

Do Emotions Play an Essential Role in Moral Judgments?

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Abstract

The past few decades of moral psychology research have yielded empirical anomalies for rationalist theories of moral judgments. An increasing number of psychologists and philosophers argue that these anomalies are explained well by sentimentalism, the thesis that the presence of an emotion is necessary for the formation of a sincere moral judgment. The present review reveals that while emotions and moral judgments indeed often co-occur, there is scant evidence that emotions directly cause or constitute moral judgments. Research on disgust, anger, sympathy, and guilt indicates that people only reliably experience emotions when judging conduct that is relevant to the welfare of the self and valued others. Moreover, many recent studies have either failed to replicate or exposed crucial confounds in the most cited evidence in support of sentimentalism. Moral psychologists should jettison sentimentalism, and focus instead on how considerations of harm and welfare—the core concepts of rationalist theories—interact with empirical beliefs to shape moral judgments.

Keywords: moral emotion, moral judgment, sentimentalism, disgust, anger

1. Introduction

Are moral judgments constituted by lines of reasoning, or instead by gut feelings? Philosophers have offered accounts defending each side of the debate for centuries (Ayer, 1936; Kant, 1785/1964; Hume, 1740/1978; Stevenson, 1937). For much of the twentieth century, moral psychologists adopted the “rationalist” position that conscious reasoning about harm, welfare, and rights is the core process involved in moral judgments (Colby, Kohlberg, Gibbs, Lieberman, Fischer, & Saltzstein, 1983; Piaget, 1932; Rest, 1999; Turiel, 1983). Researchers explained moral disagreement as arising from either differences in developmental stages of moral reasoning or differences in background beliefs about what types of actions are harmful (Turiel, Hildebrandt, & Wainryb, 1991). Subsequent empirical work in non-western cultures and low socioeconomic status neighborhoods, however, revealed widespread adherence to ethical systems based on caring, purity, authority, and loyalty, rather than harm and fairness exclusively (Schweder & Haidt, 1993). Consequently, researchers began to posit that moral disagreement within and across cultures was best explained by differences in relative prioritization of values. Reminiscent of Hume’s (1740/1978) famous aphorism that “Tis not contrary to reason to prefer the destruction of the whole world to the scratching of my finger,” (p. 416) psychologists ascribed differences in values not to differences in reasoning ability, but rather to differences in emotion-laden intuitions. Some researchers still stand by rationalist theories of moral judgments (e.g., Landy & Goodwin, 2018; Smetana & Killen, 2008; Sousa & Piazza, 2014), even in the wake of the “affect revolution.” However, an increasing number of psychologists and empirically-minded philosophers have embraced sentimentalism, the thesis that emotions play an indispensable role in the formation of novel, sincere moral judgments (Cushman, 2013; Decety,

Michalska, & Kinzler, 2012; Greene, 2008; Nichols, 2004; Prinz, 2007; Schein & Gray, 2017; Young & Koenigs, 2007).

The goal of this paper is to show that sentimentalism is not supported by extant empirical evidence. Clarifying what this assertion means requires distinguishing among many versions of sentimentalism and related but distinct theses. Subsequent sections of the present paper use “sentimentalism” to refer to the *necessity* and *constituency* theses (the reviewed studies will bear on both). The *necessity* thesis asserts that emotions are necessary, but not sufficient for the formation of a novel moral judgment. For instance, Nichols (2004) argues that emotions combine with knowledge of what actions are praised and condemned to produce moral judgments. On this view, emotions play the role of transforming merely proscribed (prescribed) conduct into morally wrong (right) conduct. The *constituency* thesis holds that emotions are both necessary *and* sufficient causes of moral judgments. For example, Prinz (2007) says that “emotions promote or detect conduct that violates or conforms to a moral rule” (p. 68). What Prinz (2007) means by “detect” is that moral judgments do not necessarily involve an appraisal about an action’s moral relevance that is independent of the emotional reaction to the action: “a negative feeling can give rise to a negative moral appraisal without any specific belief about some property in virtue of which something is wrong” (Prinz, 2006, p. 31).

Versions of sentimentalism that make stronger or weaker claims than do the necessity and constituency theses are beyond the scope of the present arguments. For instance, one prominent, weaker claim is that morality consists of judgments that certain emotions are appropriate for people to feel when rules are violated or upheld, such as guilt in response to one’s own transgressions and anger in response to others’ transgressions. On this view, emotions do not cause moral judgments; rather, emotion concepts feature in and elucidate the meaning of

moral claims (Gibbard, 1990). Another claim weaker than the necessity and constituency theses is that emotions are only indispensable to some types of moral judgments. For example, Nichols (2004) entertains the possibility that emotions may only be crucial in reinforcing right from wrong during development, and thereafter not play any constitutive role in moral judgments. A version of sentimentalism that is stronger than the intended targets of this paper claims that *all* moral judgments are accompanied by an emotion. The necessity and constituency theses are committed only to people having a robust *disposition* to respond emotionally when they form novel moral judgments (Ayer, 1936; Sauer, 2012a). For instance, there is nothing anomalous about emotionlessly verbalizing a moral principle that one has committed to memory (Nichols, 2004; Prinz, 2006). Sentimentalism does, however, imply that novel moral judgments (e.g., deciding that eating animals is wrong during a crisis of conscience) or applications of a familiar moral judgment to a novel situation (e.g., judging that *that* person who drove drunk was in the wrong) are highly likely to elicit emotions. Thus, sentimentalism predicts that participants exposed to novel situations in psychological studies will experience emotions when making their judgments.

Sentimentalism is also distinct from moral intuitionism, the view that moral judgments are the product of intuition, as opposed to reasoning. Indeed, intuitionist theories of moral judgments are not conceptually tied to sentimentalism. It is true that Haidt (2001) originally defined moral intuitions in sentimentalist terms: “*moral intuition* can be defined as the sudden appearance in consciousness of a moral judgment, including an affective valence (good–bad, like–dislike), without any conscious awareness of having gone through the steps of searching, weighing evidence, or inferring a conclusion” (p. 818, emphasis in original). This equation of intuitions and emotional reactions traces back to a general theoretical position that liking

judgments reflect affective reactions that have no substantive cognitive component (Zajonc, 1980). As Haidt (2012, p. 45) later noted, moral intuitionism need not embrace this position.

Indeed, moral intuitionism is not even necessarily in tension with rationalist theories of moral judgments. Although Haidt (2012) regards intuition as opposite to reason, many intuitionist theories posit that moral judgments are the conscious output of a complex series of nonconscious inferences (Mikhail, 2009; Railton, 2014; Schein & Gray, 2017). For instance, Hauser and colleagues observed that participants responded to a series of moral dilemmas as if they were trying to uphold the principle of double effect, a moral rule stating that intentionally causing harm is worse than causing harm as an unintended but foreseen consequence (Hauser, Cushman, Young, Kang-Xing Jin, & Mikhail, 2007). Few participants articulated the principle of double effect when defending their pattern of choices, consistent with the idea that their judgments were based on a nonconscious understanding of the principle. Furthermore, it is likely that many intuitive responses to moral dilemmas are the product of previous instances of conscious reasoning and moral debate (Pizarro & Bloom, 2003; Sauer, 2012b). This process may be especially common for relatively uncontroversial judgments in which the relevant considerations were heavily discussed and internalized over the course of development (Smetana & Killen, 2008). Thus, the present review will not regard evidence that intuition plays a role in moral judgments as evidence for or against either sentimentalism or rationalism.

Sentimentalism has appeal in large part because it promises to answer a number of outstanding questions in moral psychology: Why are transgressions sufficient to elicit an emotional response from observers? Why are some moral judgments insensitive to the costs and benefits of the act under consideration? Why do people moralize harmless acts? Why do some people fail to draw a distinction between what is morally wrong and what is simply

counternormative? And what explains the moral failures of psychopaths? The rest of this paper is organized around how sentimentalism answers each of these questions. In each case, sentimentalism provides an elegant answer that has garnered promising preliminary evidence. Follow-up research, however, reveals that evidence in favor of sentimentalism has either not replicated well, or suffers from demonstrable confounds.

2. Why Do Moral Transgressions Elicit Emotions?

Although it is now trite to acknowledge that emotions primarily serve to coordinate responses that facilitate people's own survival and reproduction, people also appear to emotionally respond to the plight of even unrelated others. For instance, Haidt (2003, pgs. 853-854) claims that "[some] emotions can be triggered easily and frequently even when the self has no stake in the triggering event. Simply reading about an injustice, or seeing a photograph of a suffering child, can trigger anger or sympathy. Anger may be most frequently triggered by perceived injustices against the self, and sympathy may be most strongly felt for one's kin, but the point here is that some emotions are easily triggered by triumphs, tragedies, and transgressions that do not directly touch the self." Sentimentalism can easily explain this phenomenon: Emotions play a role in the formation of moral judgments. Thus, to the extent that people can make moral judgments about matters that do not affect them or those near-and-dear to them, they can also experience emotions on behalf of others, even strangers.

However, proponents of sentimentalism have rarely taken systematic, comprehensive steps to show that the co-occurrence of moral judgments and emotions is nonspurious. Although Haidt (2003) acknowledges that emotions that arise during morally relevant situations may be caused by self-interest or by a positive valuation of another person or group, he cites no studies that have ruled out these alternative explanations. Yet research on anger, sympathy, and guilt

reveals that people typically respond emotionally only to conduct that is relevant to the welfare of the self and cared-for others.

Consider anger, which many authors regard as the prototypical response to injustice (Crockett, 2017; Prinz, 2007; Tetlock, 2003). Sanfey et al. (2003) used fMRI to examine how participants respond to suffering unfairness in the “Ultimatum Game” (Güth, Schmittberger, & Schwarze, 1982). In the game, one person is given money by the experimenter (the “proposer”) and chooses how to divide the money between the self and another person who does not have money (the “responder”). Then the responder decides whether to accept the allocation, in which case the decision is paid out accordingly, or reject the allocation, in which case neither party gets anything. The game is played with anonymous strangers and for one round only. If responders cared only about maximizing their own material welfare, they should be willing to accept any positive offer, no matter how small. But the canonical finding is that participants tend to reject allocations that give the responder around 20% or less of the total windfall. A meta-analysis of fMRI studies on the Ultimatum Game confirm that brain regions associated with negative emotionality are strongly activated in responders when they reject unfair offers (Gabay, Radua, Kempton, & Mehta, 2014). These results are consistent with the notion that anger played a role in both the perception of unfairness and the rejection of stingy offers (Greene, 2008; Prinz, 2007). Unfortunately, fMRI scans do not have the temporal resolution to determine whether emotional activation occurs prior to, during, or after moral judgments (Huebner, Dwyer, & Hauser, 2009). Also, results from Ultimatum Game studies are consistent with the possibility that responders are angry because of the harm they incurred, rather than because a transgression occurred per se. Supporting this possibility, Yamagishi et al. (2009) report that many responders will reject unfair offers even when doing so only eliminates their own earnings. Rejection in this

case increases the inequity between the proposer and the responder, suggesting that responders are angry not because they are concerned with equity. More likely, participants simply dislike being placed in a subordinate status, as evidenced by the fact that rejection behavior positively correlates with self-reported assertiveness (Yamagishi et al., 2012).

The best supported interpretation of Ultimatum Game rejections is consistent with a broader literature indicating that people do not reliably experience anger when they judge that an action is morally wrong. In one experiment (Batson, Chao, & Givens, 2009), U.S. participants read a phony news article about soldiers who were tortured by captors to extract sensitive information. Participants who read that a Sri Lankan soldier was tortured thought the event was just as immoral as participants who read that an U.S. soldier was tortured, but only the latter group of participants showed any clear evidence of feeling angry. Participants may have gotten angry at U.S. soldiers getting tortured because they have an altruistic motivation to protect in-group members, or because the torturing of in-group members by out-group members implies that out-group members would also mistreat the self. In contrast, the torturing of Sri Lankans does not necessarily have any implications for U.S. citizens.

Similar studies show that participants get angry and punish transgressors on behalf of the self or a cared-for other, but not in response to transgressions against strangers, even though transgressions against strangers are perceived to be equally wrong (Batson et al., 2007; O'Mara, Jackson, Batson, & Gaertner, 2011; Uehara, Nakagawa, & Tamura, 2014). One set of experiments found that participants reported experiencing a modicum of anger when they witnessed a stranger receive an undeserved insult (Pedersen, McAuliffe, & McCullough, 2018). However, anger did not predict punishment of people who insulted strangers, even though anger did predict punishment when the insult was directed toward the self or a friend. Thus, the trivial

amounts of anger that were reported more likely reflect socially desirable responding than genuine anger. Overall, laboratory experiments that assess how participants respond to transgressions indicate that anger on behalf of strangers is only reliably aroused if the stranger's relevance to the self is salient, as in the case of American soldiers enduring torture.

These findings stand in contrast to studies in which participants report that they would feel angry toward transgressors in response to hypothetical moral violations as described in vignettes (e.g., Carlsmith, Darley & Robinson, 2002; Kahneman, Schkade, & Sunstein, 1998; Salerno & Peter-Hagene, 2013). But these findings may be spurious, as research suggests that humans are poor at predicting the intensity of their emotional responses to situations that they have not yet encountered (Wilson & Gilbert, 2005). Confirming this hypothesis, some research groups have compared how participants respond to actual mistreatment of strangers versus hypothetical descriptions of the same actions. Participants forecast experiencing anger in response to the hypothetical violations, but do not report anger when those violations are occurring right in front of them (Kawakami, Dunn, Karmali, & Dovidio, 2009; Karmali, Kawakami, & Page-Gould, 2017; Pedersen, Kurzban, & McCullough, 2013).

Haidt (2003) drew attention to anger in part to demonstrate that researchers can profit from regarding emotions other than sympathy and guilt as distinctively moral. Yet, it is difficult to find evidence that anger has a direct causal relationship with moral judgments. Maybe sentimentalism fares better with respect to sympathy and guilt, the archetypal "moral" emotions? Let's start with sympathy (which in this paper is synonymous with what others call "compassion" or "empathic concern"). Nichols (2004, p. 63) writes that sympathy "plays a crucial role in leading people to treat harmful transgressions as wrong in a distinctive way. Thus, these relatively simple, primitive emotions supply the sentiment to moral judgment." Put another

way, sympathy is distinct from the perception that somebody has committed a counternormative, harmful action, but is crucial to regarding such an action as morally wrong. Similarly, Pizarro (2000) argues that the arousal of sympathy “may be able to specifically inform the individual that something is wrong” (p. 362).

As Nichols (2004) acknowledges, neither the antecedents nor the consequences of sympathy are intrinsically moral. Sympathy is caused by the belief that a valued other needs help, and generates a desire to improve the welfare of the needy person (Batson, 2011). Both believing that another person is in need and wanting to improve the welfare of a valued other are distinct from having a moral judgment that a needy person deserves help. These conceptual distinctions have been empirically confirmed in experiments showing that sympathy can lead participants to provide help in ways that undermine their own moral judgments (Batson, Ahmad, Yin, Bedell, Johnson, & Templin, 1999). In one dramatic example, participants who were induced to feel sympathy for a terminally ill child were more likely than control participants to place that child higher on a waitlist for end-of-life care. The object of participants’ sympathy benefitted at the expense of other children who were higher on the list for reasons that participants agreed were morally sound (Batson, Klein, Highberger, & Shaw, 1995). In cases like these, sympathy does not aid the delivery of a moral judgment, but rather causes people to violate their conscience.

Unfortunately, caring for someone as an end in itself versus behaving in a caring way as a means of upholding a moral principle are often confused for one another. For instance, Batson, Turk, Shaw, and Klein (1995) reported that participants who experienced sympathy for a distressed person realized that they valued the distressed person more than they previously realized. Pizarro (2000, p. 362) interprets this effect to show that “the individual who is

presented with the distress of another individual uses her or his emotional arousal as a source of information, and subsequently makes the appropriate moral judgments concerning the situation.”

But a simpler interpretation, and the one favored by Batson et al. (1995), is that participants learned that they value the distressed person, not that what happened to the valued person was undeserved. In fact, Batson et al.’s (1995, p. 301) motivating example of the effect is Mark Twain’s Huckleberry Finn, who decided he cared about Jim (a runaway slave) too much to do the “right” thing and turn Jim in!

At best, sympathy may lead people to reason about overlooked moral considerations. For instance, many authors have suggested that people who are high in dispositional sympathy are more likely to believe that they ought to consider the welfare of needy people (Eisenberg, 1982; Hoffman, 2000; Ottoni-Wilhelm & Bekkers, 2016). The causal role that sympathy is hypothesized to play here is not the proximate one that sentimentalism posits, however, in which experiencing sympathy for another’s plight directly causes the observer to judge that the victim deserves help. Rather, dispositional sympathy plays the distal role of encouraging people to make their caring attitude more consistent with moral principles they endorse. In effect, dispositional sympathy seems to motivate something like the following line of *reason*: “I feel bad for *these* needy people; is it really justifiable for me to turn a blind eye toward *those* needy people whose plight does not naturally arouse my compassion? There is no morally relevant difference between *these* people and *those* people, so I conclude that I ought to help all needy people, even if I do not intrinsically value their welfare.”

What about guilt? Even those who have no stock in the sentimentalism debate typically define guilt in moral terms. For instance, Cohen, Panter, and Turan (2012) assert that “the anticipation of guilty feelings about private misdeeds indicates that one has internalized moral

values. Thus, for guilt-prone individuals, public surveillance is not required to prevent moral transgressions; instead, their conscience guides them” (p. 355). Proponents of sentimentalism such as Prinz (2007) have followed suit in defining guilt as a variant of sadness that is “associated with violations of moral rules concerning harm and justice” (p.77). The only hurdle left for sentimentalism to jump is demonstrating that guilt causes moral judgments, rather than the other way around.

However, it is difficult to establish *any* direct relationship between guilt and moral judgments. Jackson, Gaertner, and Batson (2016), for instance, found that participants who were manipulated to believe that they would not feel guilt upon violating a fairness norm were more likely to violate the norm, even though they still regarded the violation as morally wrong. This finding suggests that it is the anticipated negative affect or social evaluation following a transgression, not the fairness judgment per se, which makes guilt effective in regulating behaviour.

Also inconsistent with sentimentalism, researchers have found that people experience guilt even when they did not agree with the putative victim that they had done anything wrong (Baumeister, Stillwell, & Heatherton, 1995). How can one reconcile this phenomenon with the fact that guilt is the emotion most commonly associated with regretting secret misdeeds (Smith, Webster, Parrott, & Eyre, 2002)? For starters, it is likely that people do not typically spontaneously experience guilt when they do not believe that they have done anything wrong. Guilt in such a case would ensue only once the putative victim has expressed his or her misgivings, and would function as an *interpersonal* emotion. Specifically, people chastise themselves for failing to meet standards which they may or may not share because they do not want to jeopardize their long-term relationship with the apparent victim. What about spontaneous

private guilt? It could be that people are ruminating on the fact that they harmed a person to a greater degree than is consistent with how much they value that person's welfare (Sznycer, Schniter, Tooby, & Cosmides, 2015). On this view, people do not experience guilt over transgressions because they are wrong per se, but rather because they regret harming somebody that they value.

3. Why do people make moral judgments that are insensitive to costs and benefits?

Utilitarian theories of morality posit that actions are morally praiseworthy if they maximize overall happiness, and wrong otherwise. In contrast, deontological theories focus on intentions or means rather than outcomes. Although deontology has traditionally been associated with rationalism, utilitarians have long suspected that deontologists' willingness to accept that many of their moral positions have disastrous consequences reflects a lack of reasoned consideration (Singer, 1972; Smart & Williams, 1973). Greene (2008) attempts to empirically substantiate this point of view by showing that deontological theories of morality are elaborate, post-hoc justifications of emotional responses to moral dilemmas. The impetus for this claim is a famous fMRI study in which Greene and his colleagues (Greene, Sommerville, Nystrom, Darley, & Cohen, 2001) examined activation of brain areas involved in emotional responding while participants contemplated several moral dilemmas. The most interesting results came from comparing the footbridge dilemma, which asks participants to consider whether a person should push a fat person in front of an out-of-control train that is racing toward five people who do not notice the train, to the switch dilemma, in which a person needs only to flip a switch to redirect the train from approaching the group of five people to a path that has only one person. Most people prefer the utilitarian solution to the switch dilemma (i.e., choosing to flip the switch), and the deontological solution to the footbridge dilemma (i.e., refusing to push the fat man).

Although emotion areas were activated by both conditions, brain areas were more active when participants considered the footbridge dilemma. Greene (2008) speculates that the footbridge dilemma is more emotionally salient because pushing the fat man to his fate is more direct and personal than flipping a switch, which only indirectly harms the single, unlucky person. This hypothesis implies that people have a disposition to resolve moral dilemmas by avoiding the resolution that elicits the most negative emotional response.

Like all fMRI studies on emotions and moral judgments, Greene et al. (2001) did not have the temporal resolution to definitively show that emotion activation preceded or coincided with participants' moral judgments (Huebner et al., 2009). The soundness of Greene et al.'s (2001) conclusions, then, depend on whether differential emotional activation is the only possible explanation of differences in responses across the switch and footbridge dilemmas. Nakamura (2013) found in a factor analysis of the dilemmas used in Greene et al. (2001) that the footbridge and switch dilemmas both load on the same latent variable to the same extent. The latent variable contained dilemmas that are more likely to elicit emotion than the dilemmas that loaded on other latent variables. Responses to footbridge and switch dilemmas could therefore not be distinguished based on emotional activation. Structural equation modeling revealed that the dilemmas varied in their relationship to factors such as how much people value efficiency and can tolerate risk. Overall, even though the footbridge and switch dilemmas juxtapose the same pair of outcomes, they may differ in the moral judgments they elicit because of differences in cognitive processes rather than because of differences in emotional activation.

The disposition to resolve moral dilemmas according to the relative strength of each potential resolution's emotional salience also does not generalize to all dilemmas. In a series of studies, Royzman, Goodwin, and Leeman (2011) had participants contemplate dilemmas in

which people would have to commit disgusting acts to save a loved one from tragedy. Based on sentimentalism, the authors hypothesized that participants higher in trait disgust than in trait sympathy would refuse to commit the disgusting act, whereas participants relatively higher in trait sympathy would be more willing to commit the disgusting act. All three studies, however, supported the rationalist alternative: Participants did not resolve moral dilemmas by avoiding the resolution that was incongruent with their emotional dispositions, but rather by avoiding the resolution that they perceived imposed the most harm.

In a separate line of inquiry, researchers have also proposed that emotions play a role in the most blatant violation of utilitarianism: Moral absolutism. Moral absolutism refers to an opposition to certain actions that violate “sacred values” (Tetlock, 2003), such as loyalty to one’s country or opposition to ethnic profiling, no matter what the costs or benefits are of upholding such values. The mere existence of moral absolutism would seem to disconfirm theories that regard perceptions of harm as central to moral judgments (e.g., Turiel, 1983; Schein & Gray, 2017). But many pronouncements of absolutism are lip service paid to those who benefit from sanctifying certain values (Tetlock, 2003)—how can one tell when self-identified moral absolutists are being genuine? Prinz (2007) suggested that the presence of an emotion may serve as a litmus test of a moral judgment’s sincerity. If this claim is correct, then Scott, Inbar, and Rozin (2016) found that 45% of respondents in their survey sample had a sincere absolutist opposition to genetically modified foods. Even after controlling for differences in the perceived risk of consuming genetically modified foods, absolutists reported more disgust in response to scenarios describing people eating genetically modified foods, as well as higher trait disgust in general, than both non-absolutist opponents and supporters of genetically modified foods.

However, expressions of moral disgust do not always reflect disgust phenomenology. People who report disgust toward immoral acts do not experience the physical symptoms of disgust (Nabi, 2002), and people do not avoid physical contact with morally “repugnant” objects unless doing so would pose a reputational threat (Kupfer & Giner-Sorolla, 2017). It seems instead that people use the word “disgust” to express many distinct negative appraisals, which is a potential methodological pitfall for any study in which disgust is measured via self-report. Royzman, Cusimano, and Leeman (2017) interrogated Scott et al.’s (2016) findings by testing the hypothesis that participants might have been using the word “disgust” to convey not disgust proper (i.e., feelings of queasiness and nausea), but rather a fear of novel technologies that could have unforeseen negative consequences. By using questionnaire items that individuated several distinct emotions that laypersons express using the word “disgust,” the authors found that fear of novel technology, but not disgust, predicted absolutist opposition to genetically modified foods. Such a finding is inconsistent with sentimentalism and much less inimical to harm-based theories of moral judgments, as fear-based absolutism might be based on an incredulity that novel technologies could really yield net benefits (Gray & Schein, 2016).

4. Why do people moralize harmless wrongs?

Not all expressions of disgust in response to moral dilemmas are metaphorical. Neither are “shortcomings” in moral judgments limited to simply failing to maximize overall happiness. Indeed, Haidt (2001) found that participants view disrespectful or disgusting acts that are apparently harmless as moral violations. In the most famous vignette, two siblings named Julie and Mark have sex. Haidt stripped the incest of its harmful properties by stipulating that it was consensual, kept secret, happened only once, enjoyed by both parties, and safe because Julie was on birth control and Mark wore a condom. Participants who express disapprobation in response

to such scenarios are “morally dumbfounded” because they tend to hold onto their opinion even after the experimenter reminds them that the scenarios are devoid of harm. Participants who continue to condemn Mark and Julie sometimes report that they are relying on a gut feeling, leading researchers to argue that moral dumbfounding is caused by disgust (Prinz, 2007).

Although the moral dumbfounding study did not demonstrate a causal relationship between disgust and moral condemnation, several studies also find a relationship between disgust and moral condemnation of actions that are not obviously harmful (Haidt, Koller, & Dias, 1993; Horberg, Oveis, Keltner, & Cohen, 2009; Inbar, Pizarro, Knobe, & Bloom, 2009). Of course, these studies are also cross-sectional, so the coincidence of disgust and condemnation is possibly explained by different features of the act under consideration (Royzman, Atanasov, Landy, Parks, & Gepty, 2014), or by a third variable such as perceived harm (Schein, Ritter, & Gray, 2016). Moreover, not all studies find a relationship between trait disgust and moral judgments of disgusting acts (e.g., Fessler, Arguello, Mekdara, & Macias, 2003).

More convincing evidence comes from experiments that first arouse disgust and then measure the severity of moral condemnation. Canonical results from this literature include the findings that participants working at a filthy desk make harsher moral judgments in response to hypothetical scenarios than those working at a clean desk (Schnall, Haidt, Clore, & Jordan, 2008b), and that participants who wash their hands before reading moral vignettes make more lenient judgments (Schnall, Benton, & Harvey, 2008a). Unfortunately, commentators have identified numerous confounds in these studies (Huebner et al., 2009; Landy & Goodwin, 2015). For example, it is possible that incidental disgust alters the understanding of the scenario, or focuses participants’ attention on aspects of the scenario that were already considered morally relevant. Moreover, some of the findings do not clearly show that disgusted participants actually

condemned the acts described in the vignettes (May, 2014). Participants in these studies reported how wrong the act under consideration was on a Likert-type scale with anchors like “perfectly okay” at one end and “extremely immoral” at the other. These anchors imply that the mid-point of the scale is the dividing point between moral permissibility and impermissibility. In many of these studies the ratings of participants in the disgust condition do not eclipse the mid-point of the scale (e.g., Schnall et al., 2008b; Wheatley & Haidt, 2005). Instead, their ratings are merely higher on the “perfectly okay” side of the scale, suggesting that disgust perhaps aroused suspicion but not full-blown condemnation. Whether future studies could address these issues is likely beside the point, as Landy and Goodwin (2015) conducted a meta-analysis on all relevant experiments and found that the causal effect of disgust on moral judgment is nil after accounting for publication bias. Since then, Johnson et al. (2016) also failed to find an effect of disgust on moral judgment in two large replications of Schnall et al. (2008b).

If disgust does not have independent support as a cause of moral condemnation, then researchers should seek out alternative explanations to why some people are morally dumbfounded by acts like incest. Turiel et al. (1991) posit that individual differences in lay theories about what is harmful explains moral disagreement about cases in which the consequences of certain actions are uncertain. For instance, although many people view masturbation as a harmless act, others believe that it angers God, disrespects the object of sexual fantasy, or disrupts the physical development of the perpetrator (Gray, Schein, & Ward, 2014). But what reasons could people have for opposing incest? Some participants have argued that sibling incest compromises the family unit’s ability to carry on normal relationships, and leave the family open to negative character attributions from their community (Turiel et al., 1991). If such beliefs about incest are widespread, then why do “dumbfounded” participants not simply

articulate them? One explanation is that participants' perceptions of harm are not consciously available. In support of this interpretation, Gray et al. (2014) found across a range of implicit cognition paradigms that participants who moralize putatively harmless acts perceive them as harmful on an intuitive level. The intuitive nature of an aversion to incest could explain why participants in moral dumbfounding studies have difficulty verbalizing the basis of their condemnation (Jacobson, 2013).

A second explanation is that participants who condemn sibling incest *do*, contra all appearances, hold conscious beliefs that sibling incest is harmful. These beliefs are not well-articulated in moral dumbfounding experiments because they are ruled out of hand as invalid by the experimenter, who insists that participants take the scenarios at face value. Royzman, Kim, and Leeman (2015) introduced participants to the Mark and Julie scenario, and afterwards asked participants whether they believed the no-harm stipulation. Participants who believed that the sibling incest was wrong also believed that it would cause harm, regarding the no-harm stipulation as too unrealistic to take seriously. The authors found in a second study that the experimenter's insistence that no harm occurred in the scenario did not convince participants that sibling incest was harmless after all; rather, participants privately retained their belief that, given how the real world works, sibling incest is always likely to cause harm. These privately skeptical participants nevertheless publicly expressed dumbfounding because the experimenter did not allow them to complete the study via an honest rehearsal of the reasons for their disapprobation.

It is also worth noting that participants may still rely on harm-based reasoning when they condemn Mark and Julie even if they acknowledge that the incest did not end up causing any harm. Jacobson (2013) points out that morality functions to prescribe behaviour based on what outcomes will *likely* result. Consequently, people generally judge acts according to their

prototypical consequences rather than their actual consequences, since only the former are predictable enough to guide behaviour. To borrow Jacobson's (2013) example, it is wrong to gamble with your child's financial savings even if you win because the expected value of gambling with your child's savings is negative. Winning could in fact be harmful insofar as it positively reinforces reckless behaviour in the future. Apparently "dumbfounded" participants may, then, be basing their judgments on the belief that sibling incest is too risky (Railton, 2014). Indeed, participants in Royzman et al. (2015) who condemned the incestuous siblings were just as likely to claim that incest *could* have emotionally harmed the siblings or others to whom they are close as they were to claim that the act was actually harmful.

5. What explains the capacity to make the moral-convention distinction?

The previous two sections reveal that people regard harmful acts as candidates for condemnation. Indeed, reasoning about harm features centrally in what some theorists regard as a key signature of moral competence (e.g., Prinz, 2007; Kumar, 2015): The ability to make the "moral-convention distinction." As originally construed, what distinguishes moral violations from convention violations is that the former have intrinsically detrimental consequences, whereas the latter are only detrimental in virtue of the fact that they are currently prohibited (Turiel, 1983). For instance, unprovoked violence is morally wrong because it, by its very nature, harms the object of violence. In contrast, calling a teacher by his or her first name is merely conventionally wrong because it would not cause harm (e.g., offending the teacher, causing students to cease respecting the teacher's authority, etc.) if it were not normative to call a teacher by his or her surname.

Subsequent researchers have given the moral-convention distinction a sentimentalist gloss, asserting that people distinguish between moral violations and convention violations

because only the former evoke emotional reactions (Nichols, 2004; Prinz, 2007). The original empirical support for this proposition came from Blair (1995), who studied whether incarcerated adult psychopaths can distinguish moral violations from convention violations. Individuals high in psychopathy callously harm others, and seldom experience remorse for their actions (Hare, 1999). A popular explanation of their behaviour is that they do not truly understand right from wrong. Although psychopaths do know that society prohibits many actions, they do not understand why moral prohibitions have a distinctive status. Consistent with this theory, Blair (1995) found that incarcerated psychopaths treat convention violations as if they were moral violations. To a lesser extent, children with psychopathic tendencies also have trouble making the moral-convention distinction (Blair, 1997). Blair (1995) speculated that without the ability to “feel” why moral violations are qualitatively different from convention violations, psychopaths in his study simply treated all counternormative acts as wrong to convince the experimenter that they are morally competent. Using a student sample, Nichols (2004) found that trait disgust predicts moral condemnation of gross unconventional behaviour, such as spitting into a napkin at a dinner party. Nichols (2004) concluded that emotional experience transforms convention judgments into moral judgments.

Later work has shown that neither Blair’s (1995) nor Nichols’s (2004) results are robust. Using a larger sample and more age-appropriate stimuli, Aharoni, Sinnott-Armstrong, and Kiehl (2012) attempted to replicate Blair (1995). To deter participants from pretending that they understand morality by claiming that all of scenarios described immoral acts, the experimenter told participants that only half of the moral scenarios they would be evaluating were considered morally wrong by society at large. The authors found that psychopaths distinguished between moral and conventional wrongs similarly to control participants. Moreover, both psychopaths

and non-psychopaths distinguished moral judgments from conventional judgments based on whether the act in question is harmful or merely currently prohibited. Although there was a near-significant tendency for psychopaths higher in affective deficits to perform worse in classifying transgressions as moral versus conventional, this tendency did not generalize to a second measure of affective deficits and was too small ($r = -.18$) to conclude that emotions are necessary for making the moral-convention distinction. In two studies that attempted to replicate Nichols (2004), Royzman, Leeman, and Baron (2009) found that neither state disgust nor trait disgust predict the moralization of prohibited, disgusting acts. Moralization was instead predicted by the belief that the observers of disgusting acts will be harmed (i.e., the observers will have to experience disgust, which is unpleasant).

Note that these null findings do not show that nobody ever fails to make the moral-convention distinction after all, but merely that people with blunted emotion are not doomed to moral incompetence. In fact, difficulty in making the moral-convention distinction is more attributable to rational factors than emotion deficits: Participants who (a) are lower in IQ, (b) engage in less analytic thinking, or (c) have less education are more likely to regard arguably harmless but counternormative actions as morally wrong (Landy & Goodwin, 2018). These findings suggest that people with less intellect or education either rely too heavily on a heuristic that counternormative actions are likely to be harmful, or have different background beliefs about what types of actions are harmful.

6. Why do psychopaths harm others without remorse?

Even though researchers cannot charge psychopaths with an inability to make the moral-convention distinction, many have thought that sentimentalism is the only adequate explanation for psychopaths' moral failures (Nichols, 2004; Prinz, 2007; Greene, 2008). Indeed, studies

confirm that psychopaths do in some cases make moral judgments that deviate from the modal judgment of normal populations (Koenigs et al., 2007; Stams, Brugman, Deković, van Rosmalen, van der Laan, & Gibbs, 2006; Young, Koenigs, Kruepke, & Newman, 2012). Although a recent meta-analysis suggests that differences in moral judgments between psychopaths and non-psychopaths are small (Marshall, Watts, & Lilienfeld, 2018), there is some evidence that psychopaths rely more on abstract thinking to issue the same judgments that are endorsed by normal populations (Glenn, Raine, Schug, Young, & Hauser, 2009).

Researchers may be hesitant to abandon sentimentalism until an alternative account of psychopaths' aberrant moral judgments proves satisfactory. A promising alternative account begins with the observation that psychopaths make deviant moral judgments only when making the normative judgment depends on mentally representing emotional harm. Psychopaths do not fully appreciate others' experience of vulnerability, which is revealed in expressions of fear, distress, and sadness (Dawel, O'Kearney, McKone, & Palermo, 2012; Gray, Jenkins, Heberlein, & Wegner, 2011). Faulty emotion attribution generates aberrant moral judgments because suffering victims are prototypical to moral violations (Schein & Gray, 2017). A theory that accounts for psychopaths' deviant moral judgments in terms of deviant processing of representations of other people's emotions can explain why psychopaths view harmful accidents as more permissible than do non-psychopaths (Young, Koenigs, Kruepke, & Newman, 2012): Whereas normal populations direct more attention to the impact of transgressions on victims (Decety et al., 2012), psychopaths focus more exclusively on whether the perpetrator intended harm. Similarly, community members who are higher in psychopathy judge moral violations that cause physical harm just as severely as do others, but judge transgressions that cause emotional harm more leniently (Cardinale & Marsh, 2015; Marsh & Cardinale, 2014).

An examination of the neural underpinnings of psychopaths' emotion attribution deficit may help explain both their emotion deficits and their aberrant moral judgments. Marsh and Cardinale (2012) linked the relationship between psychopathic traits and emotion attribution deficits to decreased amygdala activation (Marsh & Cardinale, 2012). The amygdala plays a role not only in guiding people away from antisocial behaviour, but also in motivating prosocial behaviour. For example, individuals who have anonymously donated their kidneys evince greater amygdala responsiveness than do matched controls (Marsh, Stoycos, Brethel-Haurwitz, Robinson, VanMeter, & Cardinale, 2014). Anonymous kidney donors are also high in dispositional sympathy (Brethel-Haurwitz, Stoycos, Cardinale, Huebner, & Marsh, 2016). Recall that sympathy is elicited by the perception of others' distress, and generates altruistic motivation (Batson, 2011). Putting all these findings together, one can hypothesize that the amygdala regulates (among other processes) the perception of distress, which in turn plays a key role in condemning transgressions that involve emotional harm, as well as in creating caring emotional responses to suffering.

It is possible that having normal emotional experiences is necessary for attributing emotions to others. This would not vindicate sentimentalism, which is committed to the claim that emotions play a direct role in causing moral judgments. It would, however, suggest that emotions affect what information is available to judge (Huebner et al., 2009). This hypothesis merits attention, although a recent meta-analysis found that psychopaths may experience fear and sadness normally (Hoppenbrouwers, Bulten, & Brazil, 2016).

7. Rationalism Reconsidered

Moral violations often put people in a huff. In fact, proponents of sentimentalism argue that getting emotional is a prerequisite to having a sincere moral judgment. Emotions allow

people to condemn or praise situations that do not affect them, to transcend tabulations of costs and benefits in making their judgments, and to distinguish between mere norm violations from full-blown moral violations. The absence of emotions deprives psychopaths from enjoying these moral capacities, which explains why they treat others with so little regard.

But a systematic review of studies that are relevant to sentimentalism yield only the humdrum conclusion that people get emotional about moral matters that impact the welfare of themselves or others that are near and dear to them. The relationship between emotions and moral judgments goes no deeper than that, as moral violations per se do not arouse emotions. The illusion to the contrary was abetted by non-replicable studies reporting that emotions can intensify judgments and give them a moral flavour. But by far the most tempting phenomena to explain in sentimentalist terms is that people use emotional rhetoric to communicate the firmness of their convictions, and in doing so often explicitly disavow that their judgments were based on reasoning about harm. If an act is objectively harmless but disgusting, and is condemned as “disgusting,” it is certainly reasonable to hypothesize that disgust was essential to the condemnation.

And yet, it became evident over the course of the review that rationalist theories can answer the questions that aroused support for sentimentalism. The key insight that rationalism provides is that even though moral judgments are based on reasoning, they will not appear “reasonable” to researchers unless they are based on correct background beliefs about how the world works (Turiel et al., 1983; Schein & Gray, 2017). For example, people who believe that risks typically do not pay off will appear insensitive to the balance of costs and benefits not because they do not value the latter, but rather because the former loom so large for them. Such people are likely to especially likely to believe that potentially harmful actions with no obvious

offsetting benefit, like sex with a sibling, should be avoided as a rule. They are also likely to oppose technologies like genetically modified foods or nuclear energy, if they do not realize that the risk they pose is minimal relative to the benefits they can confer. Conversely, some people will fail to account for risks that really are there. For instance, psychopaths will fail to moralize accidents because they have a compromised capacity to process cues of vulnerability in victims. Their myopic focus on whether the transgressor intended harm causes them to overlook the fact that the transgressor could have been more vigilant about avoiding a situation in which they might accidentally harm others.

Sometimes the need to explicitly consider the empirical premises behind a moral conclusion is obvious, such as when men justify Chhaupadi, the tradition of condemning menstruating women to isolated huts, by citing fears of health problems should the women touch them. But often the role of background beliefs in harm-based reasoning is less obvious, such as when people are unable to articulate their aversion to incest on the spot. Unfortunately, it is exactly when the relevant background beliefs are the least salient that researchers are most likely to suspect that their participants have abandoned reason in making their moral judgments. For example, it is not plain that some participants would view spitting into a napkin at a dinner party as not only unconventional but also harmful. Moralizing such behaviour would, at first blush, seem to reflect a failure to appreciate that only intrinsically harmful actions are morally wrong. Ironically, it is some extra but hidden reasoning (viz., that exposing others to disgusting stimuli is harmful) that can create the appearance of an unreasoned judgment, ostensibly explainable only with reference to emotions.

Of course, some moral judgments really are the product of sloppy reasoning. For example, people with less ability or desire to think analytically may misclassify convention

violations as moral violations by assuming that prohibited actions are probably harmful. Yet sloppy reasoning is still reasoning, and extant evidence suggests it is harm-based reasoning, not emotional experience, that is essential to moral judgments. Given that reasoning about harm is rationalism's bread and butter, it is time that moral psychologists paid it renewed attention.

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