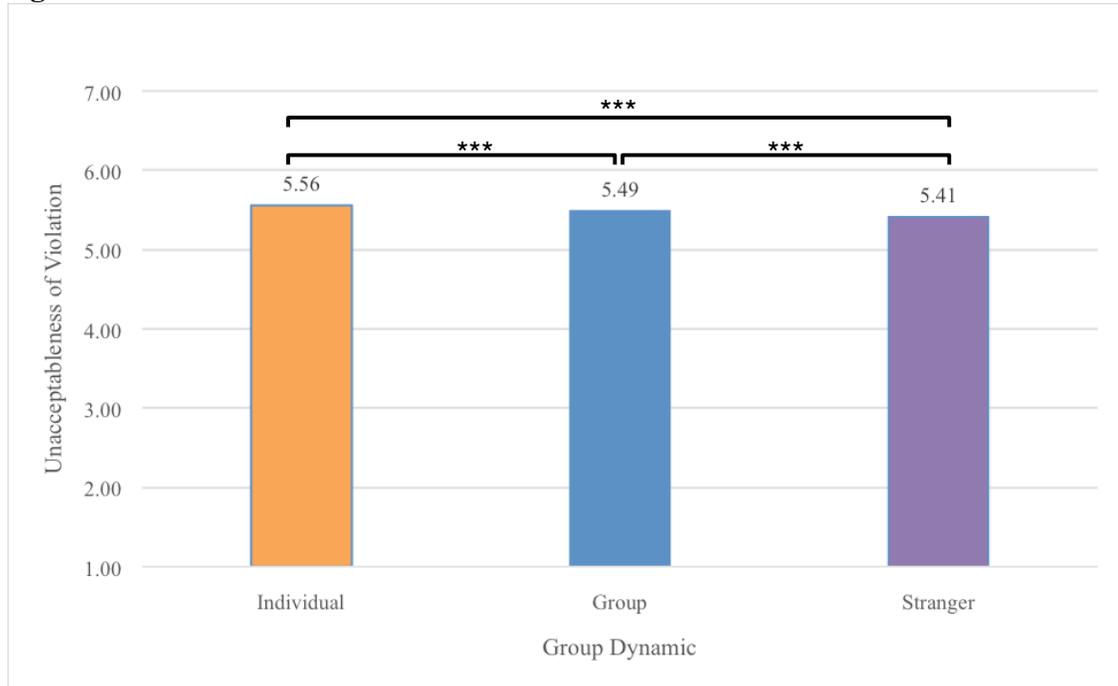
Figure B1

Model A: Unacceptableness of Violations by Group Dynamic

Figure B1. Average rating of how unacceptable violations were based on group dynamic for Model A. Ratings closer to 7 indicate that the violation was considered more unacceptable. Significance levels are based on pairwise comparisons of estimated marginal means; *p*-values were Bonferroni-corrected for multiple comparisons. Significant differences between marked * for significance at the 0.05 level, ** for significance at the 0.01 level, and *** for significance at the 0.001 level.

Figure B2
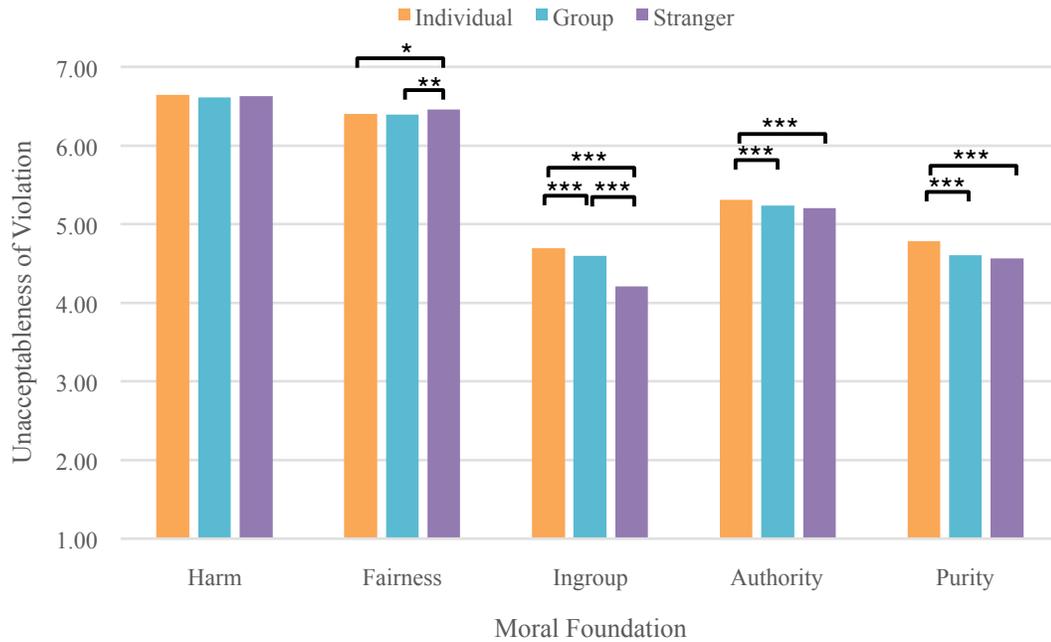
Model A: Unacceptableness of Violations by Moral Foundation and Group Dynamic

Figure B2. Average rating of how unacceptable violations were based on moral foundations and group dynamic for Model A. Ratings closer to 7 indicate that the violation was considered more unacceptable. Significance levels are based on pairwise comparisons of estimated marginal means; *p*-values were Bonferroni-corrected for multiple comparisons. Significant differences are marked * for significance at the 0.05 level, ** for significance at the 0.01 level, and *** for significance at the 0.001 level.

Table C6

Results of Model B Analysis: P-Values and Effect Sizes for Main Effects

Model	Main Effects			
	Context	Group	Foundation	+Predictor
Model A	0.218	$< 0.001^{***}$ $\eta^2_p = 0.054$	$< 0.001^{***}$ $\eta^2_p = 0.589$	–
Model A + Political Belief	0.369	$< 0.001^{***}$ $\eta^2_p = 0.052$	$< 0.001^{***}$ $\eta^2_p = 0.594$	0.370
Model A + Religiosity	0.250	$< 0.001^{***}$ $\eta^2_p = 0.053$	$< 0.001^{***}$ $\eta^2_p = 0.592$	$< 0.001^{***}$ $\eta^2_p = 0.120$
Model A + Gender	0.301	$< 0.001^{***}$ $\eta^2_p = 0.051$	$< 0.001^{***}$ $\eta^2_p = 0.586$	$< 0.001^{***}$ $\eta^2_p = 0.034$
Model A + Age	0.402	$<0.001^{***}$ $\eta^2_p = 0.054$	$<0.001^{***}$ $\eta^2_p = 0.593$	$<0.001^{***}$ $\eta^2_p = 0.054$
Model A + English Native	0.932	$<0.001^{***}$ $\eta^2_p = 0.021$	$<0.001^{***}$ $\eta^2_p = 0.291$	$<0.001^{***}$ $\eta^2_p = 0.018$
Model A + U.S. Region	0.617	$<0.001^{***}$ $\eta^2_p = 0.035$	$<0.001^{***}$ $\eta^2_p = 0.533$	$<0.001^{***}$ $\eta^2_p = 0.043$
Model A + Social Sensitivity	0.228	$<0.001^{***}$ $\eta^2_p = 0.055$	$<0.001^{***}$ $\eta^2_p = 0.588$	0.204

Note. Each new predictor variable was assessed individually with Model A; p-values are marked * for significance at the 0.05 level, ** for significance at the 0.01 level, and *** for significance at the 0.001 level. Effect sizes are given beneath significant values.

Table C7

Results of Model B Analysis: P-Values for Two-way Interactions

Model	Two-way Interactions					
	Context & Group	Context & Foundation	Group & Foundation	Context & +Predictor	Group & +Predictor	Foundation & +Predictor
Model A	0.652	0.403	**< 0.001*** ** $\eta^2_p = 0.078$	–	–	–
Model A + Political Belief	0.807	0.480	**< 0.001*** ** $\eta^2_p = 0.075$	0.119	0.967	**< 0.001*** ** $\eta^2_p = 0.017$
Model A + Religiosity	0.671	0.424	**< 0.001*** ** $\eta^2_p = 0.076$	0.199	0.602	**< 0.001*** ** $\eta^2_p = 0.034$
Model A + Gender	0.565	0.393	**< 0.001*** ** $\eta^2_p = 0.080$	0.248	0.113	**0.055** $\eta^2_p = 0.003$
Model A + Age	0.564	0.499	**<0.001*** ** $\eta^2_p = 0.079$	0.162	0.761	**<0.001*** ** $\eta^2_p = 0.022$
Model A + English Native	0.393	0.927	**< 0.001*** ** $\eta^2_p = 0.027$	0.470	0.752	**0.013*** $\eta^2_p = 0.004$
Model A + U.S. Region	0.482	0.307	**<0.001*** ** $\eta^2_p = 0.075$	0.149	0.418	**0.023*** $\eta^2_p = 0.009$
Model A + Social Sensitivity	0.707	0.406	**<0.001*** ** $\eta^2_p = 0.078$	0.566	0.142	0.435

*Note: Each new predictor variable was assessed individually with Model A; p-values are marked * for significance at the 0.05 level, ** for significance at the 0.01 level, and *** for significance at the 0.001 level. Effect sizes are given beneath significant values.*

Table C8

*Results of Model B Analysis: P-Values for Three- and Four-Way Interactions*

	Three-way Interactions				Four-Way Interaction
Model	*Context & Group & Foundation*	*Context & Group & +Predictor*	*Context & Foundation & +Predictor*	*Group & Foundation & +Predictor*	*Context & Group & Foundation & +Predictor*
Model A	0.696	–	–	–	–
Model A + Political Belief	0.671	0.375	0.233	0.964	0.831
Model A + Religiosity	0.651	0.280	0.691	**0.007*** $\eta^2_p = 0.003$	0.924
Model A + Gender	0.786	0.309	0.874	**0.013*** $\eta^2_p = 0.003$	0.690
Model A+ Age	0.711	0.295	0.285	**0.002*** $\eta^2_p = 0.004$	0.788
Model A + English Native	0.275	0.315	0.688	0.141	0.267
Model A + U.S. Region	0.702	0.297	**0.057** $\eta^2_p = 0.008$	**<0.001*** $\eta^2_p = 0.011$	0.930
Model A + Social Sensitivity	0.633	0.672	0.526	0.319	0.726

*Note: Each new predictor variable was assessed individually with Model A; p-values are marked * for significance at the 0.05 level, ** for significance at the 0.01 level, and *** for significance at the 0.001 level. Effect sizes are given beneath significant values.*
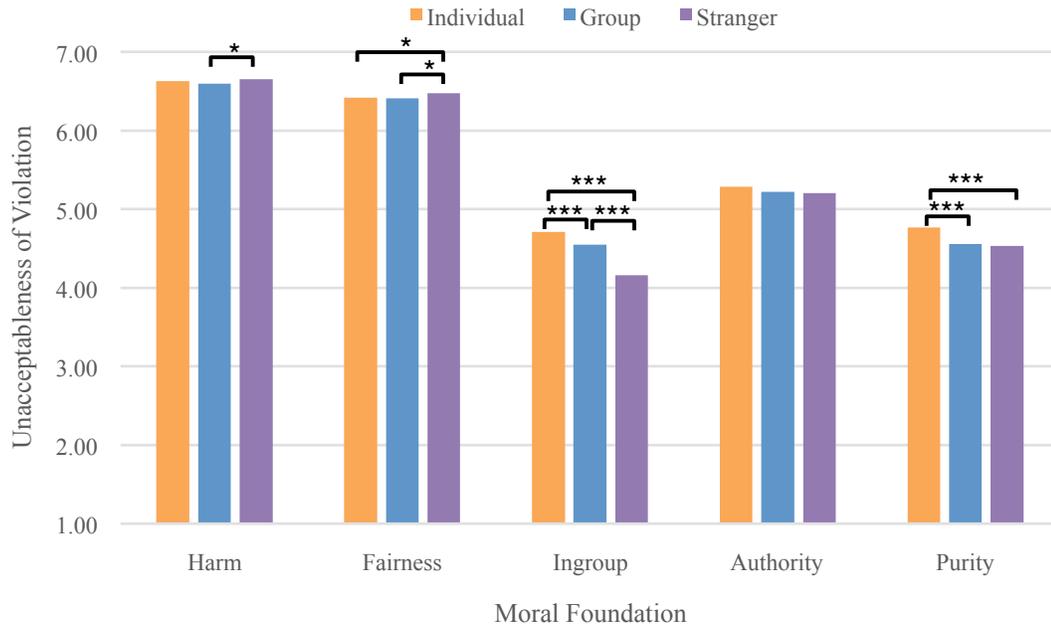
Appendix D: Model B2 Results Graphs

Figure D3
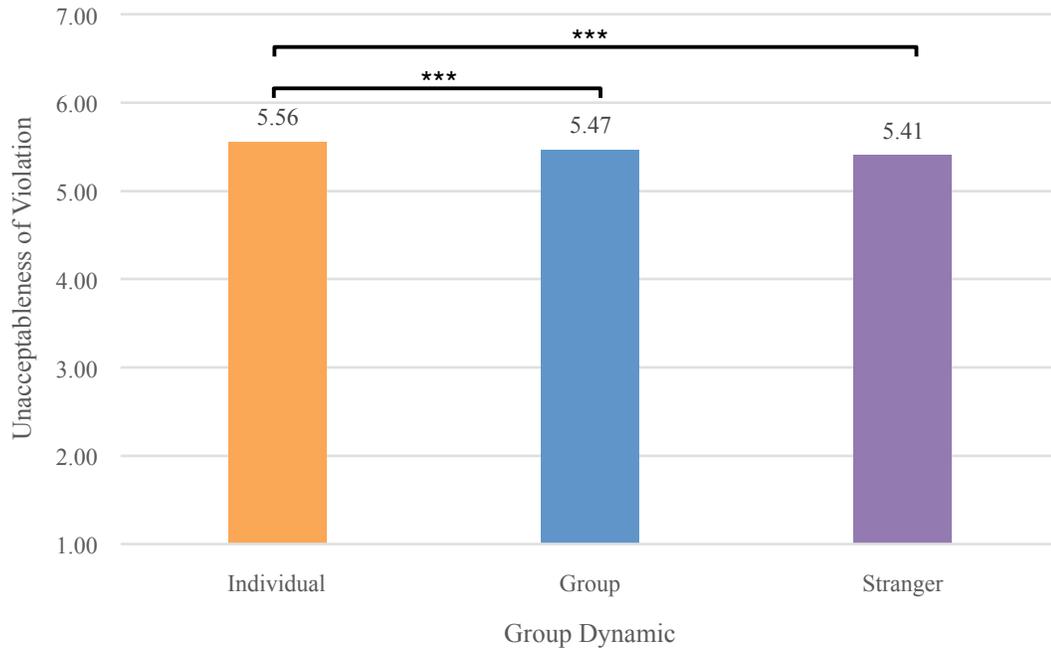
Model B2: Unacceptableness of Violations by Group Dynamic

Figure D3. Average rating of how unacceptable violations were based on group dynamic for Model B2. Ratings closer to 7 indicate that the violation was considered more unacceptable. Significance levels are based on pairwise comparisons of estimated marginal means; *p*-values were Bonferroni-corrected for multiple comparisons. Significant differences are marked * for significance at the 0.05 level, ** for significance at the 0.01 level, and *** for significance at the 0.001 level.
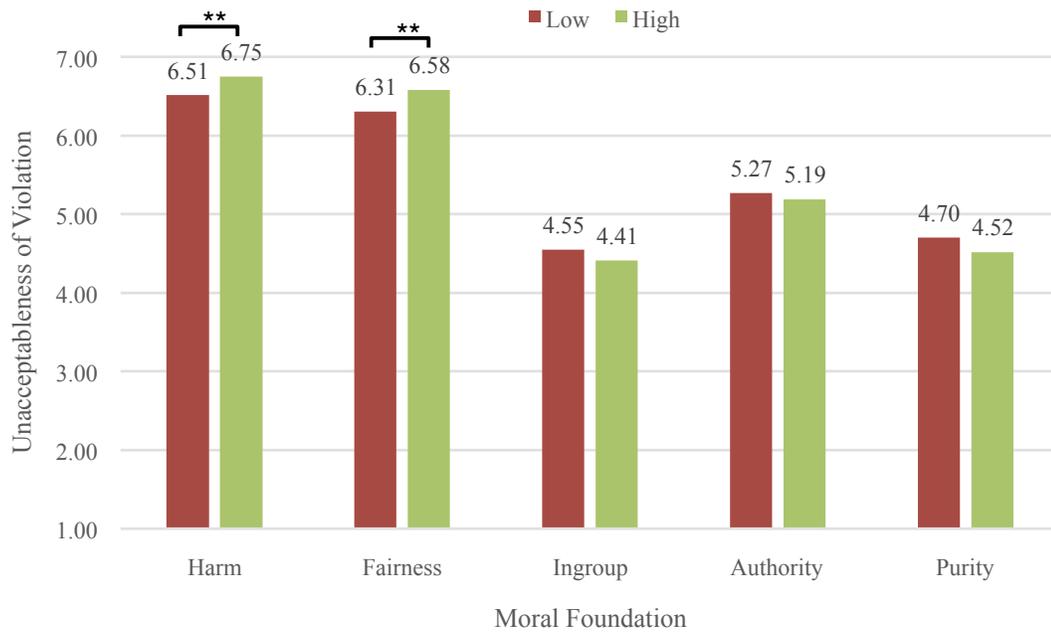
Figure D4

Model B2: Unacceptableness of Violations by Moral Foundation and Group

Dynamic

Figure D4. Average rating of how unacceptable violations were based on moral foundations and group dynamic for Model B2. Ratings closer to 7 indicate that the violation was considered more unacceptable. Significance levels are based on pairwise comparisons of estimated marginal means; *p*-values were Bonferroni-corrected for multiple comparisons. Significant differences are marked * for significance at the 0.05 level, ** for significance at the 0.01 level, and *** for significance at the 0.001 level.

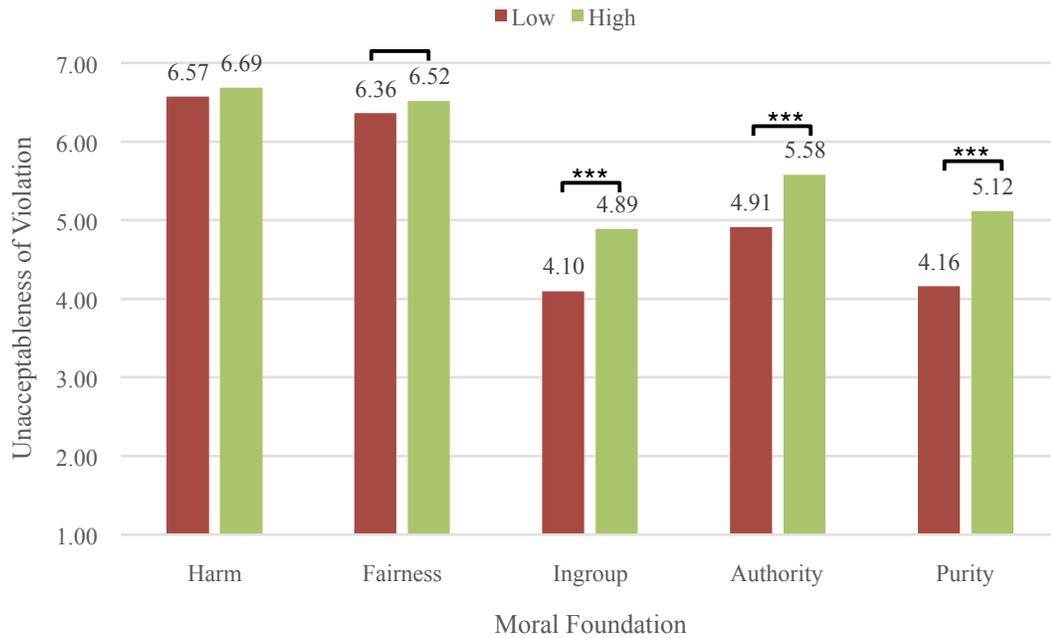**Figure D5**

Model B2: Unacceptableness of Violations by Moral Foundation and by Low and

High Importance of Political Beliefs

Figure D5. Average rating of how unacceptable violations were based on moral foundations and importance of political beliefs for Model B2. Importance of political beliefs was median-split into two groups based on low and high importance. Ratings closer to 7 indicate that the violation was considered more unacceptable. Significance levels are based on pairwise comparisons of estimated marginal means; *p*-values were Bonferroni-corrected for multiple comparisons. Significant differences are marked * for significance at the 0.05 level, ** for significance at the 0.01 level, and *** for significance at the 0.001 level.

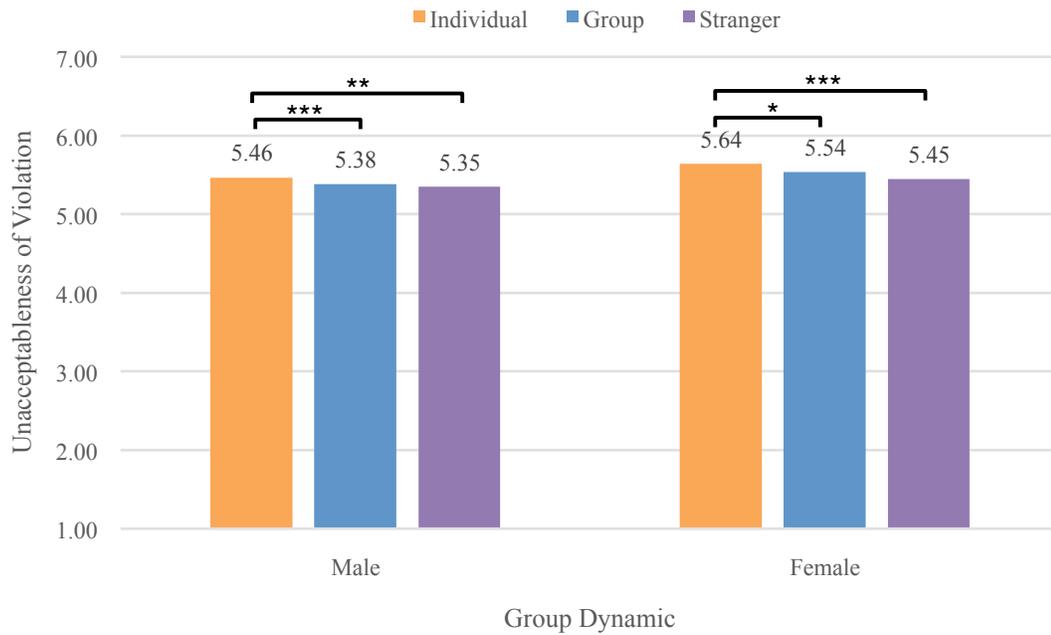**Figure D6**

Model B2: Unacceptableness of Violations by Moral Foundation and by Low and

High Religiosity

Figure D6. Average rating of how unacceptable violations were based on moral foundations and religiosity for Model B2. Religiosity was median-split into two groups based on low and high religiosity. Ratings closer to 7 indicate that the violation was considered more unacceptable. Significance levels are based on pairwise comparisons of estimated marginal means; *p*-values were Bonferroni-corrected for multiple comparisons. Significant differences are marked * for significance at the 0.05 level, ** for significance at the 0.01 level, and *** for significance at the 0.001 level. The difference between Low and High religiosity under the Fairness foundation was marginally significant, *p* = 0.052.
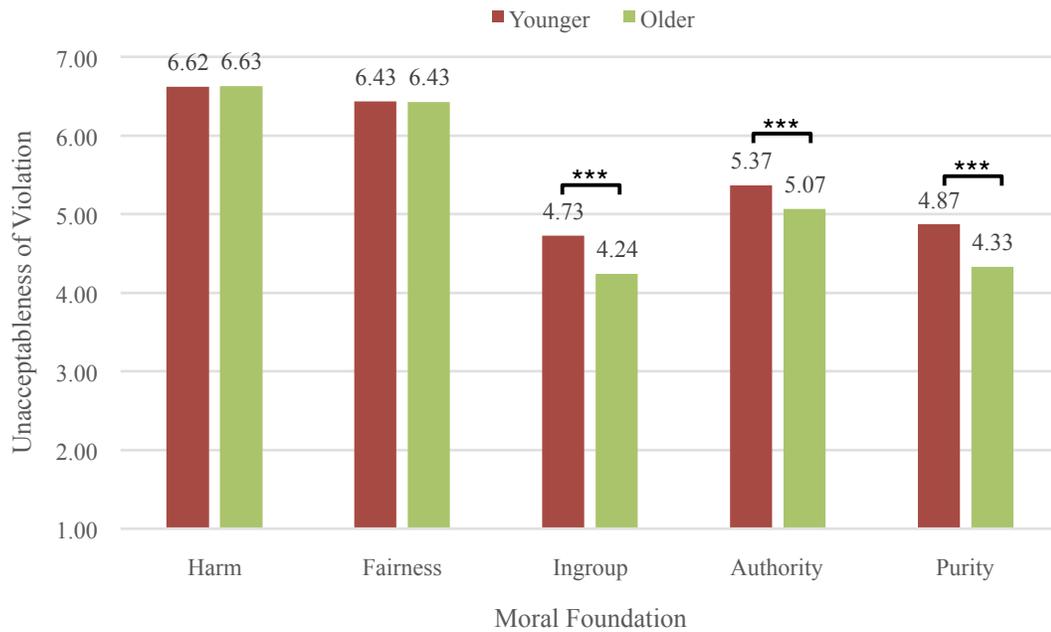
Figure D7

Model B2: Unacceptableness of Violations by Group Dynamic and Gender

Figure D7. Average rating of how unacceptable violations were based on group dynamic and gender for Model B2. Ratings closer to 7 indicate that the violation was considered more unacceptable. Significance levels are based on pairwise comparisons of estimated marginal means; *p*-values were Bonferroni-corrected for multiple comparisons. Significant differences are marked * for significance at the 0.05 level, ** for significance at the 0.01 level, and *** for significance at the 0.001 level.
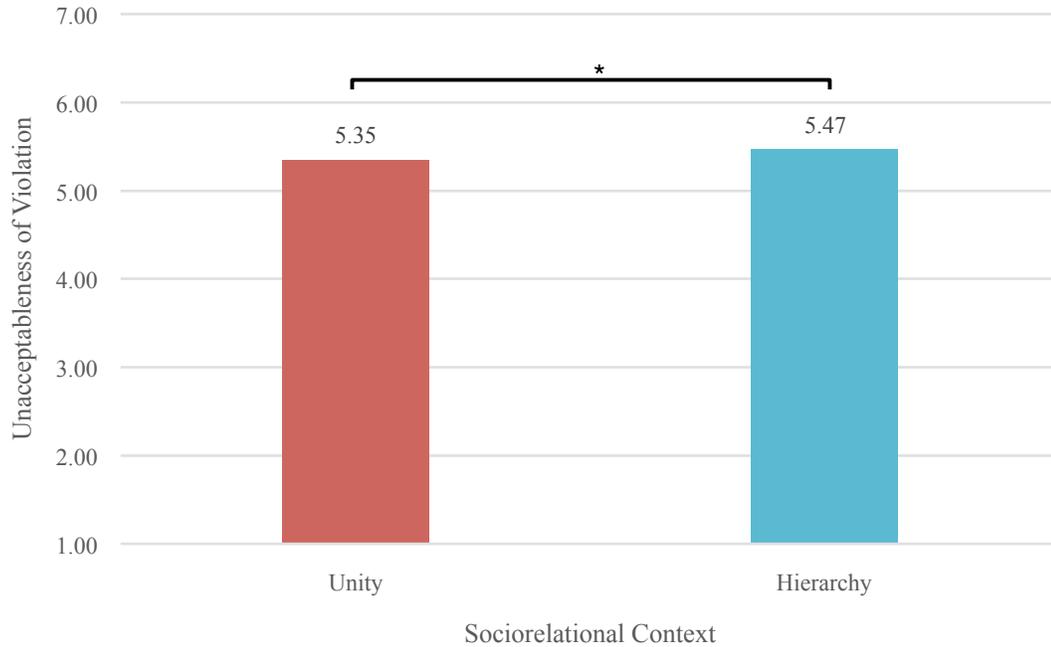
Figure D8

Model B2: Unacceptableness of Violations by Moral Foundation and Age

Figure D8. Average rating of how unacceptable violations were based on moral foundations and age for Model B2. Age was median-split into two groups based on younger participants and older participants. Ratings closer to 7 indicate that the violation was considered more unacceptable. Significance levels are based on pairwise comparisons of estimated marginal means; *p*-values were Bonferroni-corrected for multiple comparisons. Significant differences are marked * for significance at the 0.05 level, ** for significance at the 0.01 level, and *** for significance at the 0.001 level.

Appendix E: Model C Results Graphs

Figure E9

Model C: Unacceptableness of Violations by Sociorelational Context

Figure E9. Average rating of how unacceptable violations were based on sociorelational context for Model C. Ratings closer to 7 indicate that the violation was considered more unacceptable. Significance levels are based on comparisons of estimated marginal means; *p*-values were Bonferroni-corrected. Significant differences are marked * for significance at the 0.05 level, ** for significance at the 0.01 level, and *** for significance at the 0.001 level.
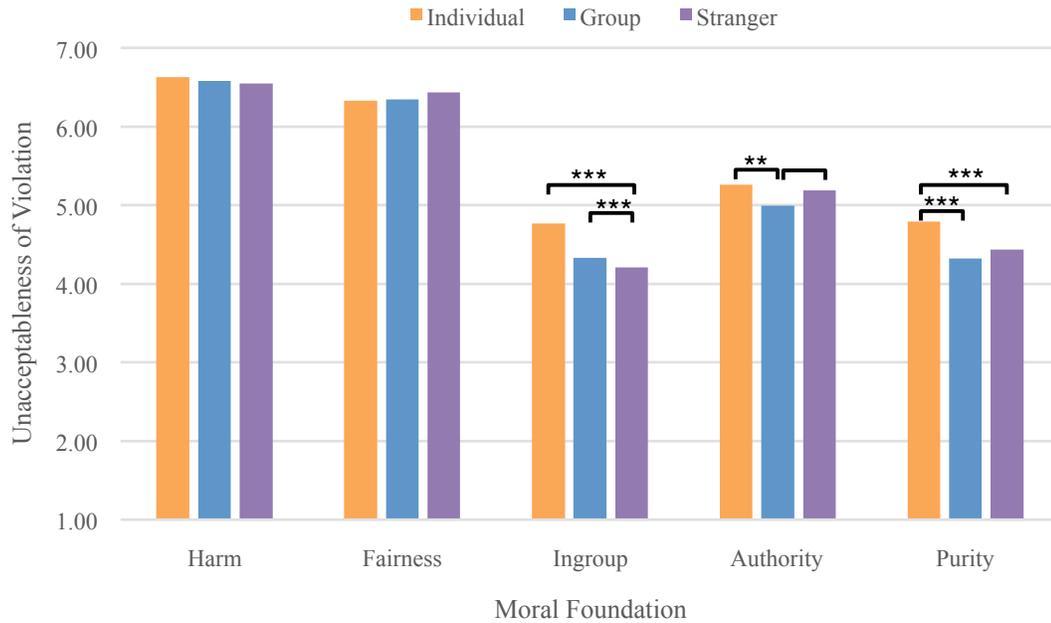
Figure E10
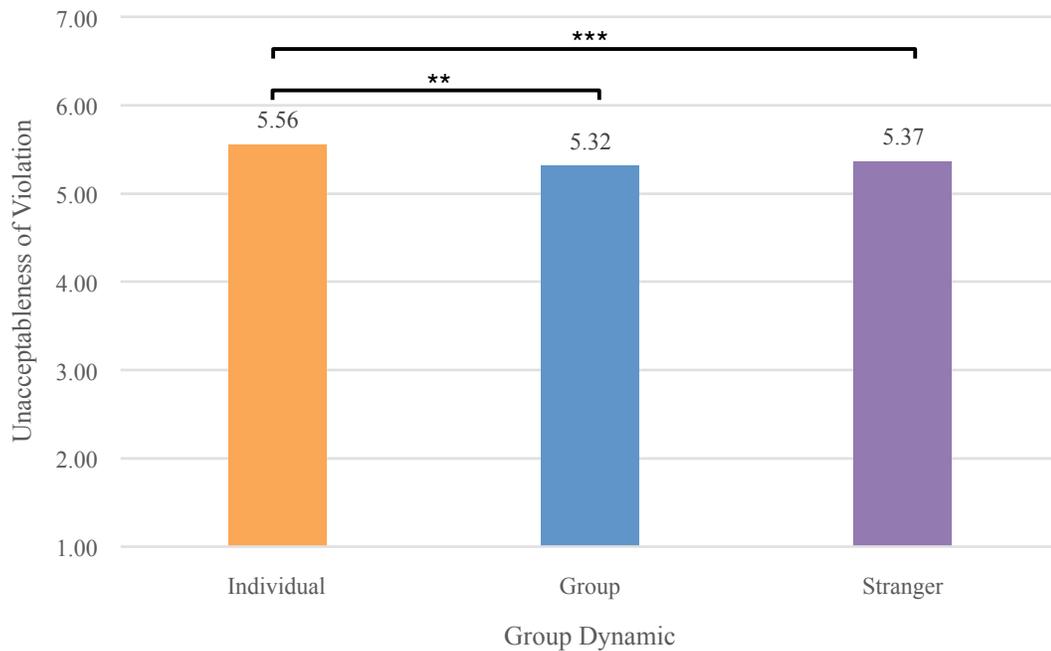
Model C: Unacceptableness of Violations by Group Dynamic

Figure E10. Average rating of how unacceptable violations were based on group dynamic for Model C. Ratings closer to 7 indicate that the violation was considered more unacceptable. Significance levels are based on pairwise comparisons of estimated marginal means; *p*-values were Bonferroni-corrected for multiple comparisons. Significant differences are marked * for significance at the 0.05 level, ** for significance at the 0.01 level, and *** for significance at the 0.001 level.

Figure E11

Model C: Unacceptableness of Violations by Moral Foundation and Group Dynamic

Figure E11. Average rating of how unacceptable violations were based on moral foundations and group dynamic for Model C. Ratings closer to 7 indicate that the violation was considered more unacceptable. Significance levels are based on pairwise comparisons of estimated marginal means; *p*-values were Bonferroni-corrected for multiple comparisons. Significant differences are marked * for significance at the 0.05 level, ** for significance at the 0.01 level, and *** for significance at the 0.001 level. The difference between Group and Stranger under the Authority foundation was marginally significant, $p = 0.057$.

Appendix F: Model Comparison Tables

Table F9

Group Dynamic Effect P-Values Across Model A, Model B2, and Model C

Group Dynamic Comparison	*Model A*	*Model B2*	*Model C*
Individual to Group	**< 0.001*** **	**< 0.001*** **	**< 0.001*** **
Individual to Stranger	**< 0.001*** **	**< 0.001*** **	**0.007** **
Group to Stranger	**< 0.001*** **	0.174	1.000

Note: All p-values are based on estimated marginal mean comparison, and are Bonferroni-adjusted for multiple comparisons; p-values are marked * for significance at the 0.05 level, ** for significance at the 0.01 level, and *** for significance at the 0.001 level.

Table F10

Group Dynamic and Moral Foundation Interaction P-Values Across Model A, Model B2, and Model C

Moral Foundation	Group Dynamic Comparison	Model A	Model B2	Model C
Harm	Individual to Group	0.084	0.093	1.000
	Individual to Stranger	1.000	1.000	0.700
	Group to Stranger	0.904	**0.042***	1.000
Fairness	Individual to Group	1.000	1.000	1.000
	Individual to Stranger	**0.012***	**0.045***	0.365
	Group to Stranger	**0.003****	**0.037***	0.599
Ingroup	Individual to Group	**< 0.001****	**0.001*****	**< 0.001*****
	Individual to Stranger	**< 0.001*****	**< 0.001*****	**< 0.001*****
	Group to Stranger	**< 0.001*****	**< 0.001*****	0.944
Authority	Individual to Group	**< 0.001*****	0.138	**0.004****
	Individual to Stranger	**< 0.001*****	0.279	1.000
	Group to Stranger	0.358	1.000	**0.057**
Purity	Individual to Group	**< 0.001*****	**< 0.001*****	**< 0.001*****
	Individual to Stranger	**< 0.001*****	**< 0.001*****	**0.003****
	Group to Stranger	0.384	1.000	0.773

*Note: All p-values are based on estimated marginal mean comparison, and are Bonferroni-adjusted for multiple comparisons; p-values are marked * for significance at the 0.05 level, ** for significance at the 0.01 level, and *** for significance at the 0.001 level.*

REFERENCES

Aristotle, Ross, W. D., & Brown, L. (2009). *The Nichomachean ethics*. Oxford: Oxford University Press.

Chen, X., Fu, R., Liu, J., Wang, J., Zarbatany, L., & Ellis, W. (2018). Self-Report Measure of Social Sensitivity [Database record]. Retrieved from PsycTESTS. doi: http://dx.doi.org/10.1037/t66346-000

Costa, A., Foucart, A., Hayakawa, S., Aparici, J., Heafner, J., et al., (2014). Your morals depend on language. *PLoS ONE, 9*(4), e94842.

DeLamater, J. D., Myers, D., J., & Collett, J. A. (2014). *Social psychology* (8th ed.). New York: Westview Press.

Fiske, A. P. (1991). *Structures of social life: The four elementary forms of human relations: Communal sharing, authority ranking, equality matching, market pricing.* New York, NY: Free Press.

Fiske, A. P. (1992). The four elementary forms of sociality: Framework for a unified theory of social relations. *Psychological Review, 99*(4), 689-723.

Fiske, A. P. (2000). Complementarily theory: Why human social capacities evolved to require cultural complements. *Personality and Social Psychology Review, 4,* 76-94. doi: 10.1207/S1532795PSRPR0401_7

Fiske, A. P., & Haslam, N. (2005). The four basic social bonds: Structures for coordinating interaction. In M. Baldwin (Ed.), *Interpersonal cognition* (pp. 267-298). New York, NY: Guilford Press.

Fiske, A. P., & Rai, T. S. (2014). *Virtuous violence: Hurting, and killing to create, sustain, end, and honor social relationships.* Cambridge, MA: Cambridge University Press.

Foot, P. (1967). The problem of abortion and the doctrine of double effect. *Oxford Review, 5,* 1-6.

Gilligan, C. (1982). *In a different voice: Psychological theory and women's development.* Cambridge, MA: Harvard University Press.

Graham, J., & Haidt, J. (2012). Sacred values and evil adversaries: A moral foundations approach. Wen M. Mikulincer & P. Shaver (Eds.), *The social psychology of morality: Exploring the causes of good and evil* (pp. 11-31). Washington D.C.: American Psychological Association.

Graham, J., Haidt, J., & Noseck, B. A. (2009a). Taboo Trade-Off Measure [Database record]. Retrieved from PsycTESTS. doi: http://dx.doi.org/10.1037/t48553-000

Graham, J., Haidt, J., & Nosek, B. (2009b). Moral Judgment Scale [Database record]. Retrieved from PsycTESTS. doi: http://dx.doi.org/10.1037/t48552-000

Graham, J., Haidt, J., & Nosek, B. A. (2009c). Liberals and conservatives rely on different sets of moral foundations. *Journal of Personality and Social Psychology, 96*, 1029-1046. doi:10.1037/a0015141

Graham, J., Nosek, B. A., Haidt, J., Iyer, R., Koleva, S., & Ditto, P. H. (2011). Mapping the moral domain. *Journal of Personality and Social Psychology, 101*(2), 366-385.

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

Haidt, J. (2012). The righteous mind: Why good people are divided by politics and

religion. New York, NY: Pantheon.

Haidt, J., & Graham, J. (2007). When morality opposes justice: Conservatives have moral

intuitions that liberals may not recognize. *Social Justice Research, 20*(1), 98-116.

Haidt, J., & Kesebir, S. (2010). Morality. In S. T. Fiske, D. Gilbert, & G. Lindzey (Eds.),

Handbook of social psychology (5th ed., pp. 797-832). Hoboken, NJ: Wiley.

Haslam, N., & Fiske, A. (1992). Implicit relationship prototypes: Investigating five

theories of the cognitive organization of social relationships. *Journal of

Experimental Social Psychology, 28*(5), 441-474.

Hechter, M., & Opp, K. (2001). *Social norms.* New York: Russell Sage Foundation.

Hogg, M. A. (2013). Intergroup relations. In DeLamater, J. D., and Ward, A. (Eds.),

Handbook of Social Psychology (2nd ed., pp. 533-561). New York: Springer.

Hogg, M., Terry, D., & White, K. (1995). A tale of two theories: A critical comparison of

Identity Theory with Social Identity Theory. *Social Psychology Quarterly, 58*(4),

255-269.

Kolhberg, L. (1969). Stage and sequence: The cognitive-developmental approach to

socialization. In D. A. Goslin (Ed.), *Handbook of socialization theory and

research* (pp. 347-480). Chicago, IL: Rand McNally.

Kolhberg, L. (1971). From is to ought: How to commit the naturalistic fallacy and get

away with it in the study of moral development. In T. Mischel (Ed.), *Cognitive

development and epistemology* (pp. 151-235). New York, NY: Academic Press.

Litman, L., Robinson, J., & Abberbock, T. (2016). TurkPrime.com: A versatile

crowdsourcing data acquisition platform for the behavioral sciences. *Behavior

Research Methods,* 1-10.

Moss, A. J., & Litman, L. (2018, Sept. 18). After the bot scare: Understanding what's

been happening with data collection on MTurk and how to stop it [blog post].

Retrieved from https://blog.turkprime.com/after-the-bot-scare-understanding-

whats-been-happening-with-data-collection-on-mturk-and-how-to-stop-it

Oppenheimer, D. M., Meyvis, T., & Davidenko, N. (2009). Instructional manipulation

checks: Detecting satisficing to increase statistical power. *Journal of

Experimental Social Psychology, 45*, 867-872.

Rai, T. S., & Fiske, A. P. (2011). Moral psychology is relationship regulation: Moral

motives for unity, hierarchy, equality, and proportionality. *Psychological Review,

118*(1), 57-75.

Simpson, A., Laham, S. M., & Fiske, A. P. (2016). Wrongness in different relationships:

Relational context effects on moral judgment. *The Journal of Social Psychology,

156*(6), 594-609.

Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G.

Austin & S. Worchel, *The social psychology of intergroup relations* (pp. 33-47).

Monterey, CA: Brooks/Cole.

Terry, D. J., & Hogg, M. A. (1996). Group norms and the attitude-behavior relationship:

A role for group identification. *Personality and Social Psychology Bulletin, 22,*

776-793.

Thomson, J. J. (1985). The trolley problem. *Yale Law Journal*, *94*(6), 1395-1415.

Turiel, E. (1983). *The development of social knowledge: Morality and convention.* Cambridge, England: Cambridge University Press.

Turiel, E., Hildebrant, C., & Wainryb, C. (1991.) Judging social issues: Difficulties, inconsistencies, and consistencies. *Monographs of the Society for Research in Child Development, 56*(2), 1-103.

White, K. M., Hogg, M. A., & Terry, D. J. (2002). Improving attitude-behavior correspondence through exposure to normative support from a salient ingroup. *Basic and Applied Social Psychology, 24*(2), 91-103.

Willard, A. K., & Norenzayan, A. (2017). Spiritual but not religious: Cognition, schizotypy, and conversion in alternative beliefs. *Cognition, 165*(2017), 137-146.