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Stereotypic morality: The influence of group membership on moral foundations

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Abstract

Today’s modern world affords many benefits, one of which is the ability to have near-instantaneous interactions with groups and cultures other than our own. Though advantageous in many situations, one challenge for these groups is navigating what they perceive to be right and wrong in a cooperative manner despite having different modes of morality. Moral foundations theory holds groups use the same moral foundations to guide their judgments and decision making, but there has been little research on how the perception of these foundations differ within and between groups. Thus, the current study examined how moral foundations operate from a group perspective and potential outgroup moderators of moral foundations. Participants rated the extent to which various groups used moral foundations in one of two conditions. Each condition contained an ingroup and three outgroups that conformed to the quadrants of the stereotype content model. Results showed significant differences in the harm, fairness, and loyalty foundations between ingroups and outgroups. Moreover, the type of outgroup significantly influenced moral foundations scores. These findings demonstrate the importance of considering moral foundations at the group level.

Keywords: groups, moral foundations, stereotype content
Although technological advancements have given us the ability to communicate and interact in more efficient ways, they have also introduced problems we have not quite yet figured out how to solve. For example, now that different groups, societies, and nations can interact in a near-instantaneous fashion, these groups, with all their different ideologies, must find ways to engage cooperatively. Research on moral foundations theory (e.g., Haidt, 2008) suggests this could be a problem in intergroup situations; despite groups using identical moral foundations, they do so to different extents. However, there is little data on how moral foundations operate within and between groups outside of the political domain. Therefore, the current study tests whether people perceive differences in moral foundations when thinking broadly about ingroups compared to outgroups and checks for potential moderators of this effect. We examine if people see differences in moral foundations for groups that vary in warmth and competence.

Systematically investigating moral foundations within group settings is essential to a model of morality because group membership can influence an individual’s behavior and judgment. For example, groups tend to behave uncooperatively to protect or enhance the group compared to individuals who tend cooperate in the same situation (i.e., the interindividual-intergroup discontinuity effect; Wildschut, Pinter, Vevea, Insko, & Schopler, 2003). This finding demonstrates a discontinuity between interindividual and intergroup interactions in mixed-motive situations (i.e., cases in which individuals or groups have both shared and competing goals). For example, during a prisoner’s dilemma game, two individuals will typically cooperate when making their individual choices. However, when two groups play the same game, they tend to agree to cooperate during communication and then defect when making their actual choices. Thus, instead of exaggerating the individual’s dominant strategy of cooperation, groups tend to have a dominant strategy of competition (see Wildschut et al., 2003).
While there are exceptions to this trend, social identity theory provides insight as to when and why it persists. According to social identity theory, the standing of the group to which one is a member directly relates to a person’s self-esteem and identity (Tajfel & Turner, 1979). We invoke a part of our social identity whenever we think of ourselves as belonging to a particular gender, ethnicity, social class, and the like. Consequently, people sometimes endorse the interests or choices of their group, even if doing so conflicts with their interests (Haidt & Kesebir, 2010). For example, individuals in a prisoner’s dilemma game often chose the highest payoff strategy of cooperation, but when in a group, fear and greed concerns supersede individuals’ interests and defecting becomes the dominant group strategy. Thus, generally speaking, self-interest takes a backseat to group-interest when one is a member of a group.

Arguably, these findings are due to evolutionary adaptations related to the human tendency to live within group contexts (Brewer & Caporael, 2006). Because survival depended on individuals banding together in groups for strength and safety, individuals who came together to enhance and protect each other were more likely to survive (though there is some contention about the extent to which cognition is due to evolution; for a discussion, see Lewontin, 1990). Furthermore, social identity theory states group identification directly leads to ingroup favoritism and behaviors that differentiate one’s group from others (Hogg & Abrams, 1988). Work on the evolutionary adaptation of groups argues living and hunting in groups had survival implications and being rejected by the group could lead to starvation and death (Levine & Kerr, 2007). Thus, the tendency for a group to enhance and protect itself is likely to be present and deeply embedded in most group settings. Once group members think of themselves as a group, they will start to favor options that protect or enhance the group welfare (Tindale, Talbot, & Martinez, 2013).
However, protecting the group from harm can only be done if the group can identify a threat relatively quickly. Thus, the categorization of social units (i.e., stereotypes) serves an essential function for groups. Perceivers must use a limited cognitive processing system to cope with the rich and complex social environment they live in, and they need to understand as well as anticipate interactions within that environment (Hamilton & Sherman, 1994). Due to the limitations of the human cognition system, grouping objects and people into categories based on their similarities or differences becomes functionally adaptive.

A fundamental basis of social categorization is the distinction between a group to which one belongs (i.e., ingroup) and those one does not belong (i.e., outgroup; Allport, 1954). Tajfel established what is known as the “minimal group paradigm” to study the influence of social categorization processes independent of intergroup conflict (see Diehl, 1990). Based on many studies using this paradigm, participants favorably evaluate and allocate more resources to members of their group, even though they do not know the specific identities of those in their group (i.e., ingroup bias). Thus, the mere perception of belonging to different groups triggers ingroup favoritism and relative outgroup discrimination. This suggests the presence of specialized social-cognitive structures designed for group relations (Haidt & Kesebir, 2010). Due to this categorization process, information is tagged by physical and social distinctions (e.g., race, gender), within-group differences are minimized, between-group differences are exaggerated, and group members’ behaviors are interpreted stereotypically (Taylor, 1981; Wilder, 1981).

While in- and outgroup social categorizations are useful, our social worlds are much more complicated than this binary distinction. For instance, some stereotyped groups are deemed inept (e.g., older adults), whereas others are respected for their intellect (e.g., Asians). To
account for such variations between social categorizations, the stereotype content model includes two dimensions to capture the content of stereotypes: warmth and competence (Fiske, Cuddy, Glick, & Xu, 2002). The theory argues these dimensions are common to all stereotypes and result from interpersonal and intergroup interactions. For example, when meeting others, people typically want to know what others’ goals will be and how effectively others will pursue their goals. In other words, perceivers want to know the other’s intent and capability. These characteristics correspond to perceptions of warmth and competence (Fiske et al., 2002). Therefore, to extend our findings beyond a binary in- and outgroup categorization, we manipulated the warmth and competence dimensions of target groups in the present study. By including outgroups with varying levels of warmth and competence, we can test if an outgroup’s level of warmth or competence influences participants perceptions of moral foundations.

Moral foundations are particularly well suited to answer the present research question. First, they capture conceptions of the moral domain that extend beyond traditional justice and rights concerns (e.g., loyalty, obedience, purity; Haidt, 2007, 2008; Haidt & Graham, 2007; Haidt & Joseph, 2004), which means they can capture more variability in perceptions of group morality. Second, they specify the functions of moral systems rather than the content of a particular moral judgment. This is important because the content of a moral judgment could vary from group to group, whereas the moral system should remain more stable. Moral foundations theory views moral systems as “interlocking sets of values, practices, institutions, and evolved psychological mechanisms that work together to suppress or regulate selfishness and make social life possible” (Haidt, 2008, p. 70).

Moral foundations theory (Haidt & Graham, 2007; Haidt & Joseph, 2004) holds moral intuitions derive from innate psychological mechanisms that co-evolved with cultural institutions.
and practices. These intrinsic but modifiable mechanisms provide socializing agents (e.g., parents) the moral foundations to build on as they teach children their societal virtues, vices, and ethical practices. The five moral foundations are harm/care, fairness/reciprocity, ingroup/loyalty, authority/respect, and purity/sanctity. The harm foundation leads to the disapproval of individuals who cause pain and suffering and approval of those who prevent or alleviate harm. The fairness foundation is sensitive to issues of equality and justice and leads to the disapproval of those who violate these principles. The loyalty foundation is based on our attachment to groups (e.g., family or country) and leads to the approval of those who contribute to the group’s welfare and cohesion. The authority foundation is based on our tendency to create hierarchically structured societies of dominance and subordination and includes approval of individuals who fulfill the duties associated with their position on the social ladder (e.g., by demonstrating good leadership or obedience). Lastly, the purity foundation is based on the emotion of disgust in response to biological contaminants (e.g., feces or rotten food) and to various social contaminants (e.g., spiritual corruption; Graham, Haidt, & Nosek, 2009).

One approach to examining group-level moral foundations is Janoff-Bulman and Carnes’s (2013) model of moral motives (MMM). The MMM is comprised of a 2 x 3 matrix, in which the rows are divided by motives to protect (i.e., avoidance) and to provide (i.e., approach). Each of the columns of the matrix represents a different focus of moral concern: the self, others, and the group. However, as Graham (2013) notes, the model contains some ambiguity about how these distinctions are made. Additionally, the model falls short by excluding the intergroup context.

In a similar attempt, the current study examines how moral foundations operate from a group perspective. However, given the approach/avoidance motivation component and the criticisms the model has received, this study focuses purely on the moral foundations component.
Since groups tend to protect themselves and enhance their welfare, they will likely be sensitive to threats from outgroups and be responsive to fairness, reciprocity, and justice cues. Drawing on research from social identity theory and the discontinuity effect, we predict the enhancement and protective motives will lead groups to perceive harm and fairness moral foundations as a low priority for outgroups compared to ingroups. The presence of an outgroup should exacerbate the ingroup's natural tendencies to protect and enhance the group's welfare. This is consistent with social identity theory predictions that motivations to protect and enhance the group's welfare would protect the group's status and allow members to feel good about their group membership. Thus, hypothesis 1 predicts participants will rate outgroups lower on the harm and fairness foundations compared to ingroups.

When judging ingroups, perceptions of loyalty, patriotism, and self-sacrifice for the group should surface. These virtues would have made it possible for groups to initially band together for strength and safety and are captured quite nicely by the loyalty foundation. Once people have formed a group, they must be able to keep the group stable over time and to prevent the dissipation of solidarity (e.g., generating norms and sanctions). Therefore, hypothesis 2 predicts participants will rate ingroups higher on loyalty, authority, and purity foundations compared to outgroups.

Additionally, because the stereotype content model argues different outgroups can promote different reactions and expectations, we test if different types of outgroups moderate the perception of moral foundations. Hypothesis 3 predicts the effect of group membership on perceptions of moral foundations is moderated by warmth and competence. While it is unclear exactly how different outgroups might influence perceptions of moral foundations, it is probable they do. For example, outgroups low in warmth and high in competence tend to be viewed as
competitive and invoke negative intent (Fiske et al., 2002). Such outgroups are expected to be harmful and unfair. Because one might view these outgroups with negative qualities, there is likely a perception these dimensions are not crucial to the group. In this case, participants would likely rate the harm and fairness foundations lower because they expect the group to be harmful and unfair (i.e., hypothesis 3a). Using a similar rationale, outgroups low in warmth and low in competence tend to invoke disgust. Participants might rate these groups low on the purity foundation because they expect them to be disgusting (i.e., hypothesis 3b).

**Method**

**Pilot study**

Six target outgroups were chosen based on past research of the stereotype content model for participants to judge (i.e., two of each outgroup type specified by the model). Moral perceptions of these three outgroup types were compared to moral perceptions of ingroups, assuming ingroups are seen high in warmth and competence. Thus, participants made ratings of ethical concerns related to four different groups: a high warmth, high competent (HwHc) ingroup; a low warmth, high competent (LwHc) outgroup (i.e., the rich or business professionals); a high warmth, low competent (HwLc) outgroup (i.e., the elderly or housewives); and a low warmth, low competent (LwLc) outgroup (i.e., the homeless or welfare recipients) based on a modified version of the Moral Foundations Questionnaire (MFQ).

Before the main experiment, we conducted a pilot study to ensure the ratings across the two instances of each outgroup (e.g., LwHc outgroup: the rich and business professionals) did not substantially differ. Also, we assessed whether allowing participants to rate all four group types would produce different ratings than a comparable between-participant design (because using a within-participant design would allow for more statistical power). The pilot test used a
total sample of 148 participants with nine conditions. Two of the nine conditions included within-participant designs that asked participants to rate one ingroup and three outgroups. The other seven conditions used between-participant designs that asked participants to evaluate one group (i.e., either their ingroup or one of the six outgroups).

Responses tended to not differ between the within- and between-participant conditions. A series of t-tests were conducted between each within-participant condition and the corresponding between-participant condition on the five moral foundations (e.g., within-participant "the rich" target outgroup and between-participant "the rich" target outgroup). All results were nonsignificant, except for two outcomes: The harm foundation for the rich, \( t(32) = -2.27, p < .05, d = .79 \), and the fairness foundation for the elderly, \( t(29) = 2.54, p < .05, d = .92 \). For the rich manipulations, participants' ratings in the within-participant condition were lower on the harm (\( M = 2.82, SD = .74 \)) than those in the between-participant condition (\( M = 3.41, SD = .76 \)). But, participants in the within-participant condition rated the elderly higher on the fairness foundation (\( M = 3.62, SD = .66 \)) compared to participants in the between-participants condition (\( M = 3.02, SD = .64 \)). Although a few significant differences were found, both designs produced identical overall rank orderings of the groups on the various moral dimensions. Therefore, the pilot study suggested a within-participant design was a viable approach for the main study.

Participants

Four hundred ten undergraduates at a midwestern university voluntarily participated for course credit in their introductory psychology classes. Participants were at least 18 years of age and were recruited from the midwestern university psychology participant pool. The mean age of the participants was 18.93 years (\( SD = 1.13 \)). However, 24 participants did not include their age. Participant ethnicity was as follows: 217 Caucasian, 73 Asian, 61 Hispanic, 15 Black, 11 Middle
Eastern, and 33 either gave an invalid response or did not respond at all. Participant gender consisted of 299 females and 88 males, while 23 either gave an invalid respond or did not respond at all.

**Key variables**

This study contained two independent variables: outgroup set and type of group. The outgroup set participants were asked to rate was varied between participants and involved two different sets. A single outgroup set was comprised of an ingroup target and three outgroup targets based on the stereotype content model. At one level of the outgroup set, participants rated an ingroup target (i.e., group the participant most identified with) and three outgroup targets (i.e., the rich, housewives, and the homeless). At the second level of the outgroup set, participants rated an ingroup target (i.e., group the participant most identified with) and three different outgroup targets (i.e., business professionals, the elderly, and welfare recipients). Thus, in both levels, participants rated four different groups. This manipulation was done to generalize beyond one group for each social category of the stereotype content model.

The second independent variable (i.e., type of group) included four levels of group identification derived from the stereotype content model: (1) a HwHc ingroup, (2) a LwHc outgroup, (3) a HwLc outgroup, and (4) a LwLc outgroup. These four levels of group type were then crossed with the two levels of the outgroup set. Thus, participants rated one HwHc ingroup (i.e., a group the participant most identified with), one LwHc outgroup (i.e., either the rich or business professionals), one HwLc outgroup (i.e., either housewives or the elderly), and one LwLc outgroup (i.e., either the homeless or welfare recipients).
Although the HwHc (i.e., ingroup) level content was not held constant like all of the outgroup levels contents, the current manipulation is justified for two reasons. First, if any of our participants do not identify with a culturally dominant group or do not see particular group favorability, they might not view that group as being high in warmth and competence. Fiske and colleagues (2002) argue HwHc groups can consist of both ingroups and societal reference groups, so by asking our participants to think of a group they identify with (i.e., an ingroup), we are helping ensure they view the group as being high in warmth and competence. Second, although our participants were drawn from the same college student pool, their notions of an ingroup are likely to vary based on their demographics and life experiences. This limits us from holding the HwHc group constant (e.g., Christian) because some participants may see this as an ingroup and others may not. By asking participants to think of a group they most identify with on campus, we are activating a HwHc group despite these differences.

The outgroup prototypes were chosen based on past research conducted on the stereotype content model. These outgroups have been the most frequently used across a number of studies that have investigated the stereotype content model (e.g., Caprariello, Cuddy, & Fiske, 2009; Cuddy et al., 2009; Fiske et al., 2002; Harris & Fiske, 2006; Lee & Fiske, 2006; Rogers, Schroder, & Scholl, 2013). Using six distinctly different outgroups that have been shown to vary in stereotype content provides converging evidence of the moral foundations used when rating a target outgroup.

Although we did not initially collect ratings of ingroup members, we did so in a follow-up study in which participants rated an ingroup member using the procedures from the current study and items that measured the ingroup’s name, warmth, trust, disloyalty, competence, and inconsiderateness. Results demonstrated participants did view a wide variety of ingroups (e.g., friend groups, campus organizations, political groups, ethnic groups, fraternities/sororities, athletic teams, religious groups) as relatively more warm ($M = 5.69, SD = 1.16$), trustworthy ($M = 5.76, SD = 1.23$), and competent ($M = 5.43, SD = 1.29$), but less disloyal ($M = 2.41, SD = 1.28$) and inconsiderate ($M = 2.26, SD = 1.19$) on a 7-point scale.
To measure participants' perceptions of group moral foundations, we used a modified version of the MFQ (Graham et al., 2009). Participants completed a 32-item questionnaire validated in previous research (Graham et al., 2011). The only modifications made to the questionnaire involved minor linguistic changes for the group membership manipulation. In the original questionnaire, moral relevance items asked respondents if an act committed by "someone" was relevant to their decision of whether something was right or wrong. In the present study, we prefaced these items by asking participants to think about a particular group (e.g., ingroup, business professionals, housewives) and to consider the extent to which the items listed were relevant to their thinking.

Wherever the original MFQ items mentioned "someone", we replaced that pronoun with the name of the target group or the pronoun "they". In the original questionnaire, respondents were asked to indicate the degree to which they agreed or disagreed with various statements. In the modified version, participants were asked to complete this same task while keeping in mind a typical member of the target group. Since many of these statements did not suggest a single person or persons where involved, we added pronouns so the target of the judgment became the group the respondent was considering. For example, “Justice is the most important requirement for a society” was changed to “For them, justice is the most important requirement for a society”.

Finally, in a couple of cases, the original moral judgment items contained a reference to the individual, so these items were also modified (see Appendix A for items; see osf.io/84t9p for materials). These modifications shift the measurement to attributed moral foundations that assess the extent to which the respondent attributes a particular moral foundation to the group under consideration. This allows us to assess the impact of group membership on participants' perceptions of moral foundations at the group level. After the experiment, we checked the
internal consistencies of each of these modified scales. Results showed our modifications did not undermine the reliability of the ingroup ($\alpha = .85$), rich ($\alpha = .85$), housewife ($\alpha = .88$), homeless ($\alpha = .88$), business professional ($\alpha = .85$), elderly ($\alpha = .85$), or welfare recipient ($\alpha = .84$) versions of the modified scale.

Previous research has shown moral foundation scores (MFS) are highly correlated with political orientation. For example, Graham and colleagues (2009) found conservatives and liberals rely on different sets of moral foundations: Liberals utilize harm and fairness more than loyalty, authority, and purity but conservatives tend to use all five of foundations more equally. Other research has shown social conservatives tend to be more prejudicial against certain groups when priming disgust. Terrizzi, Shook, and Ventis (2010) showed conservatives displayed more prejudicial attitudes toward contact with homosexuals after experimentally priming disgust, but liberals show reduced prejudice. Therefore, because some of the target outgroups in the present study could potentially elicit disgust (e.g., the homeless, welfare recipients; Cottrell & Neuberg, 2005; Fiske et al., 2002), political orientation was measured and controlled for in the analysis.

Design

This study used a 2 (outgroup set: 1 vs. 2) × 4 (type of group: one ingroup and three outgroups) design. The type of group is a within-participant factor while the outgroup set was manipulated between participants. In one condition, participants rated a group they most identified with, the rich, housewives, and the homeless. In the second condition, participants rated a group they most identified with, business professionals, the elderly, and welfare recipients. Across conditions, the target outgroups were matched on the two dimensions of the stereotype content model (i.e., warmth and competence) to control for target outgroup content. Cold and incompetent target outgroups were the homeless and welfare recipients. Warm and
incompetent target outgroups consisted of the elderly and housewives. Cold and competent outgroups were the rich and business professionals. Lastly, warm and competent target groups were considered ingroups. Thus, the ingroup manipulation serves as both one level of the independent variable and the control, thereby increasing statistical power. The primary outcome variable was participants' MFS derived from a modified version of the MFQ, and the order the groups were presented was based on a Latin square design.

**Procedure**

Participants were randomly assigned to one of two replication conditions (i.e., outgroup set 1 or 2). After completing the informed consent form and agreeing to participate, participants were asked to fill out an online survey. This survey was a modified version of the MFQ. In each condition, participants completed the modified MFQ four times, each with a different target group. Once completing the survey, participants were asked to complete a final questionnaire that included demographic questions. The final questionnaire asked participants for their political orientation, age, gender, and ethnicity.

**Results**

We used Hotelling’s $T^2$ to compare the two outgroup sets on the five MFS for each target group (e.g., “the rich” in outgroup set 1 and “business professionals” in outgroup set 2). The results showed a significant overall difference between the outgroup sets on MFS $F(20, 363) = 5.21, p < .001$. Twelve comparisons reached significance: the fairness, $F(1, 382) = 6.41, p < .05$, $R^2_{Adj} = .031$, and loyalty foundations for HwHc ingroups, $F(1, 382) = 6.16, p < .05$, $R^2_{Adj} = .013$, the fairness foundation for LwHc outgroups, $F(1, 382) = 10.38, p < .001$, $R^2_{Adj} = .024$, the loyalty foundation for LwHc outgroups, $F(1, 382) = 6.09, p < .05$, $R^2_{Adj} = .013$, the harm, $F(1, 382) = 10.87, p = .001$, $R^2_{Adj} = .025$, fairness, $F(1, 382) = 27.78, p < .001$, $R^2_{Adj} = .065$, loyalty, $F(1, 382)$
GROUP MEMBERSHIP AND MORALITY

\[ = 39.79, p < .001, R^2_{\text{Adj}} = .092, \text{authority}, F(1, 382) = 7.64, p < .01, R^2_{\text{Adj}} = .017, \text{and purity}, F(1, 382) = 6.31, p < .01, R^2_{\text{Adj}} = .014, \text{foundations for HwLc outgroups, and the loyalty}, F(1, 382) = 14.88, p < .001, R^2_{\text{Adj}} = .035, \text{authority}, F(1, 382) = 16.28, p < .001, R^2_{\text{Adj}} = .038, \text{and purity}, F(1, 382) = 5.78, p < .01, R^2_{\text{Adj}} = .012, \text{foundations for the LwLc outgroups.}

Specifically, self-identified ingroups were rated significantly higher on the fairness and loyalty foundations in the second outgroup set \((M = 3.47, SE = .06; M = 3.07, SE = .06,\text{ respectively})\) compared to the first outgroup set \((M = 3.27, SE = .05; M = 2.87, SE = .06,\text{ respectively})\). For the LwHc outgroups, business professionals were rated higher on the fairness \((M = 2.90, SE = .06)\) and loyalty \((M = 2.91, SE = .05)\) foundations compared to the rich \((M = 2.64, SE = .06; M = 2.72, SE = .05,\text{ respectively})\). In terms of the HwLc outgroups, the elderly were rated significantly higher on the harm \((M = 3.68, SE = .06)\), fairness \((M = 3.47, SE = .06)\), loyalty \((M = 3.04, SE = .05)\), authority \((M = 3.04, SE = .05)\), and purity \((M = 2.60, SE = .07)\) foundations compared to housewives \((M = 3.43, SE = .06; M = 3.06, SE = .05; M = 2.56, SE = .05; M = 2.83, SE = .05; M = 2.37, SE = .07,\text{ respectively})\). Lastly, for the LwLc outgroups, the welfare recipients were rated significantly higher on the loyalty \((M = 2.71, SE = .06)\), authority \((M = 2.99, SE = .06)\), and purity \((M = 2.51, SE = .06)\) foundations compared to the homeless \((M = 2.41, SE = .06; M = 2.67, SE = .05; M = 2.30, SE = .06,\text{ respectively})\). Since these results produced small effects and the order of means over the outgroup types remained consistent despite some magnitude differences, reported results were collapsed across outgroup sets. For example, participants’ MFS for LwHc outgroups was a composite score of those who rated the rich and of those who rated business professionals.

MFS for target outgroups were averaged into a composite outgroup score, and a one-way repeated measures multivariate analysis of covariance (MANCOVA) was performed on five
dependent variables (DVs): harm, fairness, loyalty, authority, and purity foundations. The independent variable (IV) was group membership (ingroup vs. outgroup), and political orientation (liberal, moderate, and conservative) served as a covariate. We first ran this analysis on the full dataset and then ran a second analysis with participants’ manipulation check scores as a second covariate. Manipulation check scores were computed based on a series of items embedded in the final questionnaire. Questions were used to examine the possibility a participant perceived a target outgroups as an ingroup instead. For example, socioeconomic status was asked to gauge if participants identified with “the rich” as an ingroup. Other items included checks for business professionals (i.e., “Have you or anyone in your family held a profession in business?”), the homeless (i.e., “Have you or anyone in your family been homeless for an extended period?”), welfare recipients (i.e., “Have you or anyone in your family received welfare?”), housewives (i.e., “Have you or anyone in your family held an occupation that consisted of caring for one’s family, managing household affairs, and doing housework?”), and elderly (i.e., “Have you or anyone in your family been a caretaker for the elderly?”) outgroups. If participants were in a condition that presented one of these groups and were found to identify with a group, they received a 1 for their manipulation check score. If they did not identify with any presented outgroup, participants received a 0 for their manipulation check score.

Results from the full dataset analysis show the DVs were significantly affected by group membership, $F(5, 376) = 21.10, p < .001, \eta_p^2 = .22$, using the Wilks’ criterion. Specifically, results showed a significant effect of group membership on the harm, $F(1, 380) = 67.18, p < .001, \eta_p^2 = .15$, fairness, $F(1, 380) = 18.89, p < .001, \eta_p^2 = .05$, loyalty, $F(1, 380) = 57.35, p < .001, \eta_p^2 = .13$, and purity, $F(1, 380) = 8.67, p < .01, \eta_p^2 = .02$, foundations. Pairwise comparisons with Bonferroni adjustments for multiple comparisons showed participants’ ratings
of outgroups were significantly lower on the harm ($M = 3.37, SE = .04, p < .001$), fairness ($M = 3.17, SE = .04, p < .001$), loyalty ($M = 2.75, SE = .04, p < .001$), and purity ($M = 2.54, SE = .05, p < .01$) foundations compared to ingroups ($M = 3.64, SE = .04; M = 3.35, SE = .05; M = 3.04, SE = .05; M = 2.65, SE = .06$, respectively; see Table 1).

### Table 1

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<td></td>
<td>Outgroup</td>
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<td>.037</td>
<td>2.906</td>
</tr>
<tr>
<td>Purity</td>
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<td>.057</td>
<td>2.537</td>
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<tr>
<td></td>
<td>Outgroup</td>
<td>2.542</td>
<td>.047</td>
<td>2.450</td>
</tr>
</tbody>
</table>

We then examined these findings after using participants’ manipulation check score as a second covariate. Results from this second analysis show the DVs were significantly affected by group membership, $F(5, 373) = 17.70, p < .001, \eta_p^2 = .19$, using the Wilks’ criterion.

Specifically, results showed a significant effect of group membership on the harm, $F(1, 377) = 55.93, p < .001, \eta_p^2 = .13$, fairness, $F(1, 377) = 19.29, p < .001, \eta_p^2 = .05$, and loyalty, $F(1, 377) = 49.62, p < .001, \eta_p^2 = .12$, and purity, $F(1, 377) = 5.51, p < .05, \eta_p^2 = .01$, foundations. Pairwise comparisons with Bonferroni adjustments for multiple comparisons showed participants’ ratings of outgroups were significantly lower on the harm ($M = 3.66, SE = .05, p < .001$), fairness ($M = 3.37, SE = .05, p < .001$), loyalty, ($M = 3.02, SE = .05, p < .001$), and purity, ($M = 2.67, SE = .06, p < .05$), foundations compared to ingroups ($M = 3.38, SE = .05; M = 3.18, SE = .04; M = 2.73, SE = .04; M = 2.57, SE = .05$, respectively; see Table 2).
Table 2
Results of group membership on MFS with manipulation check as a second covariate

<table>
<thead>
<tr>
<th>DV</th>
<th>Membership</th>
<th>Mean</th>
<th>Std. Error</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
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<td></td>
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<td></td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td></td>
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<td>Upper Bound</td>
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<tr>
<td>Harm</td>
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<td>.052</td>
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<td>.043</td>
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<td>2.809</td>
</tr>
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<td>.054</td>
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<td></td>
<td></td>
<td>2.790</td>
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</table>

Based on these results, hypothesis 1 is supported. We expected participants would be sensitive to the harm and fairness foundations when rating an outgroup compared to an ingroup. Consistent with this outgroup threat hypothesis, participants rated outgroups as being significantly lower on harm and fairness regardless of their manipulation check score. These data also provide partial support for hypothesis 2. We expected participants to be sensitive to the loyalty, authority, and purity foundations when rating an ingroup compared to an outgroup. Participants did score higher on the loyalty foundation when evaluating the ingroup (regardless of their manipulation check score); however, the differences between ingroups and outgroups along the authority and purity foundations did not reach significance.

To further tease apart this relationship and examine if dimensions of warmth and competence moderate the relationship between group membership and perceptions of moral foundations, a 2 (warmth: low vs. high) x 2 (competence: low vs. high) repeated measures MANCOVA was performed on the same DVs: harm fairness, loyalty, authority, and purity moral foundations. We also included political orientation (liberal, moderate, vs. conservative) as a
covariate in the analysis. We first ran this analysis on the full dataset and then ran a second analysis with participants’ manipulation check scores as a second covariate. Results from the full dataset analysis show main effects of both warmth, \( F(5, 372) = 25.64, p < .001, \eta^2_p = .26, \) and competence, \( F(5, 372) = 45.66, p < .001, \eta^2_p = .38, \) using the Wilks’ criterion.

Pairwise comparisons with Bonferroni adjustments for multiple comparisons showed groups that were high in warmth were perceived as significantly higher on harm (\( M = 3.59, SE = .04, p < .001 \)), fairness (\( M = 3.29, SE = .04, p < .001 \)), and loyalty (\( M = 2.93, SE = .04, p < .001 \)) compared to groups low in warmth (\( M = 3.29, SE = .04; M = 3.15, SE = .04; M = 2.71, SE = .04 \), respectively). They also showed groups who were high in competence were perceived as significantly lower on harm (\( M = 3.37, SE = .04, p < .001 \)) and fairness (\( M = 3.05, SE = .04, p < .001 \)), but significantly higher on loyalty (\( M = 2.93, SE = .04, p < .001 \)), authority (\( M = 3.08, SE = .04, p < .001 \)), and purity (\( M = 2.64, SE = .05, p < .001 \)) foundations compared to groups low in competence (\( M = 3.51, SE = .04; M = 3.39, SE = .04; M = 2.71, SE = .04; M = 2.91, SE = .04; M = 2.50, SE = .05 \), respectively).

Although there are significant main effects, there are also interactions that qualify them, \( F(5, 372) = 39.64, p < .001, \eta^2_p = .35. \) Specifically, there are crossover interactions of warmth and competence on the harm, \( F(1, 376) = 69.34, p < .001, \eta^2_p = .16, \) and fairness, \( F(1, 376) = 137.36, p < .001, \eta^2_p = .27, \) foundations such that the effect of warmth on these foundations is opposite depending on the effect of competence. High warmth groups were rated higher on the harm foundation when they were high in competence (\( M = 3.65, SE = .04 \)) compared to low in competence (\( M = 3.54, SE = .05 \)), but low warmth groups were rated lower on the harm foundation when they were high in competence (\( M = 3.09, SE = .05 \)) compared to low in competence (\( M = 3.48, SE = .05 \)). A similar pattern was found for the fairness foundation: high
warmth groups were rated higher on the fairness foundation when they were high in competence ($M = 3.35, SE = .05$) compared to low in competence ($M = 3.22, SE = .05$), but low warmth groups were rated lower on the fairness foundation when they were high in competence ($M = 2.75, SE = .05$) compared to low in competence ($M = 3.56, SE = .05$).

There is also a spreading interaction that qualifies the main effect of competence on the authority, $F(1, 376) = 9.84, p < .01, \eta_p^2 = .03$, foundation. Specifically, low warmth groups were rated significantly higher on authority when they were also high in competence ($M = 3.13, SE = .04$) compared to low warmth groups that were low in competence ($M = 2.85, SE = .05$). High warmth groups were also rated slightly higher when they were also high in competence ($M = 3.03, SE = .05$) compared to high warmth low competence groups ($M = 2.96, SE = .05$), but this difference was not significantly different. See Table 3 for the full table of means.

Table 3

Results of warmth/competence on MFS, full dataset

<table>
<thead>
<tr>
<th>DV</th>
<th>Warmth</th>
<th>Competence</th>
<th>Mean</th>
<th>Std. Error</th>
<th>95% Confidence Interval</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
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<tr>
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<tr>
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<td>.049</td>
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We then examined this 2 (warmth: low vs. high) x 2 (competence: low vs. high) repeated measures MANCOVA after using participants’ manipulation check score as a second covariate. Results from this second analysis show main effects of both warmth, $F(5, 369) = 18.39, p < .001, \eta^2_p = .20$, and competence, $F(5, 369) = 37.54, p < .001, \eta^2_p = .34$, using the Wilks’ criterion.

Pairwise comparisons with Bonferroni adjustments for multiple comparisons showed groups that were high in warmth were perceived as significantly higher on harm ($M = 3.59, SE = .05, p < .001$), fairness ($M = 3.29, SE = .04, p = .001$), and loyalty ($M = 2.91, SE = .05, p < .001$) foundations compared to groups low in warmth ($M = 3.31, SE = .05; M = 3.16, SE = .04; M = 2.69, SE = .05$, respectively). They also showed groups that were high in competence were perceived as significantly lower on harm ($M = 3.39, SE = .05, p < .001$) and fairness ($M = 3.06, SE = .04, p < .001$) foundations, but significantly higher on loyalty ($M = 2.91, SE = .04, p < .001$), authority ($M = 3.07, SE = .04, p < .001$), and purity ($M = 2.67, SE = .06, p < .001$) foundations compared to groups low in competence ($M = 3.52, SE = .05; M = 3.39, SE = .05; M = 2.68, SE = .05; M = 2.90, SE = .04; M = 2.52, SE = .05$, respectively).

Although there are significant main effects of each IV, there are also interactions that qualify them, $F(5, 369) = 37.73, p < .001, \eta^2_p = .34$. Specifically, there are crossover interactions of warmth and competence on the harm, $F(1, 373) = 68.00, p < .001, \eta^2_p = .15$, and fairness, $F(1, 373) = 125.98, p < .001, \eta^2_p = .25$, foundations such that the effect of warmth on these foundations is opposite depending on the effect of competence. High warmth groups were rated higher on the harm foundation when they were high in competence ($M = 3.66, SE = .05$)
compared to low in competence ($M = 3.52, SE = .05$), but low warmth groups were rated lower on the harm foundation when they were high in competence ($M = 3.11, SE = .06$) compared to low in competence ($M = 3.51, SE = .05$). A similar pattern was found for the fairness foundation: high warmth groups were rated higher on the fairness foundation when they were high in competence ($M = 3.38, SE = .05$) compared to low in competence ($M = 3.21, SE = .05$), but low warmth groups were rated lower on the fairness foundation when they were high in competence ($M = 2.75, SE = .06$) compared to low in competence ($M = 3.57, SE = .05$).

There is also a spreading interaction that qualifies the main effect of competence on the authority, $F(1, 373) = 9.55, p < .01, \eta^2_p = .03$, foundation. Specifically, low warmth groups were rated significantly higher on authority when they were also high in competence ($M = 3.13, SE = .05$) compared to low warmth groups that were low in competence ($M = 2.83, SE = .05$). High warmth groups were also rated slightly higher when they were also high in competence ($M = 3.03, SE = .05$) compared to high warmth low competence groups ($M = 2.96, SE = .05$), but this difference was not significantly different. See Table 4 for the full table of means.

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Results of warmth/competence on MFS with manipulation check as a second covariate</th>
</tr>
</thead>
<tbody>
<tr>
<td>DV</td>
<td>Warmth</td>
</tr>
<tr>
<td></td>
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<tr>
<td>Harm</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>High</td>
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<tr>
<td></td>
<td>High</td>
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<td></td>
<td>High</td>
</tr>
<tr>
<td>Loyalty</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>High</td>
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<tr>
<td></td>
<td>High</td>
</tr>
</tbody>
</table>
Both warm and competence (and their interaction) moderated the effect of group membership on perceptions of moral foundations, providing empirical support for hypothesis 3. For harm and fairness foundations, differences between ingroups and outgroups are mainly a function of LwHc outgroups, with these outgroups scoring the lowest on both foundations. This finding supports hypothesis 3a: participants expect these competitive outgroups to be harmful and unfair, so they do not see these domains as morally relevant to these outgroups compared to other groups. However, the HwLc outgroups were rated significantly lower than the HwHc (ingroup) and LwLc groups on the fairness foundation as well. For the loyalty foundation, differences between ingroups and outgroups are mainly a function of HwHc ingroups and LwLc outgroups, with the former rated the highest and the latter rated the lowest. For the authority foundation, differences between ingroups and outgroups were mainly a function of LwLc outgroups, with these outgroups scoring the lowest. Lastly, the effect for the purity foundation appears to be driven by LwLc outgroups as well, with these outgroups scoring the lowest, providing support for Hypothesis 3b: participants expect LwLc groups to be disgusting, so they do not see this domain as being relevant to this particular group compared to other groups.

**Discussion**

These results suggest how people perceive group-level moral foundations depends on how they categorize others. Given the propensity for groups to protect themselves and enhance
their welfare, hypothesis 1 predicted participants would rate outgroups lower on the harm and fairness foundations compared to ingroups. Results supported this pattern of findings. Such low outgroups scores align with the notion that ingroups are sensitive to threats from outgroups. Since outgroups can invoke negative intent (e.g., consuming resources, inflicting physical harm), the ingroup likely does not consider the harm and fairness foundations to be particularly relevant to the outgroup.

Hypothesis 2 predicted participants would rate ingroups higher on loyalty, authority, and purity compared to outgroups. Results demonstrated participants rated ingroups significantly higher on the loyalty foundation compared to outgroups, providing partial support to hypothesis 2. This supports the idea that loyalty, patriotism, and self-sacrifice to one's ingroup are significant parts of a cohesive social identity and those who go against the ingroup are often treated with disdain (Hogg & Abrams, 1988). However, the results did not show any significant differences between authority or purity for ingroups compared to outgroups.

This last finding contradicts the current hypotheses but still aligns with theory. Ingroups and outgroups are salient entities. For groups to retain their entitativity, both in- and outgroups must show obedience and respect for authority, albeit for their respective identities. Each group has leaders and provides structure for its members. Thus, they are likely to show similar levels of the authority foundation. Additionally, practices related to purity serve social functions (e.g., indicating cultural boundaries; Soler, 1973/1979). Given the often salient differences of group cultures, it seems possible ingroups and outgroups would not significantly differ in their MFS on the purity foundation. An alternative explanation is some items on the MFQ may not lend themselves to the manipulation used in this study. For example, rather than asking about gender
roles in society for an authority item, it may have been more appropriate to ask about the group's role in society.

The results of this experiment also have implications for moderators of moral foundations at the group level. The stereotype content model suggests different types of outgroups promote different expectations (Fiske et al., 2002). These expectations should also automatically trigger relevant perceptions of moral domains. Thus, hypothesis 3 predicted the effect of group membership on perceptions of moral foundations would be moderated by warmth and competence. Results supported this prediction. For harm and fairness, differences between ingroups and outgroups appeared to be a function of LwHc outgroups. Compared to any other type of group, LwHc outgroups were rated lowest on these foundations. This is likely because these outgroups tend to be viewed as competitive and invoke negative intent from the ingroup's perspective (Fiske et al., 2002). Thus, outgroups are expected to be harmful and unfair and are therefore not seen as violating expectations of harm and fairness. However, HwLc outgroups were rated significantly lower on the fairness foundation compared to HwHc and LwLc groups, but they were rated significantly higher on the fairness foundation compared to LwHc outgroups. Perhaps because these types of groups (e.g., housewives, the elderly) are often neglected or do not have as much power as other groups, participants perceived fairness concerns as being more relevant to HwLc outgroups than LwHc outgroups. Also, since LwLc outgroups may suffer more marginalization compared to HwLc outgroups, LwLc outgroups might be seen as being more concerned about fairness than HwLc outgroups.

For the loyalty foundation, the effect was driven by HwHc ingroups (rated the highest) and LwLc outgroups (rated the lowest). This makes sense given loyalty, patriotism, and self-sacrifice to one's ingroup are significant parts of a cohesive social identity. Also, if an ingroup
does not perceive its group members to be loyal, deviants are often treated with disdain. To the extent ingroup members are not loyal, they may be ostracized or exiled from the group to protect the ingroup's welfare. Conversely, LwLc outgroups are likely viewed as having members with little loyalty to one another and being more self-interested, leading to the perception of a loose social identity. Indeed, some of these outgroups (e.g., the homeless) may have even once been part of an ingroup but have since been exiled to protect the ingroup's welfare. Furthermore, these groups likely have members who would like to become non-group members (e.g., homeless people would probably prefer to have a home than to be homeless). Such group members would, therefore, have little loyalty to their group.

For the authority foundation, differences between ingroups and outgroups were mainly a function of LwLc outgroups being rated the lowest. Since the authority foundation is concerned with society's tendency to be structured hierarchically, LwLc outgroups are likely not expected to fulfill their duties in society, rendering this foundation less relevant to this group. Indeed, LwHc groups were rated highest on this foundation. This may be due to the hierarchical structure in many business settings and upper-class society. For such a hierarchy to effectively function, those working within the structure must show obedience and respect for those above them in the hierarchy. It could also be that business professionals and the rich are often thought of as powerful leaders.

Lastly, the effect on the purity foundation appears to be driven by LwLc outgroups as well. LwLc outgroups were rated lowest on the foundation compared to any other group. These outgroups may be associated with moral overtones of injustice, indignation, and bitterness toward illegitimate behavior, and they could be viewed as social contaminants in society. It might also be that the particular target groups used in this study (i.e., welfare recipients and the
homeless) could be perceived as or are associated with being physically disgusting to others (e.g., smelly, greasy, dirty).

It could be that stereotypic expectations drive moral foundation use at the group level. When individuals have stereotypic expectations of a particular group, moral domain-relevant cues about these expectations become more salient. If a participant group is expected to be harmful, for example, the harm foundation might not be seen as relevant to that group because the stereotypic expectations create a standard by which to judge it. In other words, if the group is expected to be harmful, why would one perceive it as concerning itself with being caring? However, if a particular group violates its stereotypic expectation, perhaps by helping the ingroup in some way, the moral foundation associated with that expectation should alter this perception. In other words, the present findings demonstrate how, depending on the levels and dimensions of social categorization, groups are stereotypically viewed when it comes to morality.

These findings help explain why opposing groups disagree on many moral issues and find it hard to understand how a person could hold the beliefs of the other side. Not only do people use a simple ingroup/outgroup categorization to base their moral values, judgments, and perceptions on, they also do this by differentiating among outgroup types. These findings also suggest the more likely one is to stereotype based on group membership, the more likely it is one will rely on stereotypic moral foundations to form their judgment.

While the present study provides initial evidence for the effect of group membership on the use of moral foundations, it does have limitations. First, participants were individuals who imagined other groups when rating target groups. Given the results indicated different stereotypic expectations might drive the use of moral foundations, it may be that when
interacting with another group, different moral foundations are implemented to differing degrees. This may especially be true when interacting with people whose group membership may not be particularly salient (e.g., housewives, welfare recipients, business professionals). Future research might use a minimal group paradigm to address this issue.

Second, the present study did not investigate how motivation may influence the relationship between group membership and moral foundation configuration. Although moral foundations have both proscriptive and prescriptive (c.f., approach and avoidance) components, it may be that approach-avoidance motivations influence the use of moral foundations in specific contexts. Given the current results, future research should attempt to examine how different forms of motivation might moderate the relationships between group membership and moral foundations.

Finally, there is some concern about the locus of moral concern versus the target of moral judgment (c.f., Graham, 2013). The current research framed the targets of moral judgment as particular groups (i.e., ingroups and outgroups) and examined group-level moral foundation use as targets of moral judgment. However, it may be that individuals also used a locus of moral concern to derive their judgments. For example, when individuals were asked to consider LwHc outgroups, they judged these groups to be less concerned with harm and fairness concerns in the present study. The target of their moral judgment was the LwHc outgroup (e.g., business professionals) but their locus of moral concern may have been their ingroup (e.g., group-protect). Thus, future research should attempt to tease apart these concerns.

As globalization continues to unfold, societies are becoming more diverse. With such diversity come differing notions about how to regulate selfishness and how we ought to live together. Many of the ideas on how best to solve these issues are rooted in moral values. Moral
foundations theory offers a useful way to conceptualize and measure such values. It has the potential to shed light on the origin of many conflicts. As research on moral psychology advances, perhaps it will clarify the role morality plays in group thought and behavior.
References


Appendix A

At this time, we would like you to think about a specific group of people that you most identify with on campus (for example, a group of friends, an organization) [the rich, business professionals, housewives, the elderly, the homeless, welfare recipients]. When you decide whether something is right or wrong about this specific group of people, to what extent are the following considerations relevant to your thinking? Note: this is purely your perspective about the group you have in mind. Please keep in mind the typical member of this specific group and rate each statement using this scale:

[0] = not at all relevant (This consideration has nothing to do with my judgments of right and wrong)
[1] = not very relevant
[2] = slightly relevant
[3] = somewhat relevant
[4] = very relevant
[5] = extremely relevant (This is one of the most important factors when I judge right and wrong)

______ Whether or not they suffered emotionally
______ Whether or not they were treated differently than others
______ Whether or not their actions showed love for their country
______ Whether or not they showed a lack of respect for authority
______ Whether or not they violated standards of purity and decency
______ Whether or not they were good at math
______ Whether or not they cared for someone weak or vulnerable
______ Whether or not they acted unfairly
______ Whether or not they did something to betray their group
______ Whether or not they conformed to the traditions of society
______ Whether or not they did something disgusting
______ Whether or not they were cruel
______ Whether or not they were denied their rights
______ Whether or not they showed a lack of loyalty
______ Whether or not their actions caused chaos or disorder
______ Whether or not they acted in a way that God would approve of
Please read the following sentences while keeping in mind the typical member of the specific group of people that you most identify with [the rich, business professionals, housewives, the elderly, the homeless, welfare recipients]. Remember, this is purely your perspective about the group you have in mind. Then, indicate your agreement or disagreement:

[0] Strongly disagree
[1] Moderately disagree
[2] Slightly disagree
[3] Slightly agree
[5] Strongly agree

______Compassion for those who are suffering in this group is the most crucial virtue.
______When the government makes laws, the number one principle should be ensuring that everyone in this group is treated fairly.
______I believe they are proud of their country’s history.
______Respect for authority is something all their children need to learn.
______They should not do things that are disgusting, even if no one is harmed.
______It is better for them to do good than to do bad.
______One of the worst things they could do is hurt a defenseless animal.
______Justice for them is the most important requirement for a society.
______They should be loyal to their family members, even when their family members have done something wrong.
______Their men and women each have different roles to play in society.
______I would call some acts they do wrong on the grounds that they are unnatural.
______It can never be right for them to kill a human being.
______I believe they would think it’s morally wrong that rich children inherit a lot of money while poor children inherit nothing.
______It is more important for them to be team players than to express their selves.
______If any of them were a soldier and disagreed with their commanding officer’s orders, I believe they would obey anyway because that is their duty.
______Chastity is an important and valuable virtue for them.