How Emotions Shape Moral Behavior: Some Answers (and Questions) for the Field of Moral Psychology

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Abstract

Within the past decade, the field of moral psychology has begun to disentangle the mechanics behind moral judgments, revealing the vital role that emotions play in driving these processes. However, given the well-documented dissociation between attitudes and behaviors, we propose that an equally important issue is how emotions inform actual moral behavior – a question that has been relatively ignored up until recently. By providing a review of recent studies that have begun to explore how emotions drive actual moral behavior, we propose that emotions are instrumental in fueling real-life moral actions. Because research examining the role of emotional processes on moral behavior is currently limited, we push for the use of behavioral measures in the field in the hopes of building a more complete theory of real-life moral behavior.

Within the last decade, social psychologists have started to elucidate the processes underlying moral decision making. This trend is not surprising, given the potential applicability and consequential nature of moral psychology research. Indeed, moral transgressions can cause detrimental social and economic outcomes. In 2007, the US Internal Revenue Service estimated that tax evasion cost the American economy $345bn, or about 14% of federal revenues for the fiscal year (Kaufman, 2007). At a local level, schools often suffer from academic misconduct such as cheating and plagiarism (Stern & Havlicek, 1986), while large corporations often witness employee theft (Hollinger & Clark, 1983) and sexual abuse in the workplace (Richman et al., 1999). Moral stability is vital to a well-functioning society. As such, psychologists have begun to explore the integral role that emotions may play in influencing our moral judgments. Surprisingly, however, very little social–psychological research has explored how emotional processes influence moral *behavior*, leaving a notable gap in the field of moral psychology. So while we may know about the ways in which emotions inform moral judgments (e.g. Haidt, 2001) and about a handful of factors that may influence ethical behaviors (e.g. Darley & Batson, 1973; Milgram, 1963), we know far less about how emotions shape behaviors in moral situations. In the current paper, we review the burgeoning research that has begun to fill in this gap by exploring how emotions affect moral actions. In doing so, we will propose that emotions may be instrumental in deterring transgressions and promoting prosocial behavior but will also discuss cases in which emotions may drive transgressions.

While numerous review articles have proposed models and have discussed the importance of emotions for moral judgment (Greene & Haidt, 2002; Haidt, 2001; Pizarro, 2000), to our knowledge, the current article is the first to provide a detailed discussion of emotions in the context of moral behavior. Because the relationship between self-report and actual behavior is blurry at best (i.e. Blasi, 1980), we propose that elucidating the role of emotions for moral

behavior is an important endeavor. Although the over-reliance on self-report measures is a concern in almost all areas of social psychology (Baumeister, Vohs, & Funder, 2007), we propose that this "behavioral gap" in the moral psychology literature is especially problematic due to the pivotal role that emotions play in moral decision making. We propose that the inability to tap into emotions during hypothetical decision making (e.g. Wilson & Gilbert, 2003) makes morality self-report measures particularly susceptible to error. The fact that moral psychology has been dominated by the study of moral judgments (an area of study that finds its roots in philosophy and thus lends itself well to self-report) might explain why this field has been slower than others to include measures of actual behavior in its investigations.

Because morality is notoriously difficult to define and moral rules differ based on a variety of factors, including culture, religion, and political orientation, we limit our discussion here to moral norms that encompass the foundations of harm/care and fairness. Previous research suggests that there may be less variability in the degree to which these principles are endorsed in comparison to others such as sanctity, authority, and loyalty (Haidt & Graham, 2007). Indeed, recent work has suggested that perceptions of harm may underlie and predict the severity of moral judgments previously thought to encompass unrelated moral foundations (Gray, Schein, & Ward, 2014). On a practical level, the principles of harm/care and fairness seem to apply most closely to behavioral measures used in moral psychology and are characteristic of the types of moral situations that people are most likely to encounter in everyday life (i.e. cheating, cooperation, offering help, etc.).

In the current account, we review empirical evidence supporting the notion that affective arousal, and emotions more generally, is instrumental in driving ethical behavior. In doing this, we propose that emotions are integral in influencing moral behavior in real-life situations and provide possible explanations for why this mechanism might have evolved. Although a handful of experiments in social psychology have in fact included measures of actual moral behavior (e.g. Mazar, Amir, & Ariely, 2008; Gino & Ariely, 2012; Gino & Galinsky, 2012; Haney, Banks, & Zimbardo, 1973; Mead, Baumeister, Gino, Schweitzer, & Ariely, 2009; Milgram, 1963; Shu, Gino, & Bazerman, 2011; van't Veer, Stel, & van Beest (2014), empirical research examining the effects of *emotion* on moral behavior has only recently commenced and is therefore limited. This, consequently, presents a challenge in drawing solid conclusions, no less synthesizing a comprehensive theory of emotions and moral behavior. We discuss these issues as they relate to the current state of the moral psychology field and propose future directions that have the potential to bring the field forward.

Discrepancies among Attitudes, Intentions, and Actions

The goal of the current paper is not to criticize research that has been conducted within the realm of moral judgment. Understanding the way in which individuals arrive at moral judgments sheds light on the broader scope of individuals' beliefs about what is right and wrong. Critically, judgments often serve as a primary step on the path to behavior (Ajzen, 1991). As such, we believe that research on moral judgments is of great importance. However, moral judgments or decisions in *hypothetical* moral dilemmas might not always map onto moral behavior in real life. Indeed, decades of research have revealed an attitude–behavior discrepancy.

In his book about children's' moral development, Piaget (1932/1997) suggested that "the relations between thought and action are very far from being as simple as is commonly supposed" (p. 176). Since then, this sentiment has been confirmed by plenty of empirical evidence – most notably, Festinger's (1957) work on cognitive dissonance – which has shown that individuals often engage in behavior that is incongruous with their attitudes (also see Ajzen & Fishbein, 1977). For instance, peoples' judgments of moral acceptability of specific behaviors (i.e. sacrificing

one life in order to save a greater number of lives – a utilitarian choice) do not always predict their intention to engage in those same behaviors (Tassy, Oullier, Mancini, & Wicker, 2013). The discrepancy between attitude and behavior may be more pronounced in the moral domain partly because of the normative nature of morality. Because people generally desire to see themselves and be seen by others as moral and that moral actions are often costly to the self, people often endorse moral values but fail to act morally (Batson, Thompson, Seuferling, Whitney, & Strongman, 1999). This issue was investigated in a review of numerous studies exploring the relationship between self-reported morality and moral behavior (i.e. honesty). The results seem to be inconclusive, however, such that approximately half of the studies document a positive association between self-reported morality and honesty, while the other half report no significant relationship (Blasi, 1980).

The same discrepancy also exists between moral intention and moral behavior. Several studies have now found that there exists a clear gap between peoples' forecasts and actual behavior in various moral dilemmas (Epley & Dunning, 2000; Teper, Inzlicht, & Page-Gould, 2011). These studies suggest that people are not always able to predict their behavior across a variety of moral dilemmas, including cheating, charity donation, and other cooperative behavior. Further, a recent study found a significant disconnect between peoples' responses to a hypothetical moral dilemma (i.e. the famous trolley problem[1]) and their behavior in a virtual–reality trolley problem. Specifically, participants were significantly more likely to make utilitarian choices in the virtual–reality condition than in the self-report condition (Patil, Cogoni, Zangrando, Chittaro, & Silani, 2013, but see Navarrete, McDonald, Mott, & Asher, 2012). This body of work suggests that attitudes, intentions, and actions may not always align. As we will outline next, both classic attitudes research and more recent work on decision making can provide insight into why this might be the case.

Conceptual problems with self-report in moral psychology

We propose that the issue with relying on self-report in moral psychology depends on which type of measure is being used. Currently, the field is dominated by work on moral judgments (scenarios that require a judgment or reaction – i.e. How morally acceptable is it to burn your national flag?), as well as moral forecasts (predictions of future decisions in moral dilemmas – i.e. Would you pull the lever to divert the trolley? Would you cheat on a test for $5?). Since both attitudes and intentions are important precursors to behavior (Ajzen, 1991; Ajzen & Fishbein, 1980), we discuss the way in which both of the above measures relate to behavior. We suggest that although there is likely some reliable relationship between attitudes, intentions, and behaviors, a variety of factors may weaken it.

Classic attitudes research might help explain why judgments may not always align with behaviors. Namely, people often transgress even when they recognize that their actions are morally "wrong." We do this by using in various "moral disengagement" strategies, such as diffusing responsibility, victim dehumanization, or misrepresenting consequences, which then justify our transgressions (e.g. Bandura, Barbaranelli, Caprara, & Pastorelli, 1996). Similarly, people often endorse moral values to uphold a moral self-image, while engaging in unethical behaviors such as cheating (Batson et al., 1999). This attitude–behavior dissociation presents a challenge for applying findings in the domain of moral judgments to real-life behavior.

In the case of moral forecasting, the self-report problem is twofold. First, many of the scenarios that are used are extreme and lack ecological validity (e.g. Greene, Sommerville, Nystrom, Darley, & Cohen, 2001; Greene, Nystrom, Engell, Darley, & Cohen, 2004; Greene, Morelli, Lowenberg, Nystrom, & Cohen, 2008). Second, the emotions that may be present during moral forecasting are likely quite different (certainly not as intense) than those elicited during

real–life moral decision making (Teper et al., 2011). Although there are undoubtedly other reasons why people may misforecast their behaviors in moral dilemmas, such as limited contextual information (e.g. FeldmanHall et al., 2012), here, we focus on the emotional factors that may cause the relationship between moral forecasts and behaviors to break down.

Research on affective forecasting has found that individuals have poor insight into their future emotional states (Wilson & Gilbert, 2003, 2005). Thus, if emotions are important for actions and decisions (Schwarz & Clore, 1988; Zeelenberg, Nelissen, Breugelmans, & Pieters, 2008), it then follows that individuals might not be able to accurately predict their behavior. Related work on the hot–cold empathy gap has found that people fail to appreciate the extent to which affective experiences, such as embarrassment and states of high craving, drive their behaviors (Sayette, Loewenstein, Griffin, & Black, 2008; Van Boven, Loewenstein, & Dunning, 2005). One potential explanation for this phenomenon is grounded in psychophysiological work that posits that our behavior is driven primarily by "somatic markers" (Damasio, 1994). Importantly, these "somatic markers" or affective bodily experiences are typically fainter during imagined or recalled instances of events than they are during real-life events (Bechara & Damasio, 2005; Patil et al., 2013; Teper et al., 2011), resulting in discrepancies between behaviors and forecasts. For this reason, we suggest that if we are interested in learning about the factors that motivate people to act ethically or unethically, we cannot rely on measures of attitudes, beliefs, or intentions alone.

Why Do People Behave Morally?

Although the field of moral psychology has been dominated by studies of moral judgment and hypothetical moral dilemmas, a handful of social psychology studies have examined actual behavior. This research has answered several fundamental questions about the way in which social factors influence moral actions. For instance, classic work in social psychology revealed the profound effects that authority and obedience have on moral behavior (Haney et al., 1973; Milgram, 1963). It would be quite difficult to imagine that emotions such as fear or anxiety were not at play in these studies. However, the authors did not possess the empirical evidence to make such conclusions, as emotions were never measured directly (Brock, 1969). The numerous experiments on bystander intervention have the same issue (see Fischer et al., 2011). Although one might expect that emotional intensity (e.g. empathy, distress) increases as the number of bystanders decreases, the extent to which these emotions were involved in people's decisions to offer help in the bystander studies remains an open question. More recent research has shed light on how factors such as self-control (Mead et al., 2009), religiosity (Shariff & Norenzayan, 2007), and framing (Mazar et al., 2008; Teper & Inzlicht, 2011) affect moral behaviors, suggesting that progress is in fact being made. But although we might know about the ways in which various social and contextual factors influence prosocial and moral behavior (also see Gino, Ayal, & Ariely, 2009; Gino, Gu, & Zhong, 2009), the investigation of actual emotions in these processes has been overlooked, at least on an empirical level.

We believe that studying emotions in the context of moral behaviors is important for two reasons: (1) research on emotions and moral judgments has suggested that emotions may inform moral decision making (e.g. Haidt, 2001; although we cannot assume that these patterns will translate directly to moral behavior), and (2) if emotions are important for other real–life behaviors (Sayette et al., 2008; Van Boven et al., 2005; Zeelenberg et al., 2008), there is good reason to believe that they will be important for real-life moral behaviors as well.

Although here, we highlight the role that emotion plays in driving moral behaviors, we believe that a variety of processes interact to influence moral choices. Specifically, we believe that cognitive forces (Pizarro & Bloom, 2003), conscious motivations (Blasi, 1999; Kroll & Egan,

2004), and social factors (e.g. Gino et al., 2009a) all interact iteratively with emotional processes to shape moral decisions. Emotion is integrated with motivation (Tomkins, 1982) as well as a variety of basic cognitive operations, such as attention, memory, control, and even basic perception (Fredrickson & Branigan, 2005; Gable & Harmon-Jones, 2008; Inzlicht & Al-Khindi, 2012; Schmeichel & Inzlicht, 2013). Although all of these processes are important for moral behaviors, we want to suggest that the transient experience of emotion drives moral actions on a moment-by-moment basis, and as such, we will limit our discussion to the role of emotional processes.

Moral emotions

Emotions, in general, are important tools. For instance, it is adaptive to recoil in fear upon seeing a bear or to cringe with disgust upon encountering rotten food. Similarly, theorists have argued that moral emotions have evolved as commitment devices that motivate behavior that may be costly in the short-term but beneficial in the long term (i.e. cooperation; Haidt, 2003; Rand & Nowak, 2013). The way in which these affective experiences promote adaptive behavior is likely a neurologically primitive mechanism (Panskepp & Biven, 2012) and may represent "best guesses" as to what one ought to do in evolutionary recurrent situations (Tooby & Cosmides, 2008).

Haidt (2003) has suggested that a moral emotion should be "linked to the interests or welfare either of society as a whole or at least of persons other than the judge or agent" (p. 276). The multifaceted nature of moral emotions has prompted theorists to create classifications and categories for them. These include self-conscious emotions such as guilt and shame (Tangney, Stuewig, & Mashek, 2007), positive moral emotions such as love, pride, and elevation (Haidt, 2000; Tangney, 1991), and condemning emotions such as anger and disgust (Rozin, Lowery, Imada, & Haidt, 1999). Independent of these broad categories, researchers have also suggested different classifications for self (e.g. guilt and pride) versus other-oriented (e.g. love and anger) moral emotions (Tangney et al., 2007) and proscriptive (i.e. what one *should* do) versus prescriptive (i.e. what one should *not* do) emotions (Janoff-Bulman, Sheikh, & Hepp, 2009; Sheikh & Janoff-Bulman, 2010).

Within the past decade, psychologists have theorized about the ways in which these emotions might drive moral decision making, in both their real and anticipated forms (Baron, 1992; Tangney et al., 2007). For instance, people might be motivated to relieve the pre-decisional negative affect (e.g. guilt), avoid post-decisional anticipated negative affect (e.g. shame), or achieve post-decisional positive affect (e.g. pride; Baumeister, Vohs, DeWall, & Zhang, 2007). In other words, moral emotions can provide both the information and motivational force to do the "right thing" (Kroll & Egan, 2004).

Although the important role that emotions play in the moral decision-making process has gained appreciation within the past decade, most of the work propelling this trend has focused on studies that focused almost exclusively on hypothetical moral situations and not on real-life action (e.g. Greene et al., 2001; Greene, 2007; Haidt, 2001; Inbar, Pizarro, Knobe, & Bloom, 2009; Keltner & Buswell, 1996; Sheikh & Janoff-Bulman, 2010). We suggest that we cannot completely elucidate the nature of moral emotions without understanding how they influence actual behavior.

How emotions motivate moral behaviors

Although the majority of research in moral psychology has focused on hypothetical moral dilemmas, several recent studies have begun to investigate the role that emotional experience has on motivating real-time moral behavior. The results of these experiments overwhelmingly

point to the same inference – that emotions or affective experiences can motivate people to do the "right thing." For instance, a growing body of work is revealing that positive emotions such as gratitude (Bartlett & DeSteno, 2006; DeSteno, Bartlett, Baumann, Williams, & Dickens, 2010) and elevation (Algoe & Haidt, 2009; Schnall, Roper, & Fessler, 2010) might positively influence prosocial actions. Recent work, however, suggests that even basic affective states may influence moral behavior. A recent study found that participants' levels of autonomic nervous system arousal inversely predicted cheating on a math test, suggesting that states of affective arousal may prevent people from transgressing (Teper et al., 2011). Further research suggests that participants act more morally when they are led to believe that they are physiologically aroused. In one study, participants who were presented with false somatic feedback (i.e. an audio recording of a speedy heartbeat) were significantly more likely to volunteer their time and less likely to cheat than participants who listened to a calm heartbeat (Gu, Zhong, & Page-Gould, 2013). The results of such studies suggest that individuals rely heavily on somatic cues when engaging in real-time moral decision making and that these cues deter transgressions when they signal states of high arousal (e.g. stress).

Within recent years, researchers in the field of moral psychology have theorized about why these "primal" visceral states motivate moral behavior. Do emotions motivate moral behaviors because ultimately those moral behaviors benefit people in the end? Or do people engage in moral behaviors and refrain from immoral ones because they develop affective affinity or aversion to those behaviors, independent of what consequences those behaviors may cause? These are two general approaches toward explaining why emotions motivate morally charged actions.

Intuitively prosocial: an evolutionary approach. Evolutionary accounts of moral emotions have posited that emotions serve as commitment devices (also see Haidt, 2003), deterring us from self-interested behavior. Robert Frank (1988), for instance, argues that emotions are what push us to act prosocially, even if the immediate consequences of prosocial behavior are less favorable than that of selfish behavior. From an evolutionary perspective, the presence of moral emotions can help explain why we live in mainly cooperative societies (Rand & Nowak, 2013), why people will punish transgressors even when this comes at a personal cost (Feinberg, Willer, Stellar, & Keltner, 2012), and why most individuals do not behave according to the clear-cut rules of self-interest in economic decision-making games (Frank, 1988). For instance, the anger or indignation that presumably drives individuals to reject unfair offers in the ultimatum game, despite incurring a personal cost, likely reflects an evolutionary mechanism. This sort of costly punishment is arguably necessary for deterring future transgressors and for the maintenance of societal order (Fehr & Gachter, 2002). Other studies have found that prosocial behavior is frequently observed in isolated and anonymous interactions, where the prospect of direct reciprocity is virtually nonexistent (Frank, Gilovich, & Regan, 1993).

Rand, Greene, and Nowak (2012) have suggested that prosocial cooperation may act as our default state because cooperation is not only advantageous but also critical for the societal norm of reciprocity (Nowak & Sigmund, 2005). In a series of studies, Rand et al. (2012) found that individuals make more generous contributions in various economic games under time constraints and also when they themselves take less time to make the decision. Similar effects have been found among cognitively "depleted" participants. In one study, depleted participants made significantly more generous offers in an economic game than their non-depleted counterparts. In a second study, depleted participants were significantly more likely to reject unfair monetary offers as a form of punishment, even if this came at a financial cost (Halali, Bereby-Meyer, & Meiran, 2014). In sum, all of these seemingly irrational, intuition-driven (Stanovich & West, 1998), behaviors help to maintain societal order by which all members reap greater overall benefits.

A related set of studies demonstrated that framing moral decisions as "intuitive," as opposed to "deliberative," served to encourage ethical behavior (Zhong, 2011). It seems that simply activating an intuitive (by writing about how you *feel* about a specific issue) versus deliberative (by solving math problems) mindset, or simply asking participants how much they "feel" they want to donate as opposed to asking them to "decide" how much they want to donate, increases prosocial behavior. Importantly, this same study found that the presence of aversive emotions such as fear and disgust predicted ethical behavior. A related set of experiments investigated the role of guilt in motivating prosocial behavior and found that a guilt induction increased prosocial behavior, but only when this behavior didn't come at a personal cost (de Hooge, Nelissen, Breugelmans, & Zeelenberg, 2011). In another study, participants' self-reported guilt and empathy predicted helping behavior (Gino & Pierce, 2009). The results of this work imply that at least in some cases, our feelings, or intuitions, may drive prosocial behaviors.

Aversion to acts of transgression: a non-consequentialist account. Evolutionary accounts of human co-operation posit that emotions deter transgressions because they help us make decisions that will maximize positive consequences in the long term (Rand & Nowak, 2013). Recent empirical data, however, suggest that our emotions may be active at a more basic level. Specifically, theories of action-based learning suggest that the act of transgressing in and of itself is aversive and that the emotions associated with aversion to immoral actions are what may deter transgressions (Miller, Hannikainen, & Cushman, 2014). For instance, a recent study found that willingness to induce harm in a moral dilemma was predicted by individual differences in psychophysiological arousal and that arousal was higher for participants simulating harmful actions (i.e. hitting a plastic baby doll) than for participants witnessing others perform these actions (Cushman, Gray, Gaffey, & Mendes, 2012). This suggests that aversion to harmful actions may extend beyond consequentialist considerations (Cushman, 2013; Cushman et al., 2012).

Similarly, past work has shown that individuals are more likely to commit transgressions that do not require explicit actions. Specifically, participants who could cheat on a test by physically pressing a button cheated less than those who could cheat with pressing a button (Teper & Inzlicht, 2011). Related research on cheating behavior suggests that making the act of cheating more aversive (i.e. by forcing participants to pay themselves in real money instead of with tokens to be later traded for money) is more effective for curbing cheating behavior than is manipulating consequences (i.e. likelihood of getting caught; Mazar et al., 2008).

The idea that people's emotional reaction to the behavior itself may be a critical driver of the behavior also has been supported on a physiological level. Research conducted with psychopaths, for instance, reveals that they may lack empathy (Blair, Jones, Clark, & Smith, 1997) and that they may exhibit decreased physiological responses to affective stimuli, allowing them to transgress "without remorse" (Kiehl et al., 2001; Vaidyanathan, Patrick, & Cuthbert, 2009; Williamson, Harpur, & Hare, 1991). These ideas are directly applicable to the somatic markers hypothesis, which suggests that sometimes our bodily emotional systems are able to react to an action before we cognitively assess the consequences of the action (Damasio, 1994). Work of this nature is what may have allowed moral psychologists to rethink the notion that emotions cloud or interfere with sound moral decisions and recognize the important role emotional experience plays in moral decision making. Both the evolutionary and non-consequentialist accounts point to the conclusion that affective experiences may drive people to behave morally, at least in some situations. It seems as if our intuitions may actually lead us down the moral road and that the emotions that have so long been caricatured as artifacts of our ancient animal pasts may actually lead us to act humanely. However, is it the case that emotions *always* motivate moral behavior?

Why Do People Behave Badly?

Although a burgeoning body of research is beginning to reveal that emotional arousal is instrumental in driving prosocial behavior, we must also consider the mechanisms underlying immoral actions. Is it an absence of arousal that produces immoral acts? Or is it possible that a different and discrete set of emotional states might drive individuals to transgress? We believe that both alternatives are plausible. Although there is some evidence to suggest that a *lack* of affective experience is what facilitates some moral transgressions (Teper et al., 2011; Williamson et al., 1991), there also exist empirical studies that imply some moral transgressions may be products of "condemning" moral emotions such as anger, aggression, and disgust.

In 2009, former Tennessee Titans quarterback, Steve McNair, was brutally murdered by his girlfriend, Sahel Kazemi, after she discovered his involvement with another woman. This "crime of passion" paints a very different story about the role of emotions in driving moral behavior, suggesting that in some cases, emotions may lead to antisocial actions. Emotional influences on aggression and retaliation fit well with evolutionary accounts of emotion and moral behavior, because it is thought that retaliatory strategies may deter future transgressions (Rand & Nowak, 2013).

Empirical evidence supports the idea that a discrete set of affective processes may fuel moral transgressions. For instance, one study found that that males with a higher 2D:4D finger ratio – a trait indicative of higher prenatal testosterone and often associated with aggression (Galis, Ten Broek, Van Dongen, & Wijnaendts, 2010) – made significantly more unfair offers to a confederate in the dictator game (Millet & Dewitte, 2009). In a related study, an anger induction produced increases in left prefrontal brain activity among participants, indicative of approach motivation, and also produced higher levels of aggressive behavior toward a confederate (i.e. mixing a spicy drink for them to sample; Harmon-Jones & Sigelman, 2001). Similarly, anger has been found to motivate revenge against free riders in economic decision-making games (Carlsmith, Gilbert, & Wilson, 2008). This research suggests that approach-oriented affective states such as anger, as manifest in the brain and body, may be involved in driving antisocial actions.

It is possible that approach-related emotions motivate transgressions because they are activated by the potential rewards of transgressing (Gino & Margolis, 2011) and that individuals might be more likely to transgress when the emotions activated by the external rewards (i.e. monetary gain) overpower the internal rewards of being an ethical person (Mazar & Ariely, 2006). Although these ideas are theoretically sound, work exploring the role that emotions have on immoral behaviors is quite limited. As such, future researchers who choose to explore this topic stand to gain great insight about motivational forces that drive transgressions.

Conclusion

Long gone are the days when emotion was written off as a distractor or a roadblock to effective moral decision making. There now exists a great deal of evidence bolstering the idea that emotions are actually necessary for initiating adaptive behavior (Bechara, 2004; Damasio, 1994; Panksepp & Biven, 2012). Furthermore, evidence from the field of moral psychology points to the fact that individuals rely quite heavily on emotional and intuitive processes when engaging in moral judgments (e.g. Haidt, 2001). However, up until recently, the playing field of moral psychology has been heavily dominated by research revolving around moral judgments alone, especially when investigating the role that emotions play in motivating moral decision making. Given the well-documented discrepancy between attitudes and behaviors (Festinger, 1957; LaPiere, 1934), we believe that examining the role that affective processes play in influencing actual moral *behaviors* is an important and fruitful avenue. Although there are

undoubtedly moral issues, such as murder, or abuse, that we (thankfully) cannot explore experimentally, there are many moral issues that we can, and should. As such, we believe that the missing piece of "behavior" presents the field of moral psychology with not only a problem but also an opportunity.

In this paper, we provided a review of recent work in the field that has investigated precisely how affective experience drives moral behavior. The data that are currently available on this topic suggest that psychophysiological arousal, both real and perceived, serves to encourage ethical behavior (Gu et al., 2013; Teper et al., 2011). Other work suggest that acting prosocially may be the intuitive or default choice, as we seem to be more likely to engage in prosocial or ethical behaviors when our cognitive resources are limited (Halali et al., 2014; Rand et al., 2012). Evolutionary accounts of cooperation suggest that these emotions may have evolved to motivate prosocial behavior because such behavior is advantageous in the long term (Rand & Nowak, 2013), while theories of action-based learning suggest that immoral acts become emotionally aversive over time, regardless of their outcomes (Cushman, 2013; Cushman et al., 2012). In sum, the current literature, however short, suggests that emotional experience is heavily involved in moral behavior. However, because the available research on this topic is preliminary, the conclusions that we can draw from this research are, by necessity, limited. As such, we strongly encourage researchers within the field of moral psychology to consider this as a rallying cry for more research.

Future directions. If we are interested in uncovering the mechanisms by which individuals make moral choices in their daily lives, we must turn to behavioral measures of morality. Recent evidence points us toward emotional processes as a prime candidate for investigation. In other words, there is reason to believe that emotional experiences may be instrumental in influencing individuals' moral decisions in real-life contexts. If emotions are as vital in fueling moral behavior as we suspect that they are, the field would benefit tremendously from the development of a comprehensive theory – one that utilizes empirical evidence to explain precisely how moral emotions shape moral decisions. More data are needed to build such a model – data that examine the effects of various emotional experiences on both moral and immoral behaviors.

In this regard, there are key questions that remain unanswered. For instance, exactly which emotions motivate individuals to act morally and under which circumstances? For instance, it would be worthwhile to investigate the potentially diverse emotional signatures that may underlie prescriptive versus proscriptive moral behavior. Currently, there is little empirical work that differentiates between various types of moral behaviors, or their underlying mechanisms. We suggest this would be a useful first step in building a theory of emotions and moral behavior. Another outstanding question is whether intuitive processes *always* lead to prosociality. As of now, the literature is fairly one-sided, suggesting that there is still work to be done. Finally, we suggest that building upon the current moral decision-making work with ecologically valid field studies may prove to be a worthwhile area for research, an endeavor that some researchers have already embarked on (Hofmann, Wisneski, Brandt, & Skitka, 2014). The field of moral psychology stands to gain great insight from the exploration of these numerous intriguing topics, and as such, we urge future researchers to pursue them.

Finally, we encourage psychologists to aim for a more integrated theory of moral emotions by drawing upon various measures in order to complement self-reports. We recognize the challenges that may accompany this endeavor but strongly believe that a multi-method approach to studying emotions as they relate to moral behavior can help to achieve triangulation in the field. For instance, emotion rating dials can help tap into the emotional experience that drives moral behavior without disrupting it or changing its nature (Mauss, Levenson, McCarter, Wilhelm, & Gross, 2005), while psychophysiological measures can access aspects of emotional experience that may be unconscious (Winkielman & Berridge, 2004). These alternate measures can aid

psychologists in overcoming some of the biases known to plague questionnaires (e.g. Kahneman, Fredrickson, Schreiber, & Redelmeier, 1993) and eventually build a comprehensive and integrated theory of moral emotions and moral behavior.

In short, we believe that the field of moral psychology has neglected a large aspect of "moral psychology" for far too long. While there is great merit in elucidating the emotional processes that underlie moral judgments, there is, at the very least, equivalent merit in studying the emotional processes that underlie moral behavior. Uncovering the mechanisms by which individuals arrive at real-life moral decisions is an important and worthwhile topic, and it is surprising that it has been largely overlooked. Although in recent years, some psychologists have begun to explore the mechanics of actual moral behavior, there is still much work to be done. As such, we strongly encourage moral psychologists to move beyond trolleys and pencil and paper (or their modern-day equivalent) and to measure actual behavior. Actions, after all, speak louder than words.

Short Biographies

Rimma Teper is a postdoctoral fellow at Yale University. She takes a multidisciplinary approach to her research, employing behavioral, psychophysiological, and neurological methods to study the topics that fascinate her most. Some of these topics include the factors that motivate moral behavior and cooperation and why people often mispredict their behavior in moral dilemmas. She also studies the effects of mindfulness on self-control and emotion regulation. Her research has been published in journals such as *Psychological Science*, *Social Cognitive and Affective Neuroscience*, and *Emotion*. She completed her PhD in Social Psychology at the University of Toronto Scarborough. She completed her BA in Psychology and BEd at York University.

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Notes

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[1] In the trolley problem, people are asked to imagine a trolley that is riding down the tracks and is headed toward five people that are tied up on these tracks. If the trolley hits them, all five people will die. Participants are asked to imagine a lever that, if pulled, will divert the trolley to another set of tracks, upon which one person lies tied up. Participants are then asked to decided whether or not they would pull the lever, causing the death of one person, but saving the lives of five (Foot, 1967). Different variations of this scenario are often used in moral psychology to study the degree to which various principles influence our decision making.

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