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Emotions and their Effects on Moral Foundation Endorsements

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Abstract

This research examined the effects of induced emotional states on individuals' moral values endorsements. Participants were induced to feel joy, hope, fear, or anger at either the individual or group level through an event recall task. Subsequently, their endorsements of six moral foundations were measured. Results did not support the hypothesis that joy, hope, fear, or anger, experienced at the individual or group level, would significantly affect moral foundations endorsements. Endorsements of fairness/cheating did not significantly differ from care/harm, which in turn did not differ from liberty/oppression. These three foundations were rated as significantly more relevant than all others.

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Background

Moral values and making moral judgments are implicated in every aspect of social life, from interpersonal interaction to law and policy. The framers of the United States constitution were heavily influenced by natural law theory, which places great importance on human reason, through which people can understand the right and wrong actions to take and figure out moral truths (Lambright, 2014). This kind of ideology reflects a rationalist approach to morality, which states that reflection and reasoning lead to moral knowledge and judgments (Kohlberg, 1969; Turiel, 1983). Looking at morality in this way largely closes off the possibility that unintentional forces could guide the moral values we endorse and moral judgments we make. Doing so also prevents consideration of the role of indirect, unconscious forces that might influence the making of moral value endorsements. This could lead to uninformed social judgments and thus negative social interactions amongst people. Additionally, this could bring about improper judgments of character within the political sphere.

The social intuitionist model (Haidt, 2001) opposes the rationalist approach to morality and posits that moral positions are reached through intuition and unconscious processes rather than reasoning and reflection. For example, studies have shown that people will claim that incest is wrong, not on the basis of any explicit justification, but rather on the basis of a "gut feeling" for their decision (Haidt, Bjorklund, & Murphy, 2000). This theory, in combination with the notion that emotions can be largely unconscious phenomena (Winkielman & Berridge, 2004), supports the possibility that emotions could have a significant role in moral value endorsements.

Moral foundations theory, or MFT (Graham et al., 2013), is supported by the social intuitionist model (Haidt, 2001) and uses it to explain that the rapid unconscious moral intuitions it proposes are guided by specific concrete moral foundations like care/harm, or fairness/cheating. The MFT states that there are specific "foundations" of morality and lists five primary moral foundations that guide human morality: care/harm, fairness/cheating, loyalty/betrayal, authority/subversion, and sanctity/degradation. Care/harm deals with the idea of not liking other people's pain, fairness/cheating deals with altruism and concepts like justice, loyalty/betrayal deals with patriotism and sacrificing oneself for their group, authority/subversion deals with leadership and followership, and sanctity/degradation deals with avoiding disgust and wanting to live in a more noble way (Graham et al., 2013). A sixth foundation of liberty/oppression, which deals with people's reactions to having their liberty restricted, has also been proposed (Iyer, Koleva, Graham, Ditto, & Haidt, 2012). The authors of the MFT endorse the

idea that various emotions might be characteristic of some of the foundations. For example, they suggest that disgust is characteristically associated with issues of sanctity/degradation.

Emotions have been shown to influence almost all human psychological processes, ranging from feelings of life satisfaction (Schwarz & Clore, 1983) to even taste perception (Noel & Dando, 2015). More pertinent to the current issue, specific emotions like disgust have been shown to cause participants to amplify the importance of purity-related behaviors in comparison to other moral domains like care/harm (Horberg, Oveis, Keltner, & Cohen, 2009). This highlights the relevance of emotions, as well as the specificity of emotions within the domain of morality.

The authors of the MFT also argue that fear is a characteristic emotion of the authority/subversion foundation and that anger is a characteristic emotion of the fairness/cheating foundation. The role of positively valenced emotions like joy and hope in the moral domain is largely unexplored. However, there is some evidence that could support the notion that joy is related to the care/harm foundation and that hope is related to the liberty/oppression foundation. For example, research has shown that people who are more dispositionally happy report higher motivation to enact kind behaviors (Otake, Shimai, Tanaka-Matsumi, Otsui, & Fredrickson, 2006), which relates to care/harm. Additionally, Golan-Agnon (2010) recognized the role of hope in the process of reconciliation after the abolition of apartheid in South Africa and suggested that increased hope is needed to solve the political tensions between Israel and Palestine. Both of these conflicts are characterized by issues of liberty/oppression.

Emotions are not solely experienced by individuals as individuals; they have been shown to be felt on a group level as well (Mackie, Devos, & Smith, 2000; Smith, 1993). This idea of group-level emotion opens up the possibility that in addition to individual emotions, emotions felt in the context of being a member of a specific group could also be relevant in terms of making moral value endorsements. Group-level emotions have been shown to lead to increased support for ingroup members (Smith & Mackie, 2016), so it is possible that people as group members could endorse the care/harm foundation more than individuals across any specific emotion.

This study explored whether experiencing certain emotions can lead to some moral foundations being more endorsed than others. We measured both positively (hope and joy) and negatively (fear and anger) valenced emotions. We hypothesized that different emotion conditions would lead to different levels of endorsement for the different moral foundations measured. Because of the ex-

ploratory nature of this study, making well-supported hypotheses for each emotion condition was not feasible. However, based on what the MFT determines to be characteristic emotions of specific foundations, we hypothesized that

1) Those experiencing anger would endorse the fairness/cheating foundation more than the other foundations.

2) Those experiencing fear would endorse the authority/subversion foundation more than the other foundations.

Furthermore, based on Otake et al. (2006) we hypothesized that

3) Those induced with joy would endorse the care/harm foundation more than the other foundations.

Additionally, based on Golan-Agnon (2010), we hypothesized that

4) Those induced with hope would endorse the liberty/oppression foundation more than the other foundations.

Finally, based on Smith and Mackie (2016) we also hypothesized that

5) Those primed with emotions on a group level would endorse the care/harm foundation more than other foundations across all emotion conditions.

Methods

Participants

363 self-identified United States citizens residing in the U.S. were recruited through the platform Prolific (for \$2.38 compensation). Of those, 28 were excluded based on incorrect responses to either of the two attention check questions embedded randomly throughout the dependent variable items in the online survey. An additional 16 participants were also excluded after failing to correctly respond to a manipulation check question, which asked what emotion they were writing about at the beginning of the study. Thus, the final sample size upon which analyses are based is 319 (49.9% women, 48.6% men, 1.9% other; Mage = 30.64; SD = 10.83). Participants reported their racial/ethnic backgrounds as 65.8% White, 15.4% Asian or Asian American, 7.5% Black or African American, 6.9% Hispanic or Latino, 3.1% Multiracial, 0.3% Middle Eastern or North African, and 0.9% identified as a race/ethnicity that was not listed.

Design

The study was a 2 (group level: individual vs. American) x 4 (emotion: joy vs. fear vs. hope vs. anger) x 2 (moral evaluation: judgment vs. relevance) x 6 (moral foundation: care/harm vs. fairness/

cheating vs. loyalty/betrayal vs. authority/subversion vs. sanctity/degradation vs. liberty/oppression) mixed model design. The independent variables of group level and emotion were measured between subjects, and the dependent variables of moral foundations were measured as repeated measures.

Procedure

Manipulation of emotions and level of emotion. Participants completed an anonymous online survey in which they were first given a two-minute writing task instructing them to relive and write as much as they could and in as much detail as they could about a time within the past year that they felt a randomly assigned emotion of joy, fear, hope, or anger. This manipulation of emotion was crossed with the manipulation of emotion level. Half the participants were asked to relive an emotion they had experienced as an individual, and the other half were asked to relive an emotion they had experienced as an American.

Moral Foundation endorsements. Following the emotion manipulation, participants completed an adapted version of the 30-item Moral Foundations Questionnaire (MFQ-30; Graham, Haidt, & Nosek, 2009). This questionnaire measured moral endorsements of five moral foundations of care/harm, fairness/cheating, loyalty/betrayal, authority/subversion, and sanctity/degradation based on two subscales: Moral Relevance and Moral Judgments. Two attention check questions were randomly embedded in the MFQ-30, with the first in the Moral Relevance subscale and the second in the Moral Judgments subscale.

In the Moral Relevance subscale, each moral foundation was measured with three items on a 6-point Likert scale ranging from Not at all relevant (1) to Extremely relevant (6) to assess the relevance of each foundation to one's decision about whether something is right or wrong. For example, participants were prompted to indicate the extent to which the following statement was relevant to their consideration of whether something is right or wrong: "Whether or not someone suffered emotionally." In the Moral Judgments subscale, each moral foundation was measured with three items on a 6-point Likert scale ranging from Strongly disagree (1) to Strongly agree (6) to assess the extent to which each foundation factors into one's moral judgments. For example, participants were prompted to indicate their level of agreement or disagreement with the following statement, "Compassion for those who are suffering is the most crucial virtue."

Since the MFQ-30 measures only five moral foundations, this instrument was adapted with the addition of items measuring the sixth moral foundation of liberty/oppression theorized by Iyer et al. (2012). Six items measuring liberty/oppression ($\alpha = .722$) were

added to the MFQ-30, three in each of the Moral Relevance and Moral Judgments subscales.

Manipulation checks. To assess the effectiveness of the emotion manipulation, participants were asked to state the emotion they were asked to write about. They were then asked to indicate the extent to which they felt this emotion on a 5-point Likert scale ranging from Not at all (1) to Very strongly (5). To assess the effectiveness of the group level manipulation, participants were asked the extent to which they wrote about their emotion as an individual or as an American on a 7-point Likert scale ranging from Individual (1) to American (7).

Results

Manipulation check. To assess the extent to which participants felt the emotion they were instructed to write about, we conducted a 4 (assigned emotion: joy vs. hope vs. anger vs. fear) x 2 (group level: individual vs. American) between-subjects ANOVA on the dependent variable of the level in which participants felt their assigned emotion. ANOVA was the statistical method of choice, as we wanted to see if there were any statistically significant differences between the different emotion conditions. The main effect of emotion on the extent to which participants felt the emotion they were writing about was non-significant, $F(1,315) = .02, p = .879$. The extent to which participants felt the emotion they were asked to write about experiencing did not differ significantly between participants who were assigned the emotions of joy ($M = 3.22, SD = 1.21$), hope ($M = 2.99, SD = 1.12$), anger ($M = 3.07, SD = 1.14$), or fear ($M = 2.69, SD = 1.09$). Considering that the instrument measuring the extent to which participants felt the emotion they were assigned to ranged from Not at all (1) to Very strongly (5), results show that the extent to which participants felt their assigned emotion was roughly at the midpoint of the scale across all emotions. Since participants did not feel joy, hope, anger, or fear at significantly different levels, we concluded that the manipulation was effective, as it was able to make participants feel their assigned emotions to a similar extent, regardless of which emotion they were assigned.

To assess the extent to which participants felt the emotion at the level they were told to write about (as either an individual or an American), we conducted a 4 (assigned emotion: joy vs. hope vs. anger vs. fear) x 2 (group level: individual vs. American) between-subjects ANOVA on the dependent variable of the level in which participants felt their assigned emotion as an individual or as an American. ANOVA was the statistical method of choice, as we

wanted to see if there were any statistically significant differences between the different group-level conditions. The main effect of group level on the extent to which participants felt they were writing about the emotion as an individual or as an American was significant, $F(1, 315) = 395.02, p < .001$, such that those who were asked to write about the assigned emotion as an individual felt the emotion significantly more as an individual ($M = 1.43, SD = 1.18$) as compared to those who were asked to write about the emotion as an American ($M = 4.92, SD = 1.89$). This shows that the manipulation was effective, as it was able to make those in the individual condition feel their assigned emotion significantly more as an individual, as compared to those in the American condition, and make those in the American condition feel their assigned emotion significantly more as an American, as compared to those who were in the individual condition.

Moral judgment and moral relevance composites. To assess the degree to which the instruments of moral relevance and moral judgments measured their intended constructs, Cronbach's alpha values for each moral foundation composite and each instrument were calculated. Results showed that the moral foundation composites in the relevance subscales (see Table 1) had acceptably high Cronbach's alpha values (all above .671). In contrast, the alpha values for the moral foundation composites in the judgment subscales (see Table 2) were variable and four of the six alphas were unacceptably low. Chronbach's alpha measures survey item reliability based on internal consistency within the measure, therefore, the low Cronbach's alpha values in the judgment subscale led us to only use the responses to the moral relevance instrument in our analyses.

Table 1. Means, Standard Deviations, Reliabilities, and Correlations for Moral Relevance Instrument, N = 319

Variable	M	SD	α	1	2	3	4	5	6
1. Care/Harm	4.88	.85	.671	-					
2. Fairness/Cheating	4.96	.82	.695	.64**	-				
3. Loyalty/Betrayal	3.40	1.06	.707	.17**	.18**	-			
4. Authority/Subversion	3.41	1.02	.694	.14*	.16**	.67**	-		
5. Sanctity/Degradation	3.21	1.21	.678	.13*	.10	.54**	.66**	-	
6. Liberty/Oppression	3.78	.89	.787	.59**	.66**	.22**	.19**	.13*	-

Note. **p < .01, *p < .05. α = Cronbach's alpha.

Table 2. Means, Standard Deviations, Reliabilities, and Correlations for Moral Judgment Instrument, N = 319

Variable	M	SD	α	1	2	3	4	5	6
1. Care/Harm	4.55	.92	.444	-					
2. Fairness/Cheating	4.43	.81	.219	.35**	-				
3. Loyalty/Betrayal	2.97	1.06	.565	-.05	-.20**	-			
4. Authority/Subversion	3.65	1.17	.675	-.07	-.20**	.66**	-		
5. Sanctity/Degradation	3.03	1.31	.771	.07	-.06	.55**	.63**	-	
6. Liberty/Oppression	4.49	.86	.572	.33**	.23**	-.19**	-.25**	-.29**	-

Note. **p < .01. α = Cronbach's alpha.

Relevance judgments of moral foundations. Using the responses from the moral relevance instrument, a 6 (moral foundation: care/harm vs. fairness/cheating vs. loyalty/betrayal vs. authority/subversion vs. sanctity/degradation vs. liberty/oppression) x 4 (emotion: anger vs. fear vs. joy vs. hope) x 2 (group level: individual vs. American) mixed model ANOVA was conducted on the dependent variable of moral relevance of the six moral foundations.

The mixed model ANOVA showed a main effect of moral foundation, $F(5, 1,555) = 353.77, p < .001$. Participants endorsed the relevance of the six moral foundation composites at significantly different levels. There were no two-way interactions between moral foundation and emotion, $F(15, 1,555) = 1.31, p = .118$, moral foundation and group level, $F(5, 1,555) = .65, p < .663$, or emotions and group level $F(3, 311) = .52, p = .67$. Neither the assigned emotion nor the group level affected participants' ratings of moral relevance for the moral foundation composites. Statistical significance in this paper is considered $p < .05$.

In order to investigate differences among participants' ratings of moral relevance of the six moral foundations, we compared means between the ratings of the moral relevance of the care/harm foundation ($M = 4.83, SD = .05$), the fairness/cheating foundation ($M = 4.91, SD = .04$), the loyalty/betrayal foundation ($M = 3.41, SD = .06$), the authority/subversion foundation ($M = 3.42, SD = .05$), the sanctity/degradation foundation ($M = 3.21, SD = .06$), and the liberty/oppression foundation ($M = 4.73, SD = .05$). In the cluster of highly relevant foundations, fairness/cheating did not significantly differ from care/harm, which in turn did not differ from liberty/oppression (fairness/cheating was significantly more relevant than liberty/oppression, $p < .001$). All three of these foundations were rated as significantly more relevant than all other foundations, all $ps < .001$. Second, relevance ratings of the loyalty/betrayal and authority/subversion foundations did not significantly differ from each other, but both were rated as significantly more relevant than the sanctity/degradation foundation. See Figures 1-6 for

means and differences between relevance endorsements of the six moral foundations.

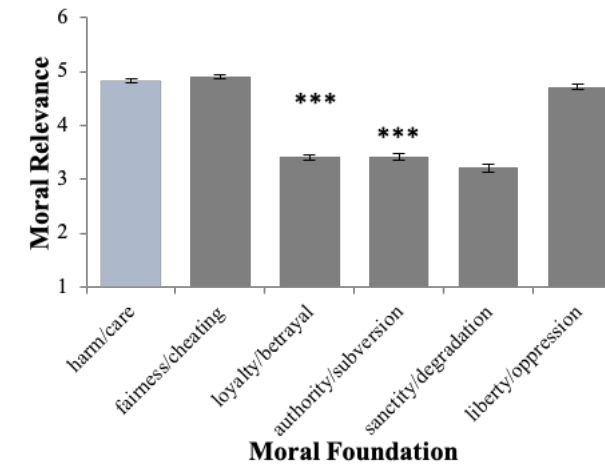


Figure 1. Moral Foundations endorsements that significantly differed from care/harm.

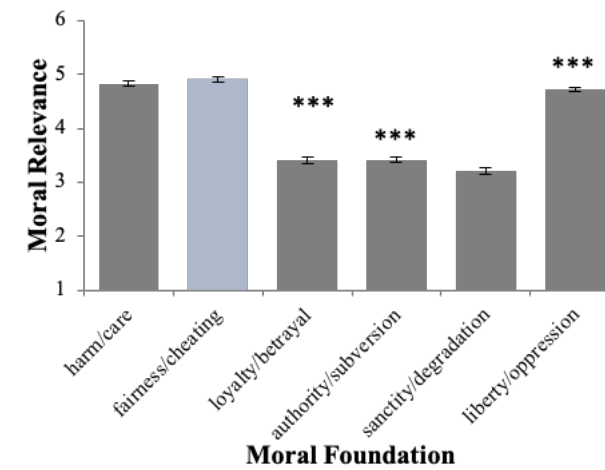


Figure 2. Moral Foundations endorsements that significantly differed from fairness/cheating.

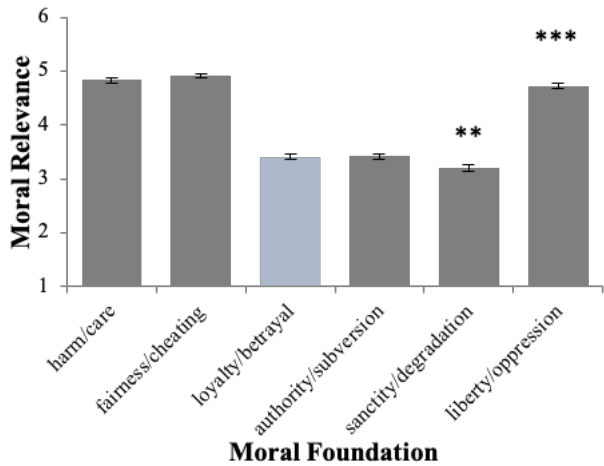


Figure 3. Moral Foundations endorsements that significantly differed from loyalty/betrayal.

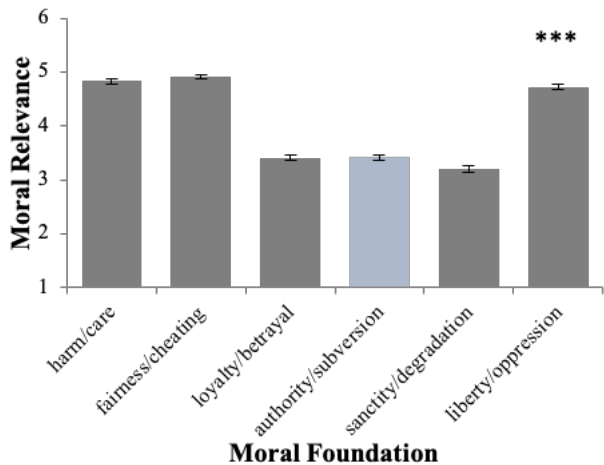


Figure 4. Moral Foundations endorsements that significantly differed from authority/subversion.

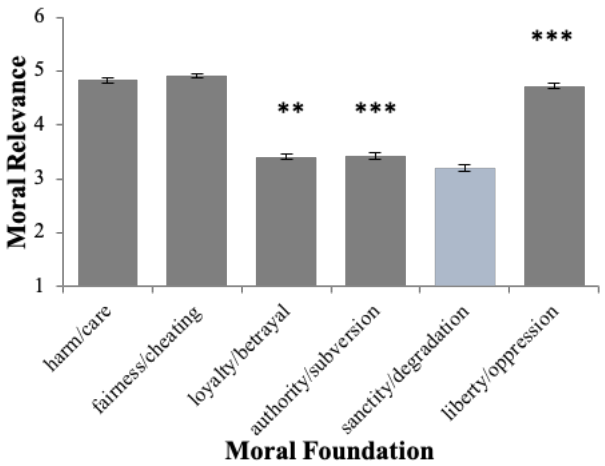


Figure 5. Moral Foundations endorsements that significantly differed from sanctity/degradation.

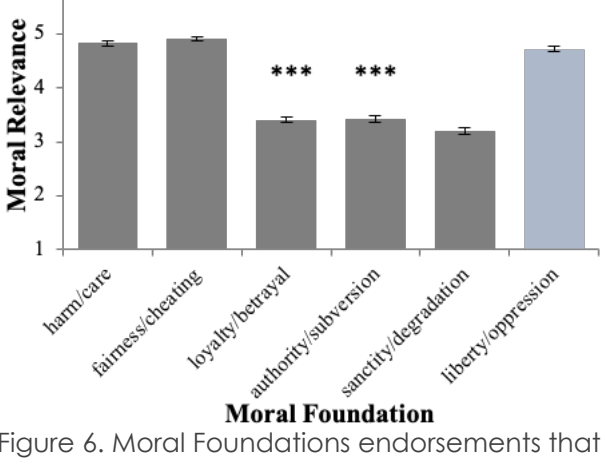


Figure 6. Moral Foundations endorsements that significantly differed from liberty/oppression.

Note. Asterisks denote which foundations are significantly different from the foundation specified in each figure. Figure 1 = care/harm, figure 2 = fairness/cheating, figure 3 = loyalty/betrayal, figure 4 = authority/subversion, figure 5 = sanctity/degradation, figure 6 = liberty/op-

Discussion

Based on prior theories and research, we hypothesized that experiencing certain emotions, at both the individual level and group level, would lead participants to endorse certain moral foundations more than others. Interestingly, none of our main hypotheses

were supported by our results. Being induced with joy, hope, fear, or anger did not lead participants to endorse any of the six moral foundations significantly more or less than the others. Additionally, being induced with joy, hope, fear, or anger at the level of either an individual or an American did not lead participants to endorse any of the six moral foundations significantly more or less than the others.

One significant effect found in the study was that participants endorsed each of the six moral foundations differently from some of the others. This provides support for the Moral Foundations Theory (MFT; Graham et al., 2013), as the theory argues that each of the foundations are separate entities from one another. Results showed that care/harm, fairness/cheating, and liberty/oppression were rated as significantly more relevant than loyalty/betrayal, authority/subversion, and sanctity/degradation. This is consistent with the idea that care/harm, fairness/cheating, and liberty/oppression are all individualizing foundations of morality (Graham et al., 2009, 2011; Iyer et al., 2012), since all participants were filtered for being American citizens, and were therefore a part of an individualistic culture.

Additionally, it was found that those induced to feel an emotion at the level of an individual, felt the emotion significantly more as an individual, as compared to those induced to feel an emotion at the level of an American, who felt the emotion significantly more as an American. This provides support for the intergroup emotions theory (Mackie et al., 2000; Smith, 1993) since it argues that group-based emotions are distinct from individual emotions.

Limitations. We would have liked to use several emotion induction methods, like also inducing emotion by having participants watch videos, in order to ensure the robustness of our manipulation, but due to time and monetary constraints, we were unable to do so. Furthermore, since this study was conducted online, problems like participants potentially lying about prescreen filters or entering multiple study submissions to receive more compensation could have had an effect on sampling error.

Future directions. Being that the link between emotions and morality is largely exploratory at this point, there are many opportunities for future investigation. Further studies could examine the effect of emotions on decisions made in different moral dilemmas and moral scenarios. For example, does being induced with anger vs. joy affect how you make decisions in situations like the trolley problem (Foot, 1967), a moral dilemma in which taking action leads to the saving of five people and the death of one person and not taking action leads to the death of five people and the saving of one person? With the recent global COVID-19 pandemic, further light

could also be shed on whether the group-level, globally felt emotions that arose from the pandemic led to different moral foundation endorsements, compared to before or after the pandemic.

Conclusion

Moral values, making moral judgments, and experiencing emotions are implicated in all aspects of the human social experience. Every day, people like politicians, policemen, and CEOs make statements and decisions that revolve around morality and are subject to the scrutiny of others in regard to these actions. Since it is a given that emotions are felt throughout our existence, it is important to understand their effects on actions involving our moral values. Recognizing whether or not emotions play a role in endorsing different moral values can provide valuable insight into the standard to which we should hold the actions of not only those within our social circle but also those who are the leaders of our society and enforcers of our law.

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About the Author

Ryan Davis is a senior from Orange County, CA, who is graduating with distinction in the Psychological and Brain Sciences major. He currently works as an emergency department medical scribe at Cottage Hospital, volunteers with Doctors Without Walls, a free medical care program for the homeless, and volunteers with Adventures in Caring, a program that helps provide companionship and compassion toward those in hospice care. Ryan has also held various leadership positions in the past, including being co-president of a UCSB organized medical mission trip to rural Panama. After graduating, he hopes to attend medical school and pursue a career in either emergency medicine or surgery.