

FEELING TROUBLED AFTER WITNESSING, FAILING TO  
ACT, OR ACTING IN AN IMMORAL WAY

by

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People can feel troubled after morally problematic events. Previous research suggests that people tend to feel disappointed after witnessing an immoral event, regretful after acting in an immoral way (Coricelli et al., 2005; Gilovich & Medvec, 1994), and wistful after failing to act (Gilovich et al., 1998). A total of 574 university students completed a survey that asked about them about potentially morally injurious events and asked whether they felt troubled after witnessing, failing to act, or acting in a way that violated their personal moral code. Results indicated that acting was relatively more troubling than failing to act, but witnessing an immoral act was more troubling than both acting and failing to act. Witnessing was a more common experience for these respondents, and probably more recent and easier to recall, which may help explain why they also reported being most troubled by this type of experience.

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I dedicate this thesis to my grandfather, an educator for over 30 years and a veteran himself. I would have been proud to share this work with him and I am deeply saddened by his passing this year.

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## **Introduction**

Regret, as pictured by Janet Landman (1993), is a “stringy-haired, boneless woman sunk in the dead arms of the past.” She would be in a room with only cobwebs and ghosts, “forever staring with glazed eyes out a window, forever straining to hear ancient footfalls, which, were they to appear, would be muffled by the drone of her mutterings about what might have been”(Landman, 1993). Regret, which can occur in anticipation of an event or after, is a state of feeling sorry, repentant or disappointed over a misfortune, limitation, loss, shortcoming, transgression, or mistake (Landman, 1993). A taxonomic study of the vocabulary of emotion found that regret is clustered with feelings of guilt, remorse, repentance, and feeling sorrow (Storm & Storm 1987). This group of emotions implies a sense of agency, that one’s own choice and behavior or lack of behavior bears responsibility. The survey used within this study asks what troubles us more, when we witness an act that goes against our moral code, when we fail to act when we see something that violates our moral code, or when we commit an act that violates our moral code?

This is an exploratory research question. The literature supports both action and failing to act as factors in eliciting troubling emotions such as regret. Fewer studies have focused on witnessing, but I anticipate that witnessing an immoral event will produce less regret than acting or failing to act. This research will be valuable because it will add to the study of emotional consequences when we witness, do, or fail to prevent actions that go against our morals. The data reported on in this study were collected as part of a larger project investigating moral injury.

Moral injury is a psychiatric wound caused by witnessing, failing to act, or acting in a way that transgresses a deeply held personal moral code. There has been strong support of the concept of moral injury from health and religious professionals (Drescher et al., 2011). Because moral injury is a relatively new concept, much of the literature has focused on defining moral injury (Drescher & Foy, 2012; Maguen & Litz, 2012; Litz et al., 2009; Shay, 2012), methods for measuring moral injury (Currier et al., 2013; Drescher et al., 2011; Nash et al., 2013) and the symptoms of moral injury (Bryan, 2014; Currier et al., 2014; Farnworth et al., 2014; Vargas et al., 2013). A better understanding of moral injury would be helpful for insight about a variety of populations, such as returning war veterans, people living in a war zone, or victims of certain crimes. This study distinguishes between the experiences of witnessing an immoral event, failing to act, and acting in an immoral way. Some studies have focused specifically on the differences in impact between acting and witnessing (Bryan et al., 2014; MacNair, 2002) but fewer studies have compared all three experiences. This study will provide more detailed information on the emotional impact of morally injurious events separated by experience, adding to the literature that exists on the symptoms of moral injury. This study will also provide additional insight into the impact immoral events and regret may have on a traditional student population.

## **Regret**

As defined above, regret can occur before or after a misfortune, limitation, loss, shortcoming, transgression, or mistake. According to Shamanoff (1984), regret is the second most commonly named emotion in daily conversation. Regret can be detrimental and beneficial and the effects of regret vary in their severity. Regret can cause us to avoid the past, failing to learn from it or sometimes even to acknowledge it. Regret can cause us to feel as though we are inadequate and provoke hesitation in the future (Landman, 1993). Gabrielle Taylor, a philosopher, suggests there are three ways that regret can be destructive: too much time spent regretting something, how intensely one feels regret, and how much importance is placed on the regretted matter (1985). On the other hand, regret can also be beneficial. By recognizing feelings of regret, we can recognize the past, both our actions and also events that happen to us. Anticipatory regret can guide future actions and serve as a motivating force. The surveys used in this study ask participants about feeling troubled after an event, connecting the study to the literature on regret.

### **Regret After Actions or Inactions**

Feeling troubled after a decision is closely related to both hot and cold feelings of regret. Hot feelings of regret, such as self-centered anger, guilt, shame, embarrassment, disgust, frustration, and irritation, have been found to occur after actions (Gilovich, Medvec & Kahneman, 1998). Cold feelings of regret include wistfulness, longing, nostalgia, and despair and are more likely to occur after a failure to act (Gilovich, Medvec & Kahneman, 1998). Kedia and Hilton (2010) supported this

research, finding that experiences of regret and self-conscious emotions were likely to occur together, with self-conscious emotions such as shame, guilt, embarrassment, and remorse being especially prevalent when recalling regretted actions versus failures to act.

In addition to the hot and cold feelings of regret, an important factor in the feeling of regret is the amount of time that has passed since the event. Research conducted by Gilovich and Medvec (1994) found that actions caused more intense feelings of regret in the short-term but failures to act were more likely to cause those feelings after a longer period of time. Using open-ended questions about people's regrets, it was found that more often people brought up regretting things they had not done, actions they had failed to take. They theorize that humans have biological mechanisms that assist in diminishing the regret felt for actions over time as well as different cognitive functions for recalling actions or inactions. Diminishing the regret felt for actions could be connected to our sense of agency, that a person is capable of changing their behavior and seeking a different course of action. Another study conducted by Gilovich and Medvec (1994) found that more people took action to correct a regrettable action than to correct a regrettable inaction.

Agency, or feeling responsible for an outcome can also affect how regretful someone feels (Weisberg & Beck, 2012; Sommer, Peters, Glascher, & Buchel, 2009; Pirontti et al., 2010). Increased feelings of responsibility can increase the regret someone feels. Landman (1993) lists three possible distinctions for agency: the self as agent, other as agent, and circumstances as agent. The self as agent would suggest personal responsibility for either acting or failing to act. Other as agent would suggest

less personal responsibility, perhaps leading less to regret than to disappointment, as suggested by Coricelli et al. (2005). Circumstances as agent would also suggest less personal responsibility. This study differentiates between self as agent on the one hand, and another person or circumstance as agent, on the other. The self as agent would bear responsibility for acting or failing to act. Witnessing an immoral act would be more closely related to the idea of the other or circumstance as an agent, suggesting an outside force that prevents personal responsibility.

How people recall their actions or failures to act can also affect feelings of regret. When asked to look back from a first-person perspective, as though reliving the event, subjects' regret for actions increased more than their regret for failing to act (Valenti, Libby, & Eibach, 2011). Actions, when looked at from a first-person perspective, have a greater effect on feelings of regret than actions looked at from a third-person perspective (Valenti, Libby & Eibach, 2011). When asked to look at an event from the third-person, regret was increased for failures to act more than actions. A possible explanation for this is how we place these events within the general frame of our lives. Failures to act, when looked at from a third-person point of view, are perceived to have a greater impact on our lives as a whole than actions (Valenti, Libby & Eibach, 2011). Actions looked at from a first-person perspective, are more likely to cause people to reflect on their own behaviors compared to looking at actions from a third-person perspective, which can diminish the intensity of regret because it places the action in the broader context.

Some studies that have found that failing to act results in greater feelings of regret. Former United States President Bill Clinton cites the failure to intervene in the

Rwandan Genocide as one of his greatest regrets in life (McMillan, 2010). One reason inaction could cause more regret is the passage of time. Clinton's comment about his regret over the Rwandan Genocide occurred four years after the genocide took place, long enough for the facts of the genocide to come to light and for Clinton and the international community to recognize what could have been done to stop it.

Kahneman and Miller (1986) theorize that it is easier to construct alternative mental outcomes when an action was taken compared to a failure to act. They suggest actions are the norm behavior. Alternative mental outcomes are easier to construct because of the perceived normality of acting than the abnormality associated with failing to act. It is easier for participants to imagine the outcome if they had not acted in an immoral way than imagining acting in an immoral manner. Regret compares reality to a better, fictitious reality and requires counterfactual thinking, which is the ability to imagine a distinct reality (Weisberg & Beck, 2012). Creating counterfactual realities for actions was found to be easier than creating counterfactual realities for failures to act, supporting Kahneman and Miller's theory that actions were the norm behavior (N'gbala & Branscombe, 1996).

Humans wish to appear fair and moral even when they do not act in such a way (Batson et al., 1997). Therefore, subjects might be more likely to regret immoral actions than failures to act because of the way they wish to perceive themselves, how others perceive them, and a desire to be judged less harshly. The legal system defines many actions as crimes, such as assault, theft, murder, child abuse, and so on. Failures to act, such as tax evasion or child neglect, are less frequently criminalized than actions.

## **Morality**

Regret and morality are closely linked. Along with shame, remorse, and guilt, regret is defined as a moral emotion (Tangney et al., 2007). Morality is commonly defined as prescriptive norms that attempt to regulate how people treat one another (Decety & Howard, 2013). Morality is a combination of emotional, cognitive, and motivational processes. Morals can be personal or shared between families and societies and are assumptions about how a person should behave and how things should work (Litz et al., 2009). Morals serve an evolutionary purpose and foster cooperation and growth within societies while helping to censure instincts, such as aggression, that could be detrimental. This study specifically asks participants about immoral events, linking the questionnaire to the study of immorality and the impact of immoral decisions.

Decety and Howard (2013) suggest that specific neural networks support moral cognition. These neural networks are also important in supporting emotion, cognitive, and motivational processes. Knowledge of immorality is negatively associated with the commission of an immoral act (Reynolds, Dang, Yam & Leavitt, 2013). This follows Kohlberg's theory of morality, which states that morality stems from the structures of moral reasoning and moral behavior is encouraged by knowing what is moral and immoral (Gibbs, 2014). However, Bandura's theory of morality suggests that even if a person does know what is moral or immoral, there are other processes for mediating reasoning and behavior, such as self-regulatory mechanisms (Gibbs, 2014). Bandura's theory of morality focuses more on how moral reasoning is translated into moral action. Intentionality and the knowledge that something was immoral are important. Bandura's belief in other self-regulatory mechanisms could provide for an explanation for immoral

actions committed by participants within the study. There should be fewer examples of people acting immorally than failing to act or witnessing because of the negative association between increased knowledge as to what is immoral and commissions of immoral acts.

### **Moral Decisions**

Actions that were later regretted were judged to be more immoral than failures to act that were regretted (Kedia and Hilton, 2010). Reports of feeling troubled when recalling instances of immoral actions should be higher than reports of feeling troubled when recalling immoral failures to act because of the perceived increase in immorality. Regret, guilt, and shame are also counterfactual emotions, showing the overlap between morality, fictitious realities, and different outcomes. A decision that includes a moral dimension can produce more post-decisional internal conflict than choices without a moral dimension (Krosch et al., 2012). Krosch et al. (2012) used the example of a United Nations Peacekeeper in a conflict zone, where the orders are to maintain neutrality but doing so would harm victims of the conflict who are asking for safe refuge. The choice to disobey orders and violate neutrality or leave the victims of the conflict to defend themselves has a moral component that makes the decision more conflicting. Morally challenging dilemmas produce more post-decisional internal conflict because they are rarely good vs. bad choices; people are often faced with deciding between the lesser of two evils. Therefore, the choice to commit an immoral action or failure to act should be considered both more immoral and produce more post-decisional internal conflict than actions that do not contain a moral aspect.

The example of the United Nations Peacekeepers assumes a level of agency that may be absent in some situations. Peacekeepers could witness immoral events but not have made the choice to act or fail to act. The impact moral decisions have on post-decisional internal conflict would be nonexistent because there was no decision to make.

## **Bystanders and Witnessing**

The connection between witnessing an immoral act and subsequently feeling troubled is less well studied. Witnessing an immoral act is distinct from the failure to act because witnessing suggests that it was not a personal choice not to act. Much of the bystander research focuses on events such as the Rwandan genocide or the Holocaust, where bystanders such as citizens or the international community failed to intervene. Monroe (2008) hypothesizes that passive bystanders will distance themselves from an event and view themselves as a victim as well. Monroe interviewed 100 people and focused on analyzing the responses of five different people. Tony was involved in the Dutch resistance during World War II. But his cousin, Beatrix, who shared many demographic similarities, stood by and watched, feeling vulnerable because she did not feel that she had a choice to act (Monroe, 2008). These findings suggest witnessing an immoral event could result in feeling weak or victimized, something that could impact feeling troubled. One of Monroe's findings is that the lack of distinction between in-groups and out-groups could facilitate being a bystander. If enough contrast exists, then people are more likely to take a role as perpetrator or rescuer.

Bystanders often have a low self-image and see themselves as weak. They believe they have little efficacy and control to change a situation. There is an external force that is responsible for an immoral event and controls their behavior (Monroe, 2008). Koelsch, Brown, and Boisen (2012) suggested that there are four steps between bystanders and taking action. The first is noticing a situation or event, then interpreting it as a situation that requires action followed by a feeling of responsibility to act, and ending with a person having the skills or knowledge to intervene. Bystanders can

encounter difficulties at each step. Bystanders can fail to notice a situation due to their status in society or because they choose to remain separate from it. Bystanders can also not know what to do when witnessing an immoral act. President Bill Clinton and the international community may have not known how to act when the Rwandan genocide broke out or failed to recognize the extent to which action was needed. It was not until after the facts were known that the international community expressed regret at not acting.

In addition to bystanders who are present in person when an event or action violates their morals, there is also the possibility that bystanders are separated by space or time. Watching a war on television, such as the Vietnam War, which was widely broadcast, could potentially violate a person's morals but they would be unable to act not by choice but because of the situation they were in. Another possibility for being unable to act is the status of the witness. Within a prison, prisoners rarely have the power or choice to act when they witness an immoral act. There is less research that specifically looks at bystanders and feelings of regret. Oftentimes the research is more characteristic of bystanders who chose not to act rather than bystanders who could not act for any combination of reasons.

One questionnaire included in this study asked participants about witnessing an event that resulted in death or serious injury. One of the more common responses was witnessing domestic violence. Children who witness domestic violence are witnesses who lack the power to intervene in the situation. Research on children who witness domestic violence has shown the effects of witnessing to be present even if the child heard the violence or saw the results after the event (Meltzer et al., 2009). Witnessing

domestic violence can produce psychological, emotional, and behavioral problems (see Edleson, 1999 for a review). Internalized problems, such as depression and anxiety, can occur when children witness domestic violence. Meltzer et al. (2009) found as many as one in 25 children witness domestic violence, with higher rates found for lower-income families compared to middle and upper-class families. Witnessing domestic violence also shows a temporal pattern. Consequences from witnessing domestic violence can vary based on the age of child when they witnessed the violence. Additionally, different effects can arise as the time since the violence increases, with children who had recently been removed from a violent household showing more negative effects than children who had been out of the environment for a longer period of time (Wolfe, Zak, Wilson, & Jaffe, 1986).

## **Moral Injury**

Violating one's moral code has different effects for different people. The extreme side of such events can be seen within the study of veterans and moral injury (Litz et al., 2009). Soldiers often transgress moral beliefs themselves or experience conflict when witnessing immoral actions committed by others. Moral injury encompasses perpetrating, failing to prevent, or witnessing events (Maguen and Litz, 2012). Killing is often something that a soldier has been taught not to do their whole life. Within the military, there is a separate moral code, where killing is normalized and violence is to be expected. Violating a moral code that has been established early on in life can have lasting effects. For soldiers, moral injury is a serious psychiatric wound that can cause symptoms similar to Post-Traumatic Stress Disorder (Litz et al., 2009). Intrusive memories, avoidance, and emotional numbing are all symptoms of a morally injurious event (Litz et al., 2009). Guilt and shame, included as items in the survey, along with inner turmoil and alienation, are also symptoms of moral injury (Drescher & Foy, 2012).

The diagnosis of PTSD has traditionally seen soldiers as victims, who have often faced sustained physical, mental, or emotional stress. However, the idea of moral injury shows that soldiers can be damaged by their own actions as perpetrators as well. Recent violence, such as the conflicts in Iraq and Afghanistan are increasingly complicated because of the urban nature of the fighting. Soldiers are faced with a combination of insurgents and non-combatants and must decide which is which. Moral injury suggests a loss of trust, resulting in an attack on the mind, soul, and body (Shay, 2012). Soldiers may be unable to trust themselves to correctly distinguish between

combatants and civilians. They may also be unable to trust fellow soldiers or officers who have chosen immoral actions in the past.

Witnessing an immoral act is included within the definition of moral injury (Litz et al., 2009). Bystanders who handle or encounter dead bodies or human remains can be morally injured but have no chance to act because of the separation in both time and space or lack of agency. The sensory effects of violence, such as images, smells, and sounds, can be comparable to direct life threats in their consequences and lasting effects (Litz et al., 2009). Because of the strict hierarchy within the military, bystanders may be soldiers who are betrayed by their commanders and forced to act or witness something that violates their morals. The literature on witnessing and moral injury is less substantial and this study will add to the emotional impact of witnessing an immoral event.

The mental consequences for civilians in combat zones include Post-traumatic stress disorder, depression, anxiety, and moral injury (Neria, Besser, Kiper & Westphal, 2010; Litz et al., 2009). Civilians who lived through the Israel-Gaza 2009 war showed symptoms of PTSD, depression, and anxiety. A sample taken during the war, 2 months after, and 4 months after showed a decline in symptoms, suggesting a temporal pattern of symptoms after witnessing combat (Neria, Besser, Kiper & Westphal, 2010). There is a wide base of research looking at civilians in war and PTSD but the fewer studies have focused on civilians in war and moral injury.

Moral injury is connected with self-injurious thoughts and behaviors. Thoughts and behaviors can be socially, mentally, and physically injurious. Bryan et al. (2014) found that suicidal ideation was higher among veterans who had committed a morally

injurious act than those who had witnessed a similar act, suggesting that action has a greater impact on soldiers than witnessing. Being actively involved in the commission of atrocities resulted in higher rates of PTSD than witnessing similar events (MacNair, 2002).

Morally injurious events can change the global meaning systems of veterans, and many veterans have difficulties finding new meaning. The difficulty in finding new meaning is associated with poorer mental health status (Currier, Holland, & Malott, 2014). Self-forgiveness and making meaning are important in healing moral injury (Currier, Holland, & Malott, 2014; Litz et al., 2009). The current Diagnostic and Statistical Manual of Mental Disorders (DSM) does not recognize moral injury as a disorder and Litz et al. (2009) suggests that there are multiple possible reasons behind this. Clinicians may not feel qualified to deal with morally injurious events because acknowledging moral injury may somehow excuse immoral behavior and the perpetration of violence. Veterans could be recommended to seek religious counseling or even fail to disclose events because of the fear of repercussions. Kinghorn (2012) supports the inclusion of religious counseling for morally injured veterans and argues about the importance of including moral theology alongside psychology in treating moral injury.

The Moral Injury Questionnaire, developed for veterans, shares many similar items with the questionnaires used within this study, including items on committing and witnessing immoral actions and events. The Moral Injury Questionnaire shows that higher scores are correlated with increased exposure to life threatening events, higher rates of trauma, PTSD, and increased risks for depression (Currier, Holland, Drescher &

Foy, 2013). Moral emotions, such as shame, guilt, anger, disgust, and contempt were found in higher rates for veterans who suffered from moral injuries than those who did not and that the onset of those emotions could occur after a veteran has returned to civilian life (Farnsworth et al., 2014). This study incorporates similar items from the Moral Injury Questionnaire, adapted for use with civilian populations, as well as questions to measure feelings of shame and guilt specifically.

The questionnaires used within this project were created for the study of moral injury. As preliminary surveys, they were completed by University of Oregon students, a population made up of very few veterans. Using a population of predominantly non-veterans is useful because it can serve to provide possible comparisons with veteran populations. A population of veterans who served in combat areas often has additional complications, such as co-morbidity with PTSD or Traumatic Brain Injuries (TBIs). TBIs can damage the physical structures in the brain, impacting the neural passages for regret, moral cognition, and emotional cognition. A population of non-veterans can also serve as a comparison for a similar population of non-combatants who have acted and failed to act in an immoral way or witnessed an immoral event, adding to the literature on witnessing and moral injury.

## **Hypothesis**

Based on the research reviewed, I hypothesize that people who act in a way that violates their moral code will report feeling more troubled than will people who violate their moral code by failing to act. People will feel less troubled by witnessing something that violates their moral code than they will by acting or failing to act. This is in line, for example, with Kruger, Wirtz, and Miller's finding (2005) that people regretted having changed a correct test answer to an incorrect one more than they regretted failing to change an incorrect answer to a correct answer. Regrets caused by actions are likely to elicit self-centered emotions such as guilt, shame, embarrassment, and self-directed anger (Kedia & Hilton, 2011). These emotions should have a stronger effect on feeling troubled than feelings of wistfulness, which is more typical for regrets when people fail to act (Gilovich, Medvic, & Kahneman, 1998). Witnessing an immoral event requires another person or circumstances to be the agent, resulting in less personal responsibility than acting or failing to act and lessening feelings of regret.

## **Participants**

Participants were recruited from Psychology 201 and 202 classes at the University of Oregon. Participants were awarded class credit for their participation in the survey. The surveys were conducted over fall 2013 and winter 2014 term. For fall term, there was a total of 302 participants (207 female, 76 male, 19 who declined to provide a gender) and the average age was 19.43 years. For the winter term survey, there was a total of 272 participants (208 female, 62 male, and 2 who declined to provide a gender). The average age for the winter term survey was 19.49 years old.

There were a total of 574 participants for the survey (415 female, 138 male, 21 who declined to name a gender). The average age for all participants was 19.47 years, and ranged from 18 to 51.

## **Method**

William Schumacher, a graduate student in the University of Oregon Department of Psychology created both surveys. The language used between the two surveys differs slightly in grammar. Participants were asked to answer ten questions as a part of the Adapted Moral Injury Events Scale (see Appendix A). The questions asked if participants had witnessed, acted, or failed to act in a way that violated their moral code and then how troubled they felt after each option. The scale then asked about feelings of betrayal by leaders, peers, others, and institutions. Each question on the Adapted Moral Injury Events Scale was rated using a 6-point scale, ranging from 1-Strongly Disagree to 6-Strongly Agree. Within the survey given to participants of fall 2013, an option to [Decline to Answer] was given. In the survey given winter 2014, this answer was not an option. In addition to the Adapted Moral Injury Events Scale, each survey included additional assessments.

The Assessment of Potentially Injurious Events (See Appendix B) inquired about the history of the participant's experience with possibly traumatic acts, including actual or threatened injury, death, or actual or threatened sexual violence. Questions include whether the participant has committed the act, if the participant had been a victim, or if the participant had witnessed the act. This assessment was only included in the fall 2013 survey. This may prime participants to think about extreme situations as it was asked before the Adapted Moral Injury Scale and could have an effect on the

frequency of experiencing witnessing, failing to act, or acting in an immoral way as participants failed to call to mind less extreme instances of moral violations. However, the Assessment of Potentially Injurious Events does ask for a brief description of the event if the participant answered yes to any of the situations. This information can be used as insight into some of the possible situations that are being called to mind.

The PCL-C (See Appendix C) is a twenty-item checklist based off of the DSM definition for PTSD and trauma asking participants if they have experienced any items out of a list of problems and complaints that sometimes arise after being exposed to traumatic experiences. The PCL-C uses a 5-point scale indicating how much certain criteria have been a problem in the past month. Questions 18 and 19 on the PCL-C are relevant to my research because they ask about feeling guilty or shameful about things you did or didn't do during a stressful experience in the past. Guilt, shame, and feeling troubled should be correlated as they share similar emotional traits and effects.

The Treatment Satisfaction Questionnaire asked participants about their experience with psychiatric treatment. Those who respond yes when asked if they have received psychological treatment are asked to fill out additional questions about their levels of satisfaction with their treatment. This questionnaire was only included in the winter 2014 survey and was not relevant to my research question.

I will be focusing my analyses on the first six questions found in the Adapted Moral Injury Events Scale. Those six questions are broken up into three pairs of questions. The first asks the frequency in which participants have seen things that were morally wrong. Following that, it asks how troubled those participants were. The second set asks about the frequency in which participants acted in ways that violated

their moral code and how troubled they were by that. The third set of questions asks about the frequency in which participants saw something that was morally wrong but failed to act and how troubled they were by that failure.

### **Data Analysis**

Data from each survey was collected and data from questions 1-6 from the Adapted Moral Injury Events Scale was selected. Questions 1 and 2, on witnessing and feeling troubled after witnessing were paired together. Questions 3 and 4, on acting and feeling troubled after acting were paired together. And questions 5 and 6, on failing to act and feeling troubled after failing to act were paired together. I ran a 2-way repeated measures ANOVA to find if there was a significant difference in means based on the term. Based on those results, means, standard deviations, and sample sizes are reported separately for the two terms. I also ran generalized linear models to see if there were significant mean differences in being troubled between experiences after accounting for mean differences in frequency of experience. Separately, I also calculated correlations between each pair of questions responses from each survey. Questions in which participants selected [Decline to Answer] were omitted from descriptive statistics and calculations of correlations.

Additional correlations were calculated between the highest “troubled” response to either inaction and action, and responses to guilt and shame items to investigate any association between feeling troubled and feelings of guilt or shame. Max responses for feeling troubled were used because the guilt and shame items did not differentiate between failing to act and acting.

## Results

### *Initial Checks*

In order to see if the questions about death, serious injury, and sexual or physical violence from the fall, 2013 survey had an impact on the frequency of reports for witnessing, failing to act, or acting, I ran a 2-way repeated measures ANOVA to look for significant main and interaction effects. The 2-way repeated measures ANOVA showed a main effect for each experience, witnessing, failing to act, or acting,  $F(2, 528)=879.67$ ,  $p<0.05$ . It also showed a main effect for term (Fall 2013 and Winter 2014),  $F(1, 264)=773.68$ ,  $p<0.05$ . The 2-way repeated measures ANOVA also showed a significant interaction effect  $F(2, 528)=89.97$ ,  $p<0.05$ . Because of the significant interaction effect between experience and term, each survey should be viewed as a distinct study.

I also ran a 2-way repeated measures ANOVA to investigate the main effects and interaction between feeling troubled and term. The results from the 2-way repeated measures ANOVA showed a main effect for feeling troubled after witnessing, failing to act, or acting  $F(2, 528)=27.00$ ,  $p<0.05$ . There was also a main effect for term  $F(1, 264)=112.45$ ,  $p<0.05$ . Results show no significant interaction between feeling troubled after witnessing, failing to act, or acting and term,  $F(2, 528)=0.57$ ,  $p>0.05$ .

Due to the significant differences in frequency means between terms for witnessing, failing to act, and acting, either each survey needs to be analyzed separately, or term needs to be controlled for in other analyses. Means, standard deviations, and sample size for each item are displayed separately for the terms in Table 1.

Table 1: Means (standard deviations) Divided by Survey

	<u>Fall 2013</u>	<u>Winter 2014</u>
Action	2.87 (1.47)	3.95 (1.29)
Failure to Act	3.19 (1.56)	3.81 (1.33)
Witnessing	3.91 (1.48)	4.66 (1.38)
Troubled after Action	3.18 (1.71)	3.88 (1.51)
Troubled after Failure to Act	3.04 (1.56)	3.62 (1.42)
Troubled after Witnessing	3.53 (1.53)	4.18 (1.43)

*Note.* For fall, 2013 n (Act) =265, n (Fail to Act) =269, n (Witness) =267. For winter, 2104 n=272

### *General Linear Model*

To test the hypotheses about differences in being troubled based on different types of experiences, I used a general linear model with difference scores between the two “troubled” responses as the dependent variable and the mean-centered frequency of the two types of experiences being compared as covariates. This approach helped control for respondents feeling more troubled based simply on having more experience, rather than due to the type of experience (action, failure to act, or witnessing). For the first hypothesis, the difference in troubled scores was calculated by subtracting troubled from acting from troubled from failing to act. Covariates were mean centered by subtracting each score from the mean for the type of experience, in this case either failing to act or acting. The initial model also included the interaction between the mean-centered scores for failing to act and acting, and the term (the two different survey periods). The initial generalized linear model showed no significant effect for the interaction or the term so I ran a simplified model dropping these predictors. Results from the simplified general linear model showed a significant intercept (indicating that the difference in troubled scores was non-zero) but a very weak effect size,

$F(1, 534)=8.50, p<0.05, \beta = -0.21$  and eta squared = 0.016. The negative beta weight indicates that acting was more troubling than failing to act.

I ran additional linear models to test whether troubled difference scores were significant for acting minus witnessing and failing to act minus witnessing. Because of the insignificant interaction and term effects, I used the same simplified model as before. The troubled difference score was calculated by subtracting feeling troubled after witnessing from feeling troubled after acting. Results from the generalized linear model show a significant difference in troubled scores based on experience, either acting or witnessing. The intercept was significant and had a weak effect size,  $F(1, 534)=17.19, p<0.05$ . The  $\beta = -0.53$  and eta squared = 0.098. The negative beta weight indicates witnessing was more troubling than acting. A third generalized linear model was run to compare troubled difference scores for failing to act and witnessing. Troubled difference scores were calculated by subtracting witnessing from failing to act. Results from the generalized linear model show a significant difference and a very weak effect size in troubled scores based on experience, failing to act or witnessing.  $F(1, 536)=58.38, p<0.05$ . The  $\beta = -0.33$  and eta squared = 0.031. The negative beta weight indicates witnessing was more troubling than failing to act.

### *Correlations*

Additionally, I ran correlations for each pair of questions separated by survey to find the strength of the relationship between each experience and feeling troubled. Correlations are displayed in the table below.

Table 2: Correlations between Experience and Feeling Troubled by Term

	<u>Fall, 2013</u>	<u>Winter, 2014</u>
Acting and Feeling Troubled	0.630	0.517
Failing to Act and Feeling Troubled	0.827	0.686
Witnessing and Feeling Troubled	0.488	0.471

R to Z transformations indicated a significant difference between failing to act and acting for Fall, 2013,  $z=4.85$ ,  $p<0.05$  and for Winter, 2014,  $z=3.11$ ,  $p<0.05$ . R to Z transformations also indicated a significant difference between failing to act and witnessing for Fall, 2013,  $z=7.43$ ,  $p<0.05$ , and for Winter, 2013,  $z=3.82$ ,  $p<0.05$ . There was a significant difference between acting and witnessing for Fall, 2013,  $z=2.39$ ,  $p<0.05$  but not for acting and witnessing from Winter, 2014,  $z=0.71$ ,  $p>0.05$ .

*Guilt, shame, and feeling troubled*

The items on guilt and shame from the PCL-C did not differentiate between acting and failing to act in an immoral manner. The PCL-C also asked participants to limit their responses of feeling guilty or shameful to examples of acting or failing to act from the last month. Findings from item asking how guilty does a participant feel, show  $M=2.03$ ,  $sd=1.17$ ,  $n=534$ . Findings from item asking how shameful does a participant feel,  $M=1.89$ ,  $sd=1.11$ ,  $n=534$ .

The correlation between feeling troubled after acting or failing to act in an immoral manner and feeling guilty was weak but statistically significant,  $r=0.294$ ,  $p<.01$ . A similar correlation was found between feeling troubled and feeling shame,  $r=0.289$ ,  $p<.01$ .

## Discussion

Committing an immoral act, failing to act during an immoral act, or witnessing an immoral act can lead to reports of feeling troubled. Results indicated that, as hypothesized, acting can be significantly more troubling than failing to act. However, the effect size was very small. Results for comparison with witnessing were significant in the opposite direction from that hypothesized: Witnessing was more troubling than both acting (another very small effect size) and failing to act (the largest effect size, but still relatively weak).

One possible explanation for the unexpected results for witnessing could be the length of time between the events brought to mind and when the survey was taken. Whether a regret is construed as open or closed, unresolved or resolved, affects the fading affect bias. Failing to act, seen as a failure to yield a desired outcome, persists in memory, and regret from failures to act is more likely to remain open, defined as “unfinished business,” than regret from action (Beike & Crone, 2008). The fading affect bias is a psychological process that suggests that information involving negative emotions tends to be forgotten at a faster rate than information involving positive emotions (Beike & Crone, 2008). However, regrets from actions do not show the same pattern for the fading affect bias as memories that do not involve regret (Beike & Crone, 2008). This suggests that the length of time that has passed between the regretted actions does not have a significant effect on forgetting negative emotions.

The length of time that has passed from the action, while not asked directly, could have had an impact on the ratings of feeling troubled separate from the effects of the fading affect bias. Participants who were remembering episodes of failures to act

may have more open memories of failing to act. Beike and Crone (2008) found that participants who had open memories of acting or failing to act but still tried to forget them were more likely to experience intrusive feelings of regret compared to participants who had closed memories, defined as “a closed book.” The strong correlations between acting or failing to act and feeling troubled could be a result of the experiences still being construed as open and the lack of the fading affect bias.

The Assessment of Potentially Injurious Events, included in the Fall, 2013 survey only, asked participants about serious events which resulted in death, injury, or sexual violence. These extreme examples of moral violations and could have prompted participants to recall more extreme situations when asked about moral violations, and perhaps to downplay or dismiss less extreme experiences of moral violations. Results indicated that mean responses to the moral injury and troubled questions were lower across the board for the survey that included this scale. Among 302 participants the Assessment of Potentially Injurious Events yielded seven yes responses for committed an act that resulted in death, serious injury, or sexual assault. Four respondents declined to provide details. Of the three who did, one participant had seen their sister physically abused by their father when they were young, one had threatened someone, and one participant had served in the military and killed or injured an unknown number of people.

Forty-three participants had witnessed an immoral act. Five participants cited domestic violence against a family member when they were younger. Thirteen participants cited witnessing the death, serious injury, or violence against a friend or family member. Seven participants declined to answer the follow up question. The

remaining participants cited witnessing events that did not involve anyone they knew. Witnessing an immoral event that resulted in death, serious injury, or violence was much more commonly endorsed than committing a similar act. In both surveys, participants reported witnessing immoral events significantly more frequently than acting in an immoral way. Because of the increased frequency, it is more likely that witnessing an immoral event occurred more recently. This could explain why the mean troubled scores for witnessing an immoral event were higher than they were for acting or failing to act and also why the difference score analysis provided the same pattern of results, even after controlling for the relative frequency of the two types of experiences. There may have been less time for negative feelings to fade after witnessing an immoral event than committing a similar immoral act.

Results from these two studies show a very strong positive correlation between failing to act during an immoral event and reports of feeling troubled afterwards. Committing an immoral act and feeling troubled afterward show a strong positive correlation. The weakest correlation was found between witnessing an immoral event and feeling troubled. The results fit partially with my hypothesis. The correlation between feeling troubled and the guilt and shame items from PCL-C were both weak and positive.

A possible source for the stronger correlation between failing to act and feeling troubled could stem from how participants rate their sense of agency. Increased agency is found in actions rather than failures to act. And a regrettable action is easier to correct than a regrettable failure to act (Gilovich & Medvec, 1994). And it is harder to construct alternatives to a failure to act than action (Kahneman & Miller, 1986). The ability to

construct an alternative action and correct a regrettable action allows for the participant to reconcile with wanting to be seen as moral (Batson et al., 1997). The lack of personal agency, apparent when the participant witnessed an immoral event, suggests that another person or circumstance was the agent of the moral transgression. Lacking agency can lead to feelings of disappointment rather than regret (Coricelli et al., 2005). When responding to the pair of questions on witnessing an immoral event and feeling troubled, participants could have reported feeling less troubled because they were feeling more disappointed than troubled or regretful. Participants could also be recalling instances of witnessing as failures to act, considering events as failures to act even if they did not know how to act or had no power in a situation. This could be the case for participants who recalled witnessing domestic violence when, as a child, they would have had no power to intervene. But when the participant recalls the event, they may judge it as a failure to act because they now know how to respond.

However, the correlations between feeling troubled and guilt and feeling troubled and shame were weak. This suggests that the use of the term “troubled” could be less reflective of feeling regret and other associated emotions than previously anticipated. Future studies using the questions about feeling troubled could benefit from more exact language, questioning participants about feeling regret, shame, or guilt. Additional changes to the overall survey could include moving the questions about death, serious injury, violence to the end in order to prevent limiting participants to thinking only of extreme cases of moral violation.

Another limitation to this study is the set-up of the six questions. Between the two surveys, the questions were asked in the same order. There was no

counterbalancing used so every participant was asked about witnessing and feeling troubled first, then acting and feeling troubled, and failing to act and feeling troubled was always last. In future studies using this survey, questions should be counterbalanced in order to account for any differences in responses based on the order of questions.

Moral injury can result from witnessing, failing to act, and acting. This research and further investigation into moral injury could clarify any differences that exist between the effects of witnessing, failing to act, or acting. This research is important because soldiers and people living in war zones can develop moral injuries. Civilians in war zones are less likely to act in a way that violates their moral code than soldiers. For civilians, research on witnessing and moral injury may therefore be more relevant than acting and moral injury.

Further studies on moral decisions and regret could incorporate manipulations, looking at the difference in regret between participants within an action or failing to act scenario. Manipulating participants in conditions of action and failing to act would provide more detailed information about the differences. Research is also needed to investigate how moral decisions impact post-decisional emotions, distinguishing between regret, guilt, and shame. Research has shown that moral decisions create more post-decisional conflict compared to decisions without a moral component (Krosch et al., 2012). A future study could manipulate the moral component of decisions, looking at post-decisional emotions when a decision has a moral component compared to no moral component. Because of the nature of moral injury as a new area of study, additional research is needed to fully understand its impact and how to treat it. Findings

from this study suggest that acting has a greater impact on feeling troubled than failing to act or witnessing when an event violates a person's moral code. The results from this survey increase our understanding of how a student population rates feeling troubled after a morally injurious event and adds to the ever-growing body of literature on moral injury.

## Appendix A: Adapted Moral Injury Events Scale

### Adapted Moral Injury Events Scale

Please choose a number to indicate how much you agree or disagree with each of the following statements about your experiences.

1. I saw things that were morally wrong.

- 1 – Strongly Disagree
- 2 – Moderately Disagree
- 3 – Slightly Disagree
- 4 – Slightly Agree
- 5 – Moderately Agree
- 6 – Strongly Agree

2. I am troubled by having witnessed others' immoral acts.

- 1 – Strongly Disagree
- 2 – Moderately Disagree
- 3 – Slightly Disagree
- 4 – Slightly Agree
- 5 – Moderately Agree
- 6 – Strongly Agree

3. I acted in ways that violated my own moral code or values.

- 1 – Strongly Disagree
- 2 – Moderately Disagree
- 3 – Slightly Disagree
- 4 – Slightly Agree
- 5 – Moderately Agree
- 6 – Strongly Agree

4. I am troubled by having acted in ways that violated my own morals or values.

- 1 – Strongly Disagree
- 2 – Moderately Disagree
- 3 – Slightly Disagree
- 4 – Slightly Agree
- 5 – Moderately Agree
- 6 – Strongly Agree

5. I violated my own morals by failing to do something that I felt I should have done.

- 1 – Strongly Disagree
- 2 – Moderately Disagree
- 3 – Slightly Disagree
- 4 – Slightly Agree
- 5 – Moderately Agree
- 6 – Strongly Agree

6. I am troubled because I violated my morals by failing to do something I felt I should have done.

- 1 – Strongly Disagree
- 2 – Moderately Disagree
- 3 – Slightly Disagree
- 4 – Slightly Agree
- 5 – Moderately Agree
- 6 – Strongly Agree

7. I feel betrayed by leaders who I once trusted.

- 1 – Strongly Disagree
- 2 – Moderately Disagree
- 3 – Slightly Disagree
- 4 – Slightly Agree
- 5 – Moderately Agree
- 6 – Strongly Agree

8. I feel betrayed by peers who I once trusted.

- 1 – Strongly Disagree
- 2 – Moderately Disagree
- 3 – Slightly Disagree
- 4 – Slightly Agree
- 5 – Moderately Agree
- 6 – Strongly Agree

9. I feel betrayed by others outside my peer group who I once trusted.

- 1 – Strongly Disagree
- 2 – Moderately Disagree
- 3 – Slightly Disagree
- 4 – Slightly Agree
- 5 – Moderately Agree
- 6 – Strongly Agree

## Appendix B: Assessment of Potentially Injurious Events

### Assessment of Potentially Injurious Events

The following questions will ask you about the guiding principles of what you believe is right and wrong in social behavior, or your “moral code.” Some authority typically teaches a moral code to you, whether it is a religious institution, your culture, your parents, or the law. Please take a few moments to think about your moral code and times when you may have struggled with acts that you committed, were a victim of, or witnessed that violated your moral code.

Now, please keep in mind that your answers are confidential and will not be associated with your name, and answer the questions below:

1. Which religion most reflects your beliefs?

Agnostic  
Atheist  
Buddhist  
Catholic  
Hindu  
Judaism  
Muslim  
Protestant  
Other

2. How important is your religious identity to you on a scale from 0 to 10, where 0 is not important at all and 10 is extremely important?

0      1      2      3      4      5      6      7      8      9      10

3. From where do you believe your personal moral code comes (please choose as many as you feel appropriate)?

Natural Human Rights  
Laws (both state and federal)  
Parents  
Religion

4. Have you committed an act that included: death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence?

Yes      No

5. If you answered “Yes,” to the previous question, please briefly describe the event: (if you answered “No” to the previous question, please select the box to decline to answer this question)

6. If you answered “Yes” to question 4, please rate how traumatic that experience was for you on a scale from 0 to 10, where 0 is not traumatic at all and 10 is the most traumatic event imaginable: (if you answered “No” to question 4, please select the box to decline to answer this question)

0      1      2      3      4      5      6      7      8      9      10

7. If you answered “Yes” to question 4, did this act violate your moral code? (if you answered “No” to question 4, please select the box to decline to answer this question)

Yes    No

8. Have you been the victim of an act that included: death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence?

Yes    No

9. If you answered “Yes,” to the previous question, please briefly describe the event: (if you answered “No” to the previous question, please select the box to decline to answer this question)

10. If you answered “Yes” to question 8, please rate how traumatic that experience was for you on a scale from 0 to 10, where 0 is not traumatic at all and 10 is the most traumatic event imaginable: (if you answered “No” to question 8, please select the box to decline to answer this question)

0      1      2      3      4      5      6      7      8      9      10

11. If you answered “Yes” to question 8, do you think the perpetrator of this act did something that violated your moral code? (if you answered “No” to question 8, please select the box to decline to answer this question)

Yes    No

12. Have you witnessed an act that included: death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence?

Yes    No

13. If you answered “Yes,” to the previous question, please briefly describe the event: (if you answered “No” to the previous question, please select the box to decline to answer this question)

14. If you answered “Yes” to question 12, please rate how traumatic that experience was for you on a scale from 0 to 10, where 0 is not traumatic at all and 10 is the most

traumatic event imaginable: (if you answered “No” to question 12, please select the box to decline to answer this question)

0      1      2      3      4      5      6      7      8      9      10

15. If you answered “Yes” to question 12, do you think the perpetrator of this act did something that violated your moral code? (if you answered “No” to question 12, please select the box to decline to answer this question)

Yes    No

16. If you answered “Yes” to question 12, do you feel as though you could have done something to prevent the act from occurring? (if you answered “No” to question 11, please select the box to decline to answer this question)

Yes    No

## Appendix C: PCL-C

### PCLC

INSTRUCTIONS: Below is a list of problems and complaints that people sometimes have in response to stressful life experiences. Please read each one carefully, then choose one of the options to indicate how much you have been bothered by that problem in the past month.

1. Repeated, disturbing *memories, thoughts, or images* of a stressful experience from the past?

1 – Not at all 2 – A little bit 3 – Moderately 4 – Quite a bit 5 – Extremely

2. Repeated, disturbing *dreams* of a stressful experience from the past?

1 – Not at all 2 – A little bit 3 – Moderately 4 – Quite a bit 5 – Extremely

3. Suddenly *acting or feeling* as if a stressful experience *were happening again* (as if you were reliving it)?

1 – Not at all 2 – A little bit 3 – Moderately 4 – Quite a bit 5 – Extremely

4. Feeling *very upset* when *something reminded you* of a stressful experience from the past?

1 – Not at all 2 – A little bit 3 – Moderately 4 – Quite a bit 5 – Extremely

5. Having *physical reactions* (e.g., heart pounding, trouble breathing, sweating) when *something reminded you* of a stressful experience from the past?

1 – Not at all 2 – A little bit 3 – Moderately 4 – Quite a bit 5 – Extremely

6. Avoiding *thinking about or talking about* a stressful experience from the past or avoiding *having feelings* related to it?

1 – Not at all 2 – A little bit 3 – Moderately 4 – Quite a bit 5 – Extremely

7. Avoiding *activities or situations* because *they reminded you* of a stressful experience from the past?

1 – Not at all 2 – A little bit 3 – Moderately 4 – Quite a bit 5 – Extremely

8. Trouble *remembering important parts* of a stressful experience from the past?

1 – Not at all 2 – A little bit 3 – Moderately 4 – Quite a bit 5 – Extremely

9. *Loss of interest* in activities that you used to enjoy?

1 – Not at all 2 – A little bit 3 – Moderately 4 – Quite a bit 5 – Extremely

10. Feeling *distant* or *cut off* from other people?

1 – Not at all 2 – A little bit 3 – Moderately 4 – Quite a bit 5 – Extremely

11. Feeling *emotionally numb* or being unable to have loving feelings for those close to you?

1 – Not at all 2 – A little bit 3 – Moderately 4 – Quite a bit 5 – Extremely

12. Feeling as if your *future* will somehow be *cut short*?

1 – Not at all 2 – A little bit 3 – Moderately 4 – Quite a bit 5 – Extremely

13. Trouble *falling* or *staying asleep*?

1 – Not at all 2 – A little bit 3 – Moderately 4 – Quite a bit 5 – Extremely

14. Feeling *irritable* or having *angry outbursts*?

1 – Not at all 2 – A little bit 3 – Moderately 4 – Quite a bit 5 – Extremely

15. Having *difficulty concentrating*?

1 – Not at all 2 – A little bit 3 – Moderately 4 – Quite a bit 5 – Extremely

16. Being “*superalert*” or watchful or on guard?

1 – Not at all 2 – A little bit 3 – Moderately 4 – Quite a bit 5 – Extremely

17. Feeling *jumpy* or easily startled?

1 – Not at all 2 – A little bit 3 – Moderately 4 – Quite a bit 5 – Extremely

18. Feeling *guilt* for the things you did or didn't do during a stressful experience in the past?

1 – Not at all 2 – A little bit 3 – Moderately 4 – Quite a bit 5 – Extremely

19. Feeling *shame* for the things you did or didn't do during a stressful experience in the past?

1 – Not at all 2 – A little bit 3 – Moderately 4 – Quite a bit 5 – Extremely

20. Feeling *sadness* related to a stressful experience in the past?

1 – Not at all 2 – A little bit 3 – Moderately 4 – Quite a bit 5 – Extremely

## Bibliography

- Batson, C. D., Kobrynowicz, D., Dinnerstein, J. L., Kampf, H. C. & Wilson, A. D. (1997) In a very different voice: unmasking moral hypocrisy. *Journal of Personality and Social Psychology*, 72(6), 1335-1348.
- Beck, S. R. & Guthrie, C. (2011) Almost thinking counterfactually: children's understanding of close counterfactuals. *Child Development*, 82(4), 1189-1198.
- Beike, D. R. & Crone, T. S. (2008) When experienced regret refuses to fade: regrets of action and attempting to forget open life regrets. *Journal of Experimental Social Psychology*, 44, 1545-1550.
- Berthoz, S., Grezes, J., Armony, J. L., Passingham, R. E. & Dolan, R. J. (2006) Affective response to one's own moral violations. *NeuroImage*, 31, 945-950.
- Bryan, A. O., Bryan, C. J., Morrow, C. E., Etienne, N. & Ray-Sannerud, B. (2014) Moral injury, suicidal ideation, and suicide attempts in a military sample. *Traumatology*, 20(3), 154-160.
- Burns, P., Riggs, K. J. & Beck, S. R. (2012) Executive control and the experience of regret. *Journal of Experimental Child Psychology*, 111, 501-515.
- Camille, N., Coricelli, G., Sallet, J., Pradat-Diehl, P., Duhamel, J. & Sirigu, A. (2004) The involvement of the orbitofrontal cortex in the experience of regret. *Science*, 304, 460-469.
- Camille, N., Pironti, V. A., Dodds, C. M., Aitken, M. R. F., Robbins, T. W. & Clark, L. (2010) Striatal sensitivity to personal responsibility in a regret-based decision-making task. *Cognitive, Affective & Behavioral Neuroscience*, 10(4), 460-469.
- Coricelli, G., Critchley, H. D., Joffily, M., O'Doherty, J. P., Sirigu, A. & Dolan, R. J. (2005) Regret and its avoidance: a neuroimaging study of choice behavior. *Nature Neuroscience*, 8(9), 1255-1262.
- Coricelli, G., Dolan, R. J. & Sirigu, A. (2007) Brain, emotion and decision making: the paradigmatic example of regret. *Trends in Cognitive Sciences*, 11(6), 258-265.
- Currier, J. M., Holland, J. M. & Malott, J. (2014) Moral injury, meaning making, and mental health in returning veterans. *Journal of Clinical Psychology*, 71(3), 229-240.
- Currier, J. M., Holland, J. M., Drescher, K., & Foy, D. (2013). Initial Psychometric Evaluation of the Moral Injury Questionnaire-Military Version. *Clinical Psychology & Psychotherapy*, 22(1), 54-63.

- Cushman, F., Sheketoff, R., Wharton, S. & Carey, S. (2013) The development of intent-based moral judgment. *Cognition*, 127, 6-21.
- Decety, J. & Howard, L. H. (2013) The role of affect in the neurodevelopment of morality. *Child Development Perspectives*, 7(1), 49-54.
- Drescher, K. D., & Foy, D. W. (2012). When They Come Home: Posttraumatic Stress, Moral Injury, and Spiritual Consequences for Veterans. *Reflective Practice: Formation and Supervision in Ministry*, 28.
- Drescher, K. D., Foy, D. W., Kelly, C., Leshner, A., Schutz, K., & Litz, B. (2011). An Exploration of the Viability and Usefulness of the Construct of Moral Injury in War Veterans. *Traumatology*, 17(1), 8–13.
- Edleson, J. L. (1999) Children's witnessing of adult domestic violence. *Journal of Interpersonal Violence*, 14(8), 839-870.
- Farnsworth, J. K., Drescher, K. D., Nieuwsma, J. A., Walser, R. B., & Currier, J. M. (2014). The role of moral emotions in military trauma: Implications for the study and treatment of moral injury. *Review of General Psychology*, 18(4), 249–262.
- Gibbs, J. (2014) *Moral development and reality: Beyond the theories of Kohlberg, Hoffman, and Haidt*. New York: Oxford University Press.
- Gilovich, T. & Medvec, V. H. (1994) The temporal pattern to the experience of regret. *Journal of Personality and Social Psychology*, 67(3), 357-365.
- Gilovich, T. & Medvec, V. H. (1995) The experience of regret: what, when, and why. *Psychological Review*, 102(2), 379-395.
- Gilovich, T., Medvec, V. H. & Kahneman, D. (1998) Varieties of regret: a debate and partial resolution. *Psychological Review*, 105(3), 602-605.
- Glenn, A. L. & Raine, A. (2009) The immoral brain. In J. Verplaetse, J. de Schrijver, S. Vanneste, & J. Braeckman (Eds.), *The Moral Brain* (45-68). New York: Springer.
- Hutcherson, C. A. & Gross, J. J. (2011) The moral emotions: a social-functionalist account of anger, disgust, and contempt. *Journal of Personality and Social Psychology*, 100(4), 719-737.
- Kahneman, D. & Miller, D. T. (1986) Norm theory: comparing reality to its alternatives. *Psychological Review*, 93(2), 136-153.
- Kedia, G. & Hilton, D. J. (2011) Hot as hell! The self-conscious nature of action regrets. *Journal of Experimental Social Psychology*, 47, 490-493.

- Kinghorn, W. (2012). Combat Trauma and Moral Fragmentation: A Theological Account of Moral Injury. *Journal of the Society of Christian Ethics*, 32(2), 57–74.
- Koelsch, L. E., Brown, A. L. & Boisen, L. (2012) Bystander perceptions: implication for university sexual assault prevention programs. *Violence and Victims*, 27(4), 563-579.
- Krosch, A. R., Figner, B. & Weber, E. U. (2012) Choice processes and their post-decisional consequences in morally conflicting decisions. *Judgment and Decision Making*, 7(3), 224-234.
- Landman, J. (1993) *Regret: The Persistence of the Possible*. Oxford University Press, New York.
- Larquet, M., Coricelli, G., Opolczynski, G. & Thibaut, F. (2010) Impaired decision making in schizophrenia and orbitofrontal cortex lesion patients. *Schizophrenia Research*, 116, 266-273.
- Litz, B. T., Stein, N., Delaney, E., Lebowitz, L., Nash, W. P., Silva, C. & Maguen, S. (2009) Moral injury and moral repair in war veterans: a preliminary model and intervention strategy. *Clinical Psychology Review*, 29, 695-706.
- MacNair, R. M. (2002). Perpetration-induced traumatic stress in combat veterans. *Peace and Conflict: Journal of Peace Psychology*, 8(1), 63.
- Maguen, S., Lucenko, B. A., Reger, M. A., Gahm, G. A., Litz, B. T., Seal, K. H., et al. (2010). The impact of reported direct and indirect killing on mental health symptoms in Iraq war veterans. *Journal of Traumatic Stress*, n/a–n/a. doi:10.1002/jts.20434
- Maguen, S. & Litz, B. (2012) Moral injury in veterans of war. *PTSD Research Quarterly*, 23(1), 1-6.
- McMillan, N. (2010) Regret, remorse and the work of remembrance: official responses to the Rwandan Genocide. *Social and Legal Studies*, 19(1), 85-105.
- Meltzer, H., Doos, L., Vostanis, P., Ford, T. & Goodman, R. (2009) The mental health of children who witness domestic violence. *Child and Family Social Work*, 14, 491-501.
- Milo, R. D. (1984) *Immorality*. Princeton: Princeton University Press.
- Monin, B. & Merrit, A. (2010) Moral hypocrisy, moral inconsistency, and the struggle for moral integrity. *Personality and Social Psychology*, 3, 1-25.

- Monroe, K. R. (2008) Cracking the code of genocide: the moral psychology of rescuers, bystanders, and Nazis during the Holocaust. *Political Psychology*, 29(5), 699-736.
- N'gbala, A. & Branscombe, N. R. (1996) When does action elicit more regret than inaction and is counterfactual mutation the mediator of this effect? *Journal of Experimental Social Psychology*, 33, 324-343.
- Nash, W. P., & Litz, B. T. (2013). Moral Injury: A Mechanism for War-Related Psychological Trauma in Military Family Members. *Clinical Child and Family Psychology Review*.
- Nash, W. P., Marino Carper, T. L., Mills, M. A., Au, T., Goldsmith, A., & Litz, B. T. (2013). Psychometric evaluation of the Moral Injury Events Scale. *Military Medicine*, 178(6), 646–652.
- Neria, Y., Besse, A., Kiper, D. & Westphal, M. (2010) A longitudinal study of Posttraumatic stress disorder, depression, and generalized anxiety disorder in Israeli citizens exposed to war trauma. *Journal of Traumatic Stress*, 00:0, 1-9.
- O'Connor, E., McCormack, T. & Feeney, A. (2012) The development of regret. *Journal of Experimental Child Psychology*, 111, 120-127.
- Prehn, K. & Heekeren, H. R. (2009) Moral judgment and the brain: a functional approach to the question of emotion and cognition in moral judgment integrating psychology, neuroscience, and evolutionary biology. In J. Verplaetse, J. de Schrijver, S. Vanneste, & J. Braeckman (Eds.), *The Moral Brain* (129-154). New York: Springer
- Rafetseder, E. & Perner, J. (2012) When the alternative would have been better: counterfactual reasoning and the emergence of regret. *Cognition and Emotion*, 25(5), 800-819.
- Rajagopal, P., Raju, S. & Unnava, H. R. (2006) Differences in the cognitive accessibility of action and inaction regrets. *Journal of Experimental Social Psychology*, 42, 302-313.
- Reniers, R., Corcoran, R., Völlm, B. A., Mashru, A., Howard, R. & Liddle, P. F. (2012) Moral decision-making, ToM, empathy and the default mode network. *Biological Psychology*, 90, 202-210.
- Reynolds, S. J., Dang, C. T., Yam, K. C. & Leavitt, K. (2014) The role of moral knowledge in everyday immorality: what does it matter if I know what is right? *Organizational Behavior and Human Decision Processes*, 123, 124-137.
- Russel, P. S. & Giner-Sorolla, R. (2011) Moral anger, but not moral disgust, responds to intentionality. *American Psychological Association*, 11(2), 233-240.

- Shay, J. (2012) Moral injury. *Intertexts*, 16(1), 57-66.
- Shimanoff, S. B. (1984) Commonly named emotions in everyday conversations. *Perceptual and Motor Skills*, 58, 514.
- Sommer, T., Peters, J., Glascher, J. & Buchel, C. (2009) Structure-function relationships in the processing of regret in the orbitofrontal cortex. *Brain Structure Function*, 213, 535-551.
- Storm, C. & Storm, T. (1987) A taxonomic study of the vocabulary of emotions. *Journal of Personality and Social Psychology*, 53(4), 805-816.
- Summerville, A. (2011) The rush of regret: a longitudinal analysis of naturalistic regrets. *Social Psychological and Personality Science*, 2(6), 627-634.
- Tangney, J. P., Steuwig, J. & Mashek, D. J. (2007) Moral emotions and moral behavior. *Annual Review of Psychology*, 58, 345-372.
- Taylor, G. (1985) *Pride, shame and guilt: Emotions of self-assessment*. New York: Clarendon Press.
- Valenti, G., Libby, L. K. & Eibach, R. P. (2011) Looking back with regret: visual perspective in memory images differentially affects regret for actions and failures to act. *Journal of Experimental Social Psychology*, 47, 730-737.
- Vargas, A. F., Hanson, T., Kraus, D., Drescher, K. & Foy, D. (2013) Moral injury themes in combat veterans' narrative responses from the National Vietnam Veterans' Readjustment Study. *Traumatology*, 19(3), 234-250.
- Weisberg, D. P. & Beck, S. R. (2012) The development of children's regret and relief. *Cognition and Emotion*, 26(5), 820-835.
- Weisberg, D. P. & Beck, S. R. (2010) Children's thinking about their own and others' regret and relief. *Journal of Experimental Child Psychology*, 106, 184-191.
- Wolfe, D. A., Zak, L., Wilson, S. & Jaffe, P. (1986). Child witnesses to violence between parents: Critical issues in behavioral and social adjustment. *Journal of Abnormal Child Psychology*, 14, 95-104.
- Worthington, E. L., Jr, & Langberg, D. (2012). Religious considerations and self-forgiveness in treating complex trauma and moral injury in present and former soldiers. *Journal of Psychology and Theology*, 40(4), 274.
- Zeelenberg, M., van den Bos, K., van Dijk, E. & Pieters, R. (2002) The inaction effect in the psychology of regret. *Journal of Personality and Social Psychology*, 82(3), 314-327.