

Examining Perceptions of Moral Change of the Self and Others

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Abstract

Despite the increasing popularity of moral psychology, little research has considered how individuals' morals change as a result of common, everyday experiences. Instead, the moral change literature focuses primarily on moral change as a consequence of significant trauma (i.e., war). Here, I adopt a social psychological perspective to address this gap in the literature. Specifically, I examine the contexts and individual perceptions that could precipitate moral change in response to relatively ordinary circumstances. In particular, the present exploratory research explored the extent to which people's moral beliefs change in response to circumstances that challenge their previously held moral convictions in everyday situations for average individuals.

Keywords: moral change, moral injury, morality

Examining Perceptions of Moral Change of the Self and Others

Although moral psychology has become increasingly popular in recent years, little attention has been paid to how individuals change morally, what contexts drive such changes, and how people perceive such moral change. Currently, the scientific literature on moral change is primarily associated with moral development and moral change as a result of serious trauma (known as moral injury); however, my interests specifically lie within changes in one's *morality* in the course of everyday life. With this, moral change is defined as the subjective, long-term altering of one's moral beliefs or values in response to circumstances that challenge one's previously held moral convictions.

The scientific literature on moral change has primarily focused on moral injury, which occurs as a result of severe trauma in conditions such as war, and therefore has a clinical orientation that is limited to specific contexts and populations (i.e., combat veterans). Moral injury is defined as dissonance created from the violation of an individual's moral code as a result of a severe moral transgression (Litz et al., 2009). The clinical literature on moral injury has focused on specific treatment and intervention strategies, along with symptoms and clinical diagnoses of moral injury. Furthermore, the literature has also focused on moral injury's comorbidity with Post Traumatic Stress Disorder (PTSD), consistent with this clinically-oriented approach (Drescher et al., 2011). This limited approach in the literature, however, does not address how individuals can undergo moral change in response to more benign, everyday circumstances. Specifically, the scientific literature on moral injury currently lacks non-clinical research to better understand its potential implications in less severe contexts. The present research aims to broaden the current research on moral injury by examining the construct of moral injury from a social psychological perspective that assesses the degree to which moral

change can occur in less severe, non-combat situations as it applies to an unselected sample of individuals.

Outside the moral domain, the psychological literature offers an approach to thinking about the concept of change more generally. O'Brien and Kardas (2016) examined the trajectory of change that people bring to mind when asked to assess themselves and others. Results indicated that when individuals assessed change in themselves, they primarily focused on improvement and ignored decline. Conversely, when subjects were asked to think about change in others, specifically change of a friend, change was interpreted as more negative (O'Brien & Kardas, 2016). Further research by O'Brien and Klein (2017) identifies the mechanisms that contribute to perceptions of "official," or more lasting, change. Put simply, the researchers sought to explore what threshold needs to be reached before an individual concludes that long-lasting change has been achieved. Findings indicate that subjects were more willing to conclude that someone had officially changed when the change was negative, as opposed to more positive change for the better, even when there was less evidence for the negative change (O'Brien & Klein, 2017). In sum, the research concludes that participants found change to be more meaningful when it manifested as negative change. The researchers attribute this to a negativity bias: subjects felt that good things would eventually worsen, whereas bad things seemed unlikely to worsen any more, and were therefore more permanent (O'Brien & Klein, 2017). Though this research examines change trajectories and provides understanding into how individuals perceive change in themselves as well as others, it does not assess how individuals perceive *moral* change, in particular, and what drives this change. According to research conducted by Strohminger and Nichols (2014), morality is one of the most central aspects of an individual's identity; given this, moral change should be approached differently than change more generally,

as morality is a significant contributor to the makeup of the self (Strohminger & Nichols, 2014). Nevertheless, this general change research provides insight into how perceptions differ amongst the self in comparison to others, and this differentiation likely can be extended to moral change as well. Taken together, the present research focuses exclusively on *moral* change, building upon the theoretical framework laid by numerous moral and social psychologists.

Moral Development

Past research indicates that social influences can affect morality and instigate moral change (Kohlberg & Kramer, 1969; Haidt, 2001). Kohlberg and Kramer (1969) discussed how the concept of the moral self begins in early childhood and develops through a series of stages of moral reasoning throughout the lifetime. As individuals become engrossed in different life experiences, an individual's moral view alters to match that individual's social world. Conflict in an individual's moral development can arise when one finds oneself in a situation that may require a moral trade-off that causes a movement in and between stages of moral reasoning (Kohlberg & Kramer, 1969). Individual morality has also been shown to be influenced by social and cultural contexts, which is a central feature of Haidt's (2001) social intuitionist theory. In particular, Haidt (2001) believes peer socialization shapes individuals' moral development in what one determines to be right or wrong, or good versus bad. Our peers may challenge our ideas of what is acceptable and unacceptable, and introduce us to novel moral intuitions we may not have thought about in the past, operating via social norms that may shape moral judgment (Haidt, 2001). Thus, given Haidt's (2001) social intuitionist theory, it stands to reason that situational contexts can influence individuals' morals through peer socialization. Together, research on moral development and social intuitionism provides a framework for thinking about how moral change could occur, with moral change being influenced more broadly by the

underlying cultural environment that provokes peer socialization, and especially, intuitionism, or the idea that moral judgments are often fast and automatic (Haidt, 2001).

Additionally, the underlying assumption of moral change relies on the idea in the social psychological literature that morals are innate, or something that all humans possess. Research by Haidt and Joseph (2004) indicates that the psychological capacity to think about and understand moral virtues is innate and subject to change as a result of experience and social construction. Rooted in evolutionary psychology, Haidt and Joseph (2004) believe in moral pluralism, or the idea that humans possess multiple virtues that underlie morality (Wojcik et al., 2013). Haidt and Joseph (2004) identify five moral intuitions that they believe humans have an innate capacity to identify and understand, or a common moral language that all humans share and use throughout moral development. These virtues, or “foundations”, can be differentially built up through culture and learned experience. These moral intuitions are categorized into five moral “foundations”: harm/care, fairness/reciprocity, ingroup/loyalty, authority/respect, and purity/sanctity. These foundations are considered to be psychological systems that influence how people perceive actions, decisions, and others around them as moral or immoral. However, these intuitions are malleable, revised to fit the environment a particular individual experiences (Graham et al., 2013). These psychological systems are influenced heavily by culture; what is socially constructed in a certain culture as worthy of praise or blame is based on the salient factors, such as social norms, political ideology, and values in that particular culture (Graham, Haidt, & Nosek, 2009). Thus, Moral Foundations Theory supports the belief that morals are innate, yet modifiable by cultural and environmental influences.

Morals as Subject to Change

Further, the scientific literature demonstrates that morality can be affected by social

influence. Doris's (1998) construct of situationism, for example, supports the idea that individuals may act differently in different situations, based on their salient dispositions and evaluative status in the given situation. Situationism rests upon the idea that behavioral variation is more influenced by situational differences in the environment rather than dispositional differences among individuals (Doris, 1998). Essentially, variation in behavior is more attributed to the situation than the character of a particular individual. Behavioral outcomes are a result, in part, of the circumstances and environment that can play a part in how an individual reacts, often overriding character and personality traits thought to be robust and consistent (Doris, 1998). Thus, the influence of the situation can be influential in contexts of moral or ethical deliberation.

In support of this, the social psychological literature also contains evidence that moral convictions are subject to change through ethical dissonance, or when an individual is faced with a situation that pressures them to choose between two options: behaving morally to maintain a moral self-image, or acting unethically to gain various benefits, but at a cost to their moral self-image (Barkan, Ayal, & Ariely, 2015). Ethical dissonance can change moral convictions in two ways: through *anticipated* ethical dissonance, prior to an individual violating their moral code, or through *experienced* ethical dissonance, which takes place following a moral violation when feelings of guilt and shame arise. When anticipated ethical dissonance occurs, evidence shows that individuals justify their unethical actions by redefining behaviors that are morally wrong as being acceptable (Barkan et al., 2015). Upon the occurrence of experienced ethical dissonance, individuals compensate for their guilt and shame in the hope that this will restore their moral code (Barkan et al., 2015). Ethical dissonance can weaken an individual's moral convictions by desensitizing one to moral wrongdoing over time through these mechanisms.

Ultimately, ethical dissonance helps bridge the gap between existing moral injury research and the exploratory questions of the present research regarding how this would look or appear in everyday life, with moral injury being defined as dissonance created from the violation of an individual's moral code as a result of a severe moral transgression (Litz et al., 2009). Moral injury is often the result of morally injurious events, including "perpetrating, failing to prevent, or bearing witness to acts that transgress deeply held moral beliefs and expectations" (Litz et al., 2009, p. 700). The scientific literature on moral injury is limited and primarily associated with combat veterans and their wartime experiences with violence; the construct has also been studied in response to severe moral transgressions, such as killing, betrayal, or rape, that result in lasting psychological impacts (Drescher et al., 2011). Given this, it remains unclear what moral injury translates to or looks like in everyday life.

Exploratory Questions

In the present exploratory research, the perception of moral change as it occurs in the self and others, and how the occurrence of moral change affects an individual's perceptions, attitudes, and beliefs regarding moral change, is examined. The present research draws from Moral Foundations Theory (Graham et al., 2009), which posits that humans share a common moral language comprised of five "foundational" moral intuitions: harm/care, fairness/reciprocity, ingroup/loyalty, authority/respect, and purity/sanctity. These perceptions, attitudes, and beliefs were captured by an IRB-approved questionnaire inspired by the research on the Moral Foundations Questionnaire (Graham et al., 2011). Taken together, I propose that the social psychological model of moral change is as follows: moral change occurs as a result of moral inconsistency when participants are a part of, or witness, something that violates a moral

virtue they hold true, and, consistent with the ethical dissonance literature, this should provoke moral change. Using this framework, the following research questions will be analyzed:

1) Do individual differences in people's beliefs about whether moral change is possible influence how they perceive moral change (in themselves or others)?

The purpose of this exploratory question was two-fold. First, I wanted to assess whether people believed moral change could occur in everyday life, which prior research had not yet examined. Additionally, if moral change was likely to occur in everyday life, I wanted to examine if it could occur as a result of something that either happened to the self or from witnessing relevant events in others.

2) Do people perceive their own moral change differently than moral change resulting from witnessing others?

Motivated by O'Brien and Kardas' (2016) findings that individuals perceive broader change differently when thinking about themselves in comparison to others, I wanted to examine if this proved true for moral change as well. I reasoned that people might be more likely to recall more severe and negatively valenced scenarios when referring to moral change resulting from witnessing others as compared to the self, due to O'Brien and Kardas' (2016) finding that when thinking about broader change of the self, individuals tended to focus on positive trajectories.

3) Does one's closeness or relationship to close (i.e., family) or distant (i.e., strangers) others influence perceptions of moral change in others?

Work by Bloom (2011) and Sowden (2015) indicates that closeness and relationship influence moral decision-making. With regards to moral change, I speculated that individuals who wrote about distant individuals would recall more severe and negatively valenced events. Conversely, I presumed that moral change events involving witnessing close others would result

in less severe and more positively valenced situations being recalled because individuals tend to be more biased toward close others, and thus, may make close others appear more moral (Bloom, 2011).

4) Are effects on one's perceptions of moral change more likely to occur as a result of personal moral change events as compared to witnessing relevant moral change events in others?

This exploratory question stemmed from the scientific literature on moral injury that indicates that moral injury has a more significant impact on an individual when that individual is personally affected or involved; however, the moral injury literature also suggests moral injury can occur to a lesser extent when an individual is not necessarily directly or personally involved, such as when one witnesses others behaving in ways that go against their own personal moral convictions (Litz et al., 2009). In context, I felt it was plausible that both personally experiencing an event and witnessing others would both yield moral change, although a situation personally experienced would likely cause more robust moral change as compared to witnessing others. This is supported by Cushman, Gray, Gaffey, and Mendes' (2012) finding that individuals tended to have stronger reactions to personally performing moral violations, but nevertheless, individuals still reacted, though not as strongly, when witnessing others committing immoral actions.

Method

To better understand what provokes moral change and individuals' perceptions concerning moral change, an exploratory study through Amazon's Mechanical Turk (MTurk) was conducted. Participants were asked to recall two moral transgressions that altered their moral perceptions, attitudes, or beliefs: one that they personally experienced, and another that they witnessed occurring to someone else. Participants were asked to detail each situation and the

circumstances in an open-ended question format (see Appendix A). The survey utilized a mixed design; participants were randomly assigned to one condition only (three in total, detailed below), but all conditions were exposed to both a “personal” and “other” open-ended question to respond to.

Participants

253 participants were recruited online via MTurk. They were given the opportunity to answer several open-ended questions, followed by several survey questions about their moral attitudes and behavior. Further, participants were instructed that the survey would take about 10 minutes to complete, and that they would be compensated \$1.00 for their time. Exclusion criteria determined a priori were utilized before coding and analyzing the data. In the Qualtrics survey, participants were asked, “In your honest opinion, should we use your data?” before submitting their survey responses. Participants who responded “no” to the quality question or left the question blank were eliminated from the data set used for analyses ($N = 94$). Further, participants who did not complete the open-ended response regarding a personal experience that changed them morally were also eliminated ($N = 4$). Lastly, responses deemed and agreed upon as “not moral change” by two independent coders were excluded from analyses as well ($N = 33$ for the personal scenarios and $N = 22$ for the other scenarios). Therefore, within the original 253 participants, 132 were excluded from my analyses, and thus, the final sample for personal moral change included 122 participants (55% male, 44% female, mean age = 34 years old). For moral change of others, the sample totaled 100 participants, due, in part, to some respondents answering the open-ended “personal” question, but not the second open-ended “other” question.

Design and Procedure

Participants were instructed that the study aimed to identify how moral decision-making

affects an individual's thoughts, behaviors, and attitudes. If subjects agreed to participate, they were told they would further be asked to reflect on times in which something that they personally experienced, or something they witnessed happening to someone else, changed them morally. Following this, they would answer some questions regarding the situation(s), followed by standard demographic questions about themselves.

Semantics can often affect how a participant thinks about a question, and consequently, shape how they respond (Petrinovich & O'Neill, 1996). Research shows that individuals often think of "change" generally as a synonym for "improvement"; when participants were asked to reflect on change that occurred in their past, participants experienced more favorable mood and satisfaction, due to associating the word "change" with "improvement" within themselves (O'Brien & Kardas, 2016). Therefore, three randomized conditions for wording were established to ensure that semantics did not interfere with the type and valence of situations that participants recalled. All questions contained the exact same wording with one exception: some participants were randomly assigned to the condition that asked participants to detail an experience that "changed" them morally (final $N = 39$), while other participants were randomly assigned to write their response based on a situation experience that "shifted" their morals (final $N = 46$) or about a time where their morals "varied" (final $N = 37$).

Prior to detailing the two situations, participants responded to the question, "Do you believe that people can experience an event in their everyday lives that changes/shifts/varies their morals?" using a sliding scale to indicate the likelihood that such an event could occur for the average individual ($M = 67.52$, $SD = 24.58$). On the scale, a response of "0" indicated that moral change was extremely unlikely, whereas "100" was extremely likely. Further, as indicated in psychological research conducted by Sowden (2015), an individual's relationship to the person

they witnessed has an effect on their moral decision-making. To account for this in my analyses, participants were asked about their relationship to the individual witnessed in the second scenario (e.g., parent, close friend, boss, stranger, see Appendix B for all options). After writing about witnessing moral change events that happened to other people, respondents were also asked to report their closeness with the identified individual.

Measures

Moral Foundations Questionnaire. To identify how individual differences in moral sensitivity were related to the type of moral change incidents that participants recalled, all participants completed the 20-question version of the Moral Foundations Questionnaire (Graham et al., 2011). The MFQ20 asks, “When you decide whether something is right or wrong, to what extent are the following considerations relevant to your thinking?” Participants then read a series of 11 statements in Part 1 and rated each statement on a scale from 1 (*not at all relevant*) to 5 (*extremely relevant*). Additionally, in Part 2, participants were asked to rate their agreement with a series of 11 statements on a scale from 0 (*strong disagreement*) to 5 (*strong agreement*). On the MFQ20, 4 questions correspond to each of the moral foundations (harm, fairness, ingroup, authority, and purity). Moral foundations scores were computed by averaging the four responses associated with each moral foundation. See Appendix C for full questionnaire.

Inclusion of Other in the Self scale (adapted). To assess how an individual’s relationship may have affected how one perceived the situation regarding someone one witnessed that changed them morally, participants answered one question regarding the level of closeness between oneself and the person described in the situation. The scale contains 9 pairs of circles that increasingly overlap, with the first pair of circles signifying minimal closeness, and the ninth pair of circles representing maximum closeness (Aron, Aron, & Smollan, 1992). Thus,

respondents reported their closeness with the identified individual in their “other” open-ended response on a scale of 1 (*minimal closeness*) to 9 (*maximum closeness*). The full scale and diagram can be found in Appendix D.

Coding

Two coders were designated to code the open-ended responses for the personal and other responses. A coding scheme (see Appendix E) was formulated to code for six variables: (1) severity of the moral change event (“event-severity”), (2) valence of the moral change event (“event-valence”), (3) the moral foundation that was most relevant to the moral change event (“MFT”), (4) whether the participant described any long-lasting effects of the moral change event (“effect-present”), (5) the severity of that effect (“effect-severity”), and (6) the valence of that effect (“effect-valence”). “Personal” variables are labeled as “personal-variable-name,” while “other” variables are titled “other-variable-name.”

Event severity indicates the seriousness of the event recalled, on a 5-point scale from 1 (*not at all serious*) to 5 (*very serious*). Further, event valence indicates the emotional value associated with a participant’s response to the event on a 5-point scale from -2 (*extremely negative*) to 2 (*extremely positive*). For the Moral Foundations Theory code, the coders were instructed to pick the one moral foundation that best describes the nature of the event a participant wrote about, consistent with Graham et al. (2009). Moreover, if the participant did not mention or describe the effect(s) the event had on them, the coder marked a “0” for effect present, and thus, left the effect severity and effect valence codes blank. If the participant did describe the effect(s) the event had on them, the coder marked a “1” for effect present, and went on to code the severity and valence of the effect exactly as they coded the event severity and valence above, but with a focus on the effect mentioned instead.

If the coders did not believe a response conveyed moral change, they coded it as a “6” for all variables and these responses were excluded before conducting analyses due to not being of interest to our research. The two coders were trained and given a subset of 30 responses to use for the first round of practice coding. Upon assessing the reliabilities from the first round, the coders were re-trained and reconciled any differences in the two categorical variables (“effect-present” and “MFT”). Given the strong intercoder reliability following this, the coders were given the entire data set that included both “personal” and “other” responses to code independently. Lastly, the coders reconciled the scenarios marked as not moral change, and agreed upon 33 scenarios deemed not moral change in the “personal” responses and 22 scenarios in the “other” responses that were excluded from my analyses. The final intercoder reliabilities calculated omitted any cases in which the coders were trained with; final reliabilities were deemed suitable to move forward with analyses, with “personal” variable reliabilities as follows: “personal-event-severity” $\alpha = 0.807$, “personal-event-valence” $\alpha = 0.814$, “personal-MFT” $\kappa = 0.709$, “personal-effect-present” $\kappa = 0.928$, “personal-effect-severity” $\alpha = 0.840$, and “personal-effect-valence” $\alpha = 0.939$. Further, the “other” variable reliabilities included: “other-event-severity” $\alpha = 0.748$, “other-event-valence” $\alpha = 0.793$, “other-MFT” $\kappa = 0.493$, “other-effect-present” $\kappa = 0.554$, “other-effect-severity” $\alpha = 0.647$, and “other-effect-valence” $\alpha = 0.689$. Finally, continuous variable scores were averaged across the two coders to create composite variables. For the two categorical variables, “effect-present” and “MFT” for both the “personal” and “other” codes, a third coder reconciled the existing discrepancies.

Results

To examine if semantics had an effect on the types of events that subjects recalled, several ANOVAs (with Bonferroni corrections for multiple comparisons) and chi-square tests

were ran. There were no significant differences for any of the six coded “personal” variables (“personal-event-severity,” “personal-event-valence,” “personal-MFT,” “personal-effect-present,” “personal-effect-severity,” and “personal-effect-valence”) by condition (all $ps > .051$). For the “other” variables, the only variable that differed significantly by condition was “other-event-valence”, $F(2, 97) = 3.55, p < 0.033$. However, given that only one variable showed a weakly significant effect, I will continue to refer to the studied construct as “moral change” in further analyses and discussion.

To assess if this moral change phenomenon could occur in everyday life for average individuals, respondents were asked to indicate the likelihood that people can experience an event in their everyday lives that changes their morals, on a scale from 0 (*extremely unlikely*) to 100 (*extremely likely*). Overall, the majority of respondents believed that moral change could occur in their daily lives ($Mdn = 70, M = 67.52, SD = 24.58$). When analyzing belief likelihood against the median of the belief likelihood scale (at 50%), there is statistical significance to say that the population mean of belief likelihood is greater than 50%, $t(121) = 7.87, p = .000$ (see Figure 1 for distribution of belief likelihood). To continue, I was interested in examining if individual differences across demographic variables moderated the perception of moral change. Overall, individual differences in regards to age, gender, level of education, political party, political ideology, race, or MFQ averages calculated from the MFQ20 results did not moderate belief likelihood in moral change (all $ps > .198$).

Do individual differences in people’s beliefs about whether moral change is possible influence how they perceive moral change (in themselves or others)?

To assess if differences in belief likelihood in moral change correlates with differences in perception of personal moral change in regards to event valence, event severity, and MFT,

several analyses were conducted. There were no significant differences in “personal-event-severity” ($B = .003$, $SE = .003$, $p = .442$, $R^2 = .005$) or “personal-event-valence” ($B = -.001$, $SE = .003$, $p = .847$, $R^2 = .000$). However, belief likelihood was positively correlated to both “personal-effect-severity” ($r(110) = .27$, $p = .003$) and “personal-effect-valence” ($r(110) = .24$, $p = .011$). This indicates that as belief that moral change can occur increases, participants recalled moral change events that had more severe and more positively valenced effects. Further, respondents who were more likely to believe that moral change could occur in daily life were more likely to have written about events that elicited fairness violations in comparison to harm, $F(2, 111) = 3.91$, $p = .023$.

Do people perceive their own moral change differently than moral change resulting from witnessing others?

There were no significant differences for “personal-event-severity” in comparison to “other-event-severity”, $t(99) = -.604$, $p = .548$. Thus, individuals did not perceive personally experienced events as more severe than events in which they witnessed another individual. However, individuals recalled more negatively valenced events when witnessing others as compared to personal moral change events, $t(99) = 2.14$, $p = .035$. Moreover, the moral foundations elicited most frequently for both the personal and other open-ended responses were fairness ($N = 59$ for personal and $N = 43$ for other) and harm ($N = 42$ for personal and $N = 40$ for other). See Figure 2 for frequencies of MFT across “personal” and “other” responses. Lastly, the effects that people reported from personal moral change events were significantly more severe ($t(77) = 3.16$, $p = .002$) and more negatively valenced ($t(77) = -2.23$, $p = .028$) than effects from moral change as a result of witnessing others. See Table 1 for the means and standard deviations of the “personal” and “other” variables.

Does one's closeness or relationship to close (i.e., family) or distant (i.e., strangers) others influence perceptions of moral change in others?

The majority of respondents wrote about witnessing a close friend ($N = 20$), acquaintance ($N = 15$), or a stranger ($N = 26$) that influenced them morally. Of the most commonly occurring relationships mentioned above, individuals tended to recall slightly more severe events for acquaintances ($M = 3.03$, $SD = 0.67$), and the least severe events regarding strangers ($M = 2.65$, $SD = 0.88$) witnessed. However, there were no significant differences across closeness (gathered from the Inclusion of the Self in Others scale by Aron et al., 1992) in regards to any of the six "other" variables. Examining my six "other" variables by relationship showed similar findings (all $ps > .239$).

Are effects on one's perceptions of moral change more likely to occur as a result of personal moral change events as compared to witnessing relevant moral change events in others?

92% of respondents personally experienced an event that had an effect on their perceptions, attitudes, and beliefs, whereas only 81% of respondents had an effect present when they witnessed an event involving someone else, $X^2(1, N = 100) = 7.12$, $p = .008$. These results indicate that subjects were more likely to have their perceptions of moral change affected when personally experiencing an event as opposed to witnessing others.

Discussion

These primary findings validate the existence of moral change in everyday life, with the majority of individuals believing that moral change can occur given the average score of belief likelihood, and indicate that moral change can result in altered perceptions, beliefs, and attitudes for both oneself and others. This work addresses an understudied topic in moral and social

psychology, and these results bolster the research showing morals' ability to change, as well as demonstrate how perceptions of moral change are influenced. With this, these findings can inform interrelated research on moral injury, moral development, and broader change.

To begin, my research on moral change has the ability to impact existing research on change more generally. Existing research on change does not look at change through a moral lens, and comparing what is known from the psychological literature with my findings, individual moral change is distinct from other types of personal change. Whereas O'Brien and Kardas (2016) found that individuals primarily focused on positive trajectories of change (i.e., improvement), my research indicates that individuals wrote about primarily negatively valenced moral change events that impacted them. However, individual improvement could be attributed to negative events that took place in one's life, as my data indicates that effects were most present with negative events, but personal change given these events was often positive. Thus, my findings do not directly contradict the current change literature. O'Brien and Kardas (2016) also found that individuals tended to assess others' change more harshly (i.e., a focus on decline) than their own personal change. Conversely, my findings indicate that individuals tended to experience effects on their perceptions of moral change as being more severe and more negatively valenced when thinking about personal moral change. Therefore, the research on moral change sheds light on how individuals' perceptions of change differ from, or are similar to, change more broadly, contributing to a deeper understanding of what moral change looks like and the types of events that typically provoke it.

In addition, the present results inform how to approach and extend the construct of moral injury to a social psychological perspective in average individuals experiencing ordinary circumstances, instead of it being examined exclusively from a clinical perspective among

military combat veterans who have experienced severe moral transgressions. The research on moral change provides an approach to examining and applying moral injury beyond the limited contexts and populations that it has been studied in thus far, indicating that individuals in more benign circumstances can experience moral change as well, though often in a less severe or clinical manner. In doing so, the research on moral change supports the notion that moral injury can be generalized to occur as moral change in everyday interactions that the average person experiences, and supports the varying forms that this everyday moral change can take.

Moreover, this research on moral change impacts existing research on moral development and provides insight as to the contexts and implications of moral change occurring. Moral development research provides indication that morals are capable of changing and altering over one's lifetime, but is often criticized for providing little information on how this moral change takes place; more specifically, what provokes this change in one's moral development? Therefore, this research on moral change provides insights into the contexts that prompt moral change and how factors, such as severity and valence of an event, have an impact on whether one's morals change in response to an experience. This also applies to research on Moral Foundations Theory, as research by Graham et al. (2009) establishes that moral foundations are influenced by perceptions of actions, decisions, and others in determining if something is moral or immoral. The findings on moral change, then, inform factors that promote and provoke these universal intuitions as malleable by providing indication that factors such as severity and valence, both of the event and if a change of one's perception was present, plays a role not just in determining if an action is moral or immoral, but in influencing one's personal perceptions of how they view the world morally.

Limitations

There are several limitations that should be addressed in regards to my research when considering the design of future related research. First, the use of MTurk has known limitations due to the sample of workers that MTurk attracts. Per Huff and Tingley (2015), MTurkers typically identify as being more politically liberal. This proved true in my sample, as nearly 77% of the sample leaned politically liberal or identified as being moderate or middle of the road. Previous research has shown that political ideology can influence the moral foundations one endorses. Individuals who consider themselves politically liberal tend to adhere to the harm/care and fairness/reciprocity foundations almost exclusively, while political conservatives are shown to adhere to all five moral foundations more equally (Graham et al., 2009). Given this, perhaps a more politically diverse sample would have slightly altered the moral transgressions recalled and the frequencies of the corresponding moral foundations. Furthermore, future research should explore moral change across a larger, more diverse sample. Though my sample sizes were sufficient for the purposes of my thesis ($N = 122$ for personal-situations and $N = 100$ for other-situations), future research should assess moral change on a larger scale, utilizing a different population than was included in this exploratory study. Due to selective attrition, numerous respondents did not complete the survey in its entirety, while others were excluded from my sample due to not following instructions or failing the quality check. Thus, a larger sample would mitigate this selective attrition and exclusionary criteria to increase the validity of the study and make the results more generalizable.

Additionally, some of the “other” variable coding categories yielded low intercoder reliabilities. Namely, the categorical codes of “other-MFT” and “other-effect-present” were lower than the continuous “other” variables in the coding scheme. This might be due, in part, to

time constraints that hindered further training to code the “other” open-ended responses to produce higher intercoder reliability. Further, the “other” open-ended responses proved to be more ambiguous and less straightforward than many of the “personal” open-ended responses due to the complexity of others being involved in a scenario. With Moral Foundations Theory being difficult to code given the nuances of each moral foundation, the ambiguity added more difficulty to the coding. For the moral foundations code, the coders were instructed to select the moral foundation most prevalent in each response. In future work, I suggest mitigating this limitation by allowing coders to code for more than one moral foundation in each response where it may be applicable, as well as providing more training materials that contextualize what each moral foundation looks like in everyday life.

Future Studies

Although these findings resulting from my exploratory study are telling, there are still several ideas that should be examined. First, the psychological factors that predict change when individuals recall witnessing others experience situations that have an effect on their own personal perceptions, attitudes, and beliefs should be examined further. According to Bloom (2011), individuals will differ in their moral judgments and moral decision-making when judging a stranger versus judging a family member or close friend. Morality has evolved over time and Bloom (2011) cites evolutionary psychological principles, such as natural selection and reproduction, in guiding individuals to be more selfish and biased toward family members and kin over strangers. Essentially, interpersonal relationships play a vital role in our lives, and the role they play in moral judgment and decision-making is much the same (Bloom, 2011). Further, the scientific literature indicates that a high degree of self-other overlap, as measured by Aron et al.’s (1992) Inclusion of Other in the Self Scale that measures perceived relationship closeness, is

associated with cognitively reasoning about close others similarly to how we reason about ourselves. With this, individuals with high self-other overlap synchronize their behavior and strengthen their social bonds by incorporating the self in the other, and vice versa (Galinsky, Ku, & Wang, 2005). This provides indication that when making a moral judgment or moral decision, an individual is more likely to reason about a close relationship similar to how they would themselves over a distant stranger. Thus, this literature background sparks my curiosity in regards to further comparing moral change as it relates to the self, versus witnessing a close other or a distant other experiencing something that changes one's own perceptions, attitudes, and beliefs.

Moreover, I would like to assess the psychological factors that contribute to moral change when participants are not just asked to recall situations that changed their morals, but physically experience low-risk moral violations in a lab setting. Using my findings on situations individuals have experienced that changed them morally as a model, in-person, low-risk moral violations would take place in the lab with the use of confederates. As demonstrated in research by Cushman et al. (2012), there is an association between the body and moral decision-making. In this research, subjects had a stronger aversive reaction to actually physically performing harm as opposed to witnessing harm (Cushman et al., 2012). Thus, I would be interested in assessing the immediate impact of an active behavioral paradigm of a moral violation as it relates to longevity of the effect, robustness, and moral intensity of the moral change on the individual's perceptions, attitudes, and beliefs in comparison to situations recalled in the online study.

Finally, my findings indicate that the construct of moral injury extends to an individual's everyday life through moral change situations that can have an effect or impact on one's perceptions as a result of an experience that affected one's morality. With this, I am interested in

assessing the robustness and longevity of this change on one's morals and, specifically, how the moral foundations underlying the situations recalled correlate to the longevity and robustness of this impact on one's morals. Considering that the social psychological literature on moral injury and moral change is scarce, this concept has not yet been studied in regards to social psychology and morality. Future studies should consider different moral violation scenarios in accordance with the moral foundations to examine which moral foundation violations have the strongest and most long-lasting effect on one's perceptions.

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Table 1

Descriptive Statistics of "Personal" vs. "Other" Variables

Variable	<i>M</i>	<i>SD</i>	Possible Scale Range
Event Severity			1-5
Personal event severity	2.78	0.94	
Other event severity	2.86	0.84	
Event Valence			-2-2
Personal event valence	-0.72	0.80	
Other event valence	-0.95	0.77	
Effect Severity			1-5
Personal effect severity	2.64	0.76	
Other effect severity	2.36	0.66	
Effect Valence			-2-2
Personal effect valence	0.29	0.87	
Other effect valence	0.55	0.84	

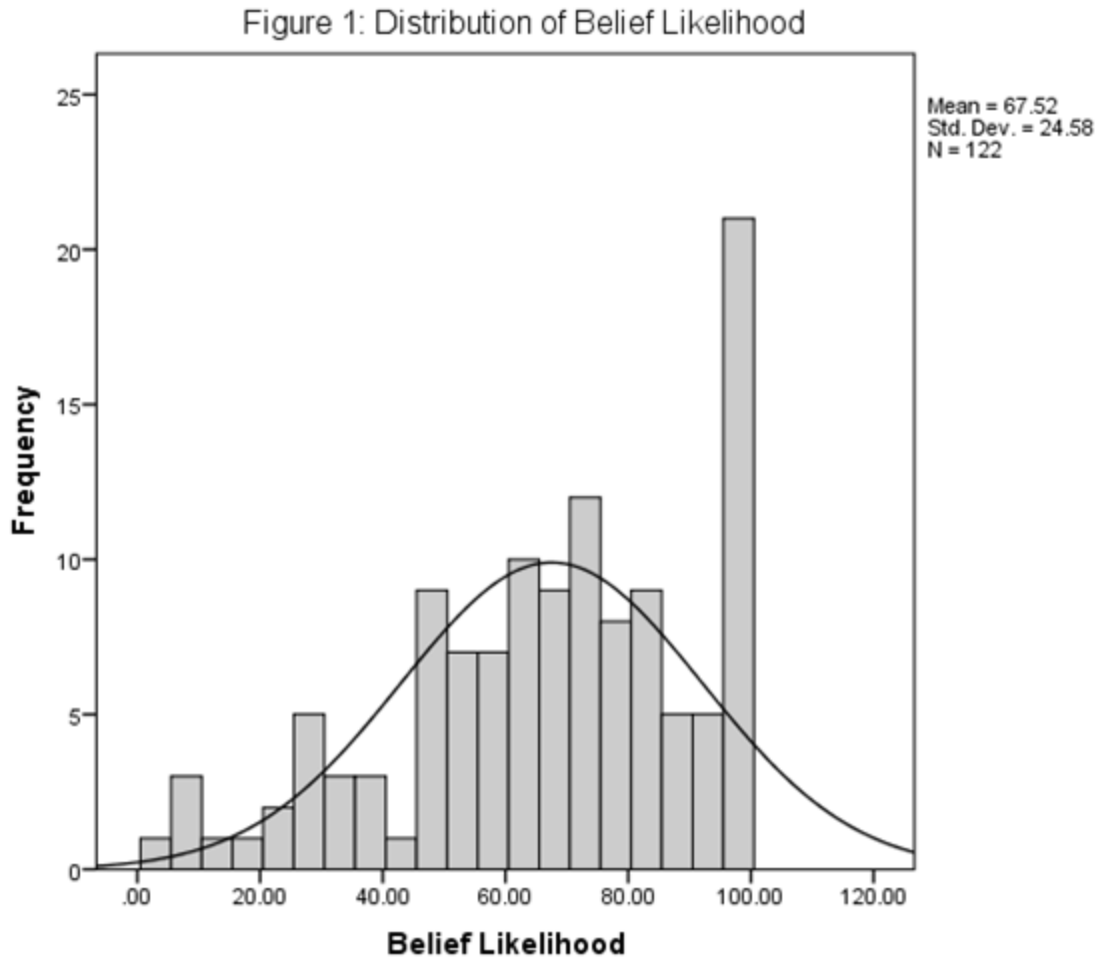


Figure 1. Frequencies of belief likelihood scores across all conditions. Higher scores indicate more belief that moral change can occur in everyday life.

Figure 2: Frequency of MFT in "Personal" vs. "Other" Scenarios

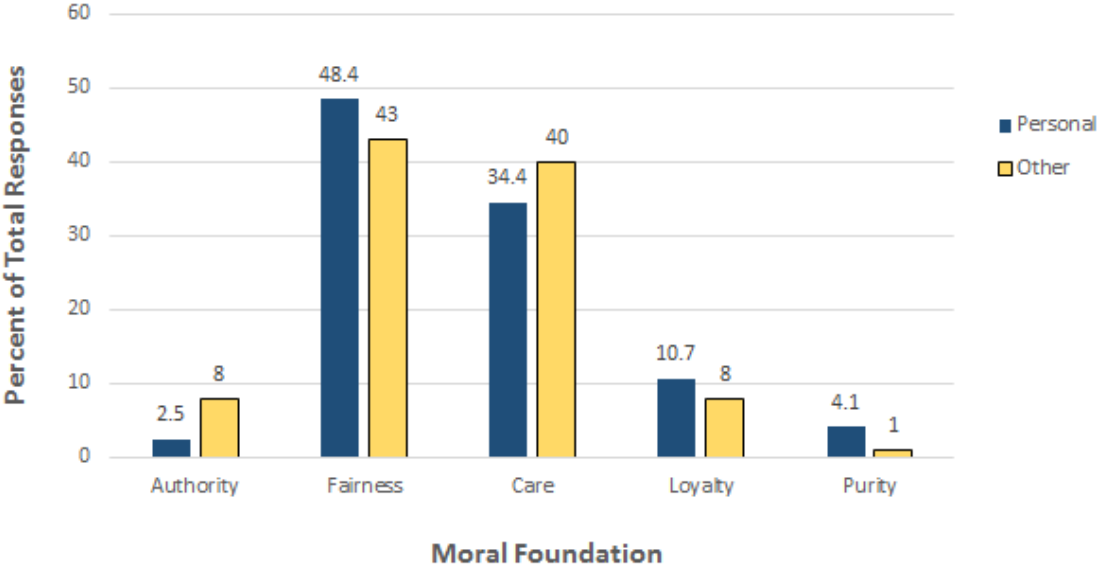
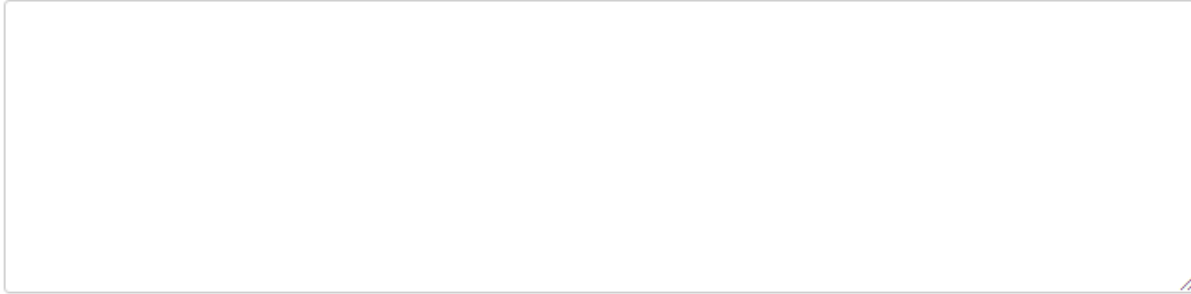


Figure 2. Total percentages of the moral foundations elicited across “personal” and “other” responses. Higher percentages indicate more commonly elicited foundations.

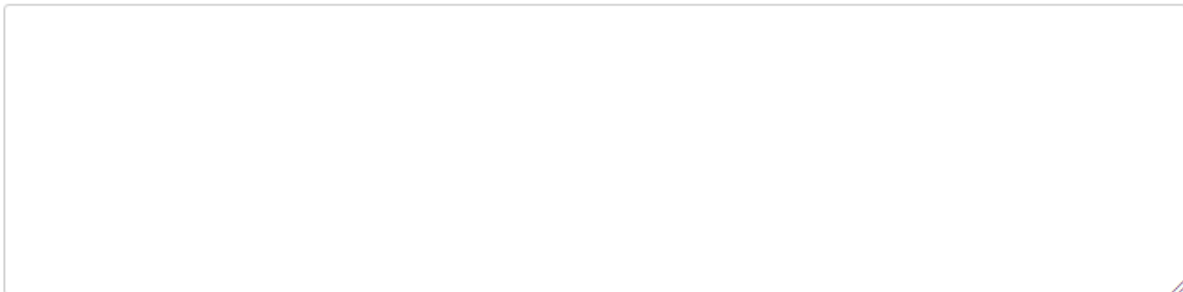
Appendix A

Open-ended “personal” and “other” situational questions from Qualtrics survey (for the “change” condition specifically)

Describe an instance that you have personally experienced that has changed your morals. Explain the situation and circumstances in detail below, as well as how your moral values, beliefs, attitudes, and/or behavior changed as a result.



Describe *another* instance that you have witnessed occurring to someone else that has changed your morals. Explain the situation and circumstances in detail below, as well as how your moral values, beliefs, attitudes, and/or behavior changed as a result.



Appendix B

Relationship question with all answer choices from Qualtrics survey

How would you describe your relationship with the person you wrote about witnessing in the previous question?

- Parent
- Sibling
- Grandparent
- Other relative
- Close friend
- Acquaintance
- Spouse/partner
- Boss
- Subordinate
- Coworker
- Child(ren)
- Stranger
- Other, please specify:

Appendix C

20-Item Moral Foundations Questionnaire

Part 1. When you decide whether something is right or wrong, to what extent are the following considerations relevant to your thinking? Please rate each statement using this scale:

[0] = not at all relevant (This consideration has nothing to do with my judgments of right and wrong)

[1] = not very relevant

[2] = slightly relevant

[3] = somewhat relevant

[4] = very relevant

[5] = extremely relevant (This is one of the most important factors when I judge right and wrong)

_____ Whether or not someone suffered emotionally

_____ Whether or not some people were treated differently than others

_____ Whether or not someone's action showed love for his or her country

_____ Whether or not someone showed a lack of respect for authority

_____ Whether or not someone violated standards of purity and decency

_____ Whether or not someone was good at math

_____ Whether or not someone cared for someone weak or vulnerable

_____ Whether or not someone acted unfairly

_____ Whether or not someone did something to betray his or her group

_____ Whether or not someone conformed to the traditions of society

_____ Whether or not someone did something disgusting

Part 2. Please read the following sentences and indicate your agreement or disagreement:

[0]	[1]	[2]	[3]	[4]	[5]
Strongly disagree	Moderately disagree	Slightly disagree	Slightly agree	Moderately agree	Strongly agree

_____ Compassion for those who are suffering is the most crucial virtue.

_____ When the government makes laws, the number one principle should be ensuring that everyone is treated fairly.

_____ I am proud of my country's history.

_____ Respect for authority is something all children need to learn.

_____ People should not do things that are disgusting, even if no one is harmed.

_____ It is better to do good than to do bad.

_____ One of the worst things a person could do is hurt a defenseless animal.

_____ Justice is the most important requirement for a society.

_____ People should be loyal to their family members, even when they have done something wrong.

_____ Men and women each have different roles to play in society.

_____ I would call some acts wrong on the grounds that they are unnatural.

Appendix D

Adapted Inclusion of Other in the Self scale (Aron et al., 1992) used in the Qualtrics survey

How close are you to the person you just thought about? The picture below contains nine sets of circles ordered by increasing degrees of overlap. One set of circles represents the level of closeness between you and the person you described above. One circle is you (self) and the other circle is the person you just thought about (other). The overlap between the two circles represents the level of closeness of your relationship with that person. The first (1) pair of circles represents minimal closeness (e.g., acquaintance) and the ninth (9) pair represents maximum closeness (e.g., intimate partner). Please indicate which set of circles best represents your relationship with the person you just thought about.

The diagram shows nine pairs of circles, numbered 1 to 9, representing increasing degrees of overlap between 'Self' and 'Other'.

- 1: Two separate circles with no overlap.
- 2: Two circles with a very small overlap.
- 3: Two circles with a small overlap.
- 4: Two circles with a medium overlap.
- 5: Two circles with a large overlap.
- 6: Two circles with a very large overlap.
- 7: Two circles with a very large overlap, almost touching at the center.
- 8: Two circles with a very large overlap, nearly forming a single shape.
- 9: Two circles with a very large overlap, almost completely merged.

Below the circles is a horizontal line with nine radio buttons, each aligned with a number from 1 to 9. The first radio button (1) is labeled '1 (minimal closeness)' and the last radio button (9) is labeled '9 (maximum closeness)'.

Appendix E

*Coding scheme for “personal” and “other” variables***Code 1: Severity**

Severity indicates the seriousness of the **event** and consequences outlined, on a scale of 1 to 5, with 5 being the most serious.

After reading a response, please indicate the seriousness of the event that was written, according to what the participant described.

1 – not at all serious

2 – not really serious

3 – neutral

4 – somewhat serious

5 – very serious

6 – not relevant/would not be considered moral change/did not refer to witnessing someone else in the “other” scenarios, and thus, did not follow instructions

Code 2: Valence

Valence indicates the emotional value associated with a participant’s response to the **event**. We are interested in assessing valence from a positive/negative standpoint based on the situation referred to. Please rate the valence of the event described on a scale of -2 to 2.

-2 – extremely negative

-1 – somewhat negative

0 – neither negative nor positive

1 – somewhat positive

2 – extremely positive

6 – not relevant/would not be considered moral change/did not refer to witnessing someone else in the “other” scenarios, and thus, did not follow instructions

Code 3: Moral Foundations Theory

Moral Foundations Theory posits that humans share a common moral language comprised of five “foundational” moral intuitions: harm, fairness, loyalty, authority, and purity. After reading a participant’s response, please pick the **one** moral foundation that best describes the nature of the event described.

1 – Authority/Subversion: obeying a person or organization of higher power.

2 – Fairness/Cheating: making judgments or decisions that are influenced by discrimination.

- 3 – Care/Harm: inflicting injury on another person deliberately.
- 4 – Loyalty/Betrayal: supporting or standing up for someone or something.
- 5 – Purity/Degradation: repulsion stemming from disgusting actions or things.
- 6 – not relevant/would not be considered moral change/did not refer to witnessing someone else in the “other” scenarios, and thus, did not follow instructions

Code 4: Accounting for the effects of the event on the participant

1) Did the participant mention or describe the effect(s) the event or scenario had on them? **If present, please mark “1”. If not present, please mark “0” for change being present, and leave severity and valence blank.**

a. If present, please rate the severity of the change on a scale of 1 to 5:

- 1 – not at all serious
- 2 – not really serious
- 3 – neutral
- 4 – somewhat serious
- 5 – very serious

b. If present, please rate the valence of the change on a scale of -2 to 2:

- 2 – extremely negative
- 1 – somewhat negative
- 0 – neither negative nor positive
- 1 – somewhat positive
- 2 – extremely positive