Do Dilemmas on a Moral Judgment task Elicit Feeling States Known to Affect Information Processing?

Brian Barger
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DO DILEMMAS ON A MORAL JUDGMENT TASK ELICIT FEELING STATES KNOWN TO AFFECT INFORMATION PROCESSING?

A Thesis
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Master of Arts

By
Brian D. Barger

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DO DILEMMAS ON A MORAL JUDGMENT TASK ELICIT FEELING STATES KNOWN TO AFFECT INFORMATION PROCESSING?

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Table of Contents

List of Figures . . . . . . . . . . . . vi
List of Tables . . . . . . . . . . . . vii
Abstract . . . . . . . . . . . . viii
Introduction . . . . . . . . . . . . 1
  Statement of the Problem . . . . . . 10
  Purpose of the Study . . . . . . 17
  Research Questions . . . . . . 17
Method . . . . . . . . . . . . 18
  Participants . . . . . . . . . . . . 18
  Measures . . . . . . . . . . . . 18
    Demographics Questionnaire . . . . . . 18
    Neutral Affect Induction . . . . . . 18
    Emotion Questionnaire . . . . . . 18
    Defining Issues Test . . . . . . 20
  Procedure . . . . . . . . . . . . 22
Results. . . . . . . . . . . . 24
Discussion . . . . . . . . . . . . 33
References . . . . . . . . . . . . 42
Appendices
  A. Demographics Survey . . . . . . 51
  B. Neutral Affect Induction Website. . . . . . 53
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>C. Emotion Questionnaire</th>
<th>55</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>D. Other-Oriented Defining Issues Test</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>E. Self-Oriented Defining Issues Test</td>
<td>69</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>F. Informed Consent Document</td>
<td>81</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>G. Human Subjects Review Board Approval</td>
<td>84</td>
</tr>
<tr>
<td>Table</td>
<td>Description</td>
<td>Page</td>
<td></td>
<td></td>
<td></td>
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<td>--------------------------------------------------</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Table 1</td>
<td>Descriptive Statistics</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Table 2</td>
<td>Sadness and Fear and Condition for Times 1 – 7</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Table 3</td>
<td>Sadness and Condition for Times 2 – 7</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Table 4</td>
<td>Fear and Condition for Times 2-7</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
List of Figures

Figure 1. Changes in Joy over Time. . . . . . . . 26
Figure 2. Changes in Surprise over Time . . . . . . 27
Figure 3. Changes in Love over Time . . . . . . . 27
Figure 4. Changes in Anger over Time . . . . . . . 28
Figure 5. Changes in Sadness over Time . . . . . . 28
Figure 6. Changes in Joy over Time per Condition . . . . 30
Figure 7. Changes in Surprise over Time per Condition . . . . 30
DO DILEMMAS ON A MORAL JUDGMENT TASK ELICIT FEELING STATES KNOWN TO AFFECT INFORMATION PROCESSING?

Brian D. Barger June 2005 Pages 50

Directed By: W. Pitt Derryberry, Elizabeth Lemerise, Kelly Madole, Dan Roenker

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The role of emotion in the process of moral decision making has become of interest in recent years (Haidt, 2001). At the same time, emotion researchers are beginning to understand that different basic emotion states (i.e., joy, anger) lead to different information processing styles (Aspinwall, 1998; Nabi, 2003). Skoe, Eisenberg, and Cumberland (2002) found evidence that the feeling states of anger and sympathy are present in moral judgment tasks. Unfortunately, aside from anger, Skoe et al. (2002) primarily focused on emotion terms that have not been experimentally linked to changes in information processing. This study extended the findings of Skoe et al. (2002) by finding: 1) Participants reported a decrease in feelings of positive emotions and an increase in anger and sadness in response to dilemmas used on traditional moral judgment tasks. 2) No differences were found in emotional responses between the self-oriented and other-oriented moral dilemmas. 3) Answering the reasoning sections appears to attenuate sadness on Self-Oriented moral judgment tasks and joy and surprise on Other-Oriented moral judgment tasks. 4) Gender differences were found in that females reported higher levels of sadness than males across all conditions.
Introduction

*Moral Judgment Development: Historical Overview and Cognitive Theoretical Origins*

Research on moral judgment development is largely an enterprise that traces its foundations to rationalist moral philosophy (Kant, 1998), emphasizing justice principles (Rawls, 1999) and the cognitive developmental theories of Piaget (1969). Kohlberg’s (1969) combination of these ideas led to the proposal that individuals develop cognitive moral constructs that progress along an ordered developmental trajectory. These constructs represent the moral reasoning that individuals use in order to arrive at their moral judgments. Kohlberg (Kohlberg, 1969; Colby & Kohlberg, 1987) developed his theories from responses to hypothetical moral dilemmas that he created and used in his Moral Judgment Interview (MJI; Colby & Kohlberg, 1987). In these dilemmas an individual must choose whether some act should be performed (i.e., whether a doctor should euthanize a terminally ill patient) and then give their reasons for their choice.

From his research, Kohlberg (1969) advanced the cognitive developmental approach to moral judgment research. He proposed three broad moral developmental levels: the preconventional, conventional, and postconventional. At each level, individuals presumably engage in a reasoning process wherein they arrive at moral judgments. For each of the three levels Kohlberg (1969) proposed two stages of advancement. The preconventional level leads from a focus on avoiding punishment in making moral decisions (stage 1) to an individualism/exchange focus (stage 2) wherein reasoning revolves around an “I’ll scratch your back if you scratch mine” focus. The conventional level encompasses a move from maintaining social relationships (stage 3) to a concern for the maintenance of social order (stage 4). The postconventional level moves from the
democratic concepts of social contracts and individual rights (stage 5) to an identification of and adherence to justice-centered universal principles (stage 6).

While Kohlberg’s legacy is still largely influential (Rest, Narvaez, Bebeau, & Thoma, 1999), criticisms and critiques of his theory and measurement have led to several alternative theories and models of moral development within the cognitive developmental paradigm (Bergman, 2002; Rest, 1983; Turiel, 1983). One particularly influential theorist is Rest (1983). According to Rest (1983), moral judgment is not the only process involved in moral development, as Kohlberg assumed. In addition to moral judgment, Rest (1983) proposed a four-component model including moral sensitivity (awareness that a moral situation is occurring), moral judgment (judgment of right or wrong), moral motivation (motivation to act morally as a result of the internalization and prioritization of moral values relative to others), and moral implementation (identification of and following through on a plan of action). In advancing this model, Rest (1983) illustrates how moral development is more accurately conceived as the interaction of various cognitive, affective, and behavioral forces.

Though Rest (1983) admits the importance of other factors in moral development, Rest’s primary area of influence continues to be seen in moral judgment research due to the popularity and easy implementation of his Defining Issues Test (DIT; Rest et al., 1999) – an objective, paper and pencil adaptation of Kohlberg’s MJI – in measuring this form of development (Derryberry & Thoma, 2005; Walker, 2002). On the DIT, participants read a series of dilemmas and then, for each dilemma, make a decision or action choice about what the protagonist should do. Once the action choice is made, participants then rate and rank a series of items in terms of their overall importance in
helping them to decide what the protagonist should do. Based on how items are rated and ranked, an individual’s primary moral judgment schema can be deduced. Moral judgment schemata are cognitive frameworks built from past experience by which moral situations are judged and considered (Narvaez & Bock, 2002; Rest et al., 1999). Rest et al. (1999) proposed three moral judgment schemata: personal interest (roughly equivalent to Kohlberg’s stages 2 and 3), maintaining norms (roughly equivalent to Kohlberg’s stage 4), and postconventional (roughly equivalent to Kohlberg’s stages 5 and 6). Unlike Kohlberg’s stages, which were considered to be more static, these schemas are thought to be more akin to shifting distributions. As individuals progress in their moral judgment development, they might rely upon reasoning from an earlier or later schema, but their moral reasoning generally reflects a primary schema. For example, a person might primarily be maintaining norms in his/her orientation, but might in some situations rely on reasoning from either the personal interest or postconventional schema.

Unlike Kohlberg, Rest et al. (1999) theory allows for the possibility of influences other than justice-oriented rational thought as reflected in indices such as the utilization (U) score (Thoma, Rest, & Davison, 1991). This score reflects the extent to which a participant employs or utilizes justice-centered moral reasoning in making action choices on the DIT. Still, moral judgment research using traditional measures, such as the DIT, primarily assumes that scores on moral judgment tasks reflect cognitive levels of rational thought that are required in order to make a moral judgment (Rest et al., 1999).

Although changes have been seen in traditional moral judgment developmental theory, the theoretical emphasis continues to endorse the position of philosophers such as Kant (1998) and Rawls (1999) in advocating the primacy of rational thought (Shweder &
that is, people are assumed to be motivated to make judgments of right and wrong based upon what has been reasoned rationally. However, other classical philosophical traditions have postulated the importance of emotion in making moral judgments (Hume, 1975; 1999) and have begun to be cited as pertinent in other considerations of moral decision-making (Haidt, 2001; Schweder & Haidt, 1993). This trend thereby suggests the importance for researchers of moral judgment from the cognitive developmental tradition of Kohlberg to consider the role of possible emotional influences in measuring their intended construct.

*Emotion and Moral Judgment*

Moral judgment research from the cognitive developmental tradition has minimally examined the role of emotions. However, support is seen in other areas that suggest the need to account for emotion in the cognitive developmental paradigm (Arsenio & Lemerise, 2004; Eisenberg, 2000; Hoffman, 2000; Lemerise & Arsenio, 2000). In particular, Haidt (2001; 2003) has recently countered cognitive developmental accounts of moral judgment with a social intuitionist model. This account borrows from Hume’s (1975; 1999) philosophical stance declaring the primacy of immediate, emotion-based intuitions in the assessment of moral situations as right or wrong. Essentially, Haidt (2001) asserts that moral judgments are formed by the social situation eliciting affectively driven intuitions that appear in our cognition as beliefs. These intuitions then lead to a process whereby people search for moral arguments and present them as their rational reasons for why they believe the way that they do, much as a lawyer defends his client rather than how a scientist looks for the truth. By claiming that moral judgment is a post-hoc illusion, Haidt (2001) relegates the cognitive Kohlbergian traditions to a secondary
position. As such, traditional measures of moral judgment development such as Kohlberg’s MJI or Rest’s DIT are seen to reflect a situation in which an individual makes a moral appraisal (i.e., should Heinz steal the drug or not?) that is based on an emotionally intuitive response, according to Haidt (2001). Then, the person makes rational arguments to support the way he or she feels about the situation. In the case of moral judgment tasks like the DIT, arguments are supplied and then individuals choose which arguments appear to best bolster their judgment.

In support of his contentions, Haidt (2001) presents past research (e.g., Haidt, Koller, & Dias, 1993) that illustrates how individuals are often unable to defend their beliefs when asked to explain their moral judgments about emotionally arousing social violations (i.e., cleaning a toilet with an American flag) that caused no harm to anyone. Haidt (2001) argues that the individuals’ moral judgments do not change because their beliefs were formed by emotional processes instead of rational processes. The individuals’ moral judgments in this case were not rationally informed, but instead emotionally informed.

While Haidt (2001) proposes a strong case for the involvement of emotion in moral judgments, he does not propose that people never rely on rational processes in making moral decisions. Instead, he suggests that the cognitive developmental claim that moral judgments reflect a series of rational processes used to arrive at a judgment is more rare than thought. Instead, Haidt (2001) contends that individuals primarily use rationalizations in order to persuade others of the correctness of their intuitions.

Recent research from the neurosciences supports Haidt’s (2001) suggestion that emotion is an important player in the formation of moral judgments. Green, Sommerville,
Nystrom, Darley, and Cohen (2001) found that the more personally involved one is in hypothetical moral dilemmas, the more brain areas associated with emotions increase in activity (e.g., medial prefrontal cortices). When participants did not perceive themselves to be personally involved in a moral dilemma, brain areas associated with higher cognitive processing (i.e., memory) were active.

Greene, Nystrom, Engell, Darley, and Cohen (2004) argue for a relationship between emotional and rational processes. According to Greene et al. (2004), it is possible that emotionally arousing personal moral judgments can be overdriven at times by rational processes. For example, in responding to a dilemma wherein a person hiding with a group from enemy soldiers must choose to smother an infant or risk death for all, many people choose not to smother the baby. While for most people the presentation of this moral dilemma activates emotion centers initially, some individuals are able to override their initial affective impulses and choose to smother the infant for the survival of the group. In these circumstances brain areas associated with abstract reasoning and cognitive control (e.g., dorsolateral prefrontal cortices) overran the initial affective impulse to save the baby. According to Greene et al. (2004), this ability may be viewed more as an individual difference than the norm but illustrates that rational processes remain important in informing moral decision making, at least for some people.

The findings of Greene et al. (2001, 2004) that the prefrontal cortices play a role in moral judgment and decision making are not surprising. Damasio (1994) brought the prefrontal cortical regions to the forefront of social decision-making research with the finding that individuals with damage (Anderson, Bechara, Damasio, Tranel, & Damasio, 1999) or dysfunction (Blair, 2004) in ventral medial prefrontal brain regions are deficient
in their real life social and moral judgments. This deficiency is not the result of a loss of higher “rational” cognitive processes in making social decisions, but instead appears to result from the loss of emotional responses to social situations. Damasio (1994) proposed that the ventral medial prefrontal cortices aid in the acquisition of “somatic markers,” affective responses that help preconsciously guide social decision making. There is even some anecdotal evidence that the prefrontal cortices possibly aid in the acquisition of moral knowledge structures. Anderson et al. (1999) presented research wherein patients with adult onset of prefrontal damage displayed poor social and moral behavior in their personal life even though their cognitive abilities were not impaired. Interestingly, it was found that these patients showed good moral reasoning abilities and were capable of conceptual knowledge of moral and social issues (a similar case study is reported by Damasio, 1994), despite their behavior. On the other hand, patients who had brain damage early in childhood showed a complete deficit in their concrete knowledge of social and moral norms, in addition to demonstrating behavioral difficulties.

Ultimately, these nascent neurological explorations into the nature of moral judgment reveal the interplay of both rational and emotional processes to inform our sociomoral decision-making strategies. In the end, these studies point toward of the role of emotion in the formation of moral judgments. In particular, the studies of Greene and his colleagues (Greene et al., 2001; Greene et al., 2004) offer a possible explanation for discrepancies found between self-oriented and other-oriented moral judgment condition scores. When traditional moral dilemmas are made to be self relevant (i.e., the participant is in the dilemma) indices of moral judgment development tend to decline (Krebs, Vermeulen, Carpendale, & Denton, 1991). According to Greene et al. (2001; 2004)
research, the cause of these differences could be from emotional elicitation during the more self-oriented moral dilemmas. Greene et al. (2001; 2004) showed that hypothetical dilemmas that do not directly implicate the self tend to recruit brain areas that are involved during working memory tasks. Hypothetical dilemmas that recruit the self display a greater amount of involvement from brain areas traditionally associated with emotion. Thus, emotions might more likely be elicited and affect moral judgment scores during self-oriented moral judgment tasks (e.g., where the participant is making the decision, rather than commenting on what someone else should do). In moral judgment tasks where the individual is making a decision about a protagonist’s action (e.g., such as those found on the MJI and DIT), emotion may not be as readily involved and rational processes may be relied upon more.

**The Influence of Emotion on Social Decision Making**

Social information processing research has recognized emotional influence as an important research area for the last twenty-five years (Forgas, 1994, 2001; Isen, 2000; Loewnstein & Lerner, 2004; Schwartz & Clore, 1983). Most research explored thus far has primarily focused on the role of positive and negative emotional states (Aspinwall, 1998; Forgas, 1994; Isen, 2001). This research supports that such states lead to very different information processing styles. Whereas positive emotional states, such as happiness, lead to information processing that is looser and less detail oriented, negative emotional states, such as sadness, lead to information processing that is more detail oriented (Aspinwall, 1998).

Although the research of Aspinwall (1998) and others (Forgas, 1994; Isen, 2001) reflects the general influence of positive and negative emotional states on social
judgments and decision making, others note the importance of studying the influence of more discrete emotional states such as anger and fear on social information processing. For example, Nabi (2003) showed that the emotions of fear and anger differentially influence information accessibility, how information is attended to, and what public policies are willingly endorsed. When asked to judge a scenario on drunk driving, angry individuals were more likely to reflect a blame orientation and fearful individuals were significantly more likely to reflect a safety orientation. Relatedly, angry individuals were also more likely to seek information based on retribution, whereas fearful individuals were more likely to seek information that reinforced societal safety and security. Other research has found that in gambling situations sad individuals are more likely to prefer high risk and high reward options, and fearful individuals are more likely to choose reward options that are less risky and offered less of a reward (Lerner & Keltner, 2000; Raghunathan & Pham, 1999). Research from Bodenhausen et al. (1994) and Jackson, Lewandowski, Fleury, and Chin (2001) showed that angry individuals were more prone to rely on stereotypes when compared to sad people. Finally, Keltner, Ellsworth, and Edwards (1993) showed that sadness tends to lead to the perception of events as out of individuals’ control, whereas anger tends to lead to the perception that specific individuals are responsible for the occurrence of events. Though further research is needed in terms of emotion elicitation procedures (Coan & Allen, in press) and emotional influences on information processing, all of these studies point toward the conclusion that not all discrete emotions elicit the same information processing styles in every situation (Lerner & Keltner, 2000; Raghunathan & Pham, 1999).
Statement of the Problem

Although research on the role of emotion has burgeoned in other areas, the cognitive developmental (e.g., Kohlbergian based) approach to moral judgment research has not actively addressed its role (Pizarro, 2000; Pizarro & Bloom, 2003). This lack of action has left a notable hole in the literature considering the observations of Haidt (Haidt et al., 1993; 2001) and Greene et al. (2001; 2004). These researchers illustrate that there is a distinct emotional influence involved in making moral judgments as well as the findings from social information processing research illustrating how emotional states can affect decision making. Although Rest (1983) has theoretically accounted for emotion in components such as moral sensitivity, the cognitive developmental paradigm has yet to experimentally explore how emotion pertains to tasks that assess moral judgment development. Given the immense support noted in other areas, efforts to account for emotion on moral judgment tasks used in the cognitive developmental paradigm are warranted.

The nature of cognitive developmental measurements of moral judgment also makes it plausible that emotion is involved to a certain extent. Cognitive developmental moral judgment research typically relies on responses to posed moral dilemmas in assessments such as Kohlberg’s MJI (Colby & Kohlberg, 1987) and Rest’s DIT (Rest et al., 1999) to measure an individual’s moral reasoning and moral judgment development. Moral dilemmas used on measures such as the MJI and DIT are essentially short stories. Short stories have been implicated as effective elicitors of happiness and sadness (Forgas, 1994; Gerrarde-Hesse, Spies, & Hesse, 1994; Westermann, Spies, Stahl, & Hesse, 1996) as well as other specific emotional states such as anger (DeSteno, Petty, Wegener, &
Rucker, 2004). Short stories are also commonly used in emotion induction research and are administered to individuals in order to elicit emotional responses (Forgas, 1994; Gerrarde-Hesse, et al., 1994; Westermann, et al., 1996). Furthermore, moral situations and dilemmas are presumed to be emotionally arousing (Haidt, 2001; 2003). As such, there is reason to believe measurements such as the MJI and DIT may be emotionally arousing. If this were true, moral judgment scores might be impacted by the influence of emotions on participants' information processing as social information processing literature supports.

To date there have been few studies experimentally investigating how the hypothetical dilemmas used on the MJI and DIT impact participants’ emotional states. Two studies have addressed how the induction of happy and sad affective states impacts DIT scores (Olejnik & LaRue, 1980; Zarinpoush, Cooper, & Moylan, 2000). Olejnic and Larue (1980) showed that DIT scores were significantly higher for individuals in a happy emotion condition than for those in a neutral and sad emotion conditions in a sample of 35 college students. Affect was manipulated using the Velten technique (Velten, 1968) wherein participants read a series of either happy (N = 12), sad (N = 12), or neutral (N = 11) statements. An affective check indicated that participants in the happy affect condition were significantly happier than the other two groups (p < .01) while the sad group and the neutral group did not differ from one another. Following the affect induction and mood check, participants took the DIT. DIT P scores were indexed to infer moral judgment level. According to Rest et al. (1999), the P score denotes the extent to which an individual ranks postconventional items over other items and ranges from 0 – 95. Those in the happy condition (M = 37.8) had significantly higher P scores (p < .01)
than those in both the sad affect condition ($M = 28.3$) and neutral affect condition ($M = 26.6$). Olejnic and Larue (1980) concluded that positive affect does not increase moral reasoning, but provides a condition where the upper levels of moral reasoning can more readily be accessed.

Zarinpoush et al. (2000) did happy and sad emotion inductions and tested the subsequent effects on the short form DIT (e.g., DIT with three dilemmas’ rather than six). In experiment 1, Zarinpoush et al. (2000) exposed 109 college students to either a happy, sad, or neutral video. After verifying that the affective inductions were successful in impacting the desired states, the DIT was completed and P scores were used to assess level of moral reasoning. Zarinpoush et al. (2000) found that the P scores ($M = 27.96$) of those in the happy group were significantly lower ($p < .05$) than the P scores of both the neutral group ($M = 36.55$) and the sad group ($M = 35.29$). There was no significant difference between the neutral and sad groups. In experiment 2, Zarinpoush et al. (2000) used films once again to influence the affective states of 89 college students who took a self-oriented version of the DIT (e.g., DIT in which the main character in the moral dilemmas is the self rather than a hypothetical character). Zarinpoush et al. (2000) showed that when the DIT’s were self-oriented, the sad group had significantly higher ($p < .01$) P scores ($M = 40.49$) than the neutral group ($M = 30.58$) and happy group ($M = 31.87$). There was no difference between the happy group and the neutral group.

Overall, Zarinpoush et al. (2000) supported that the information processing of those in the sad conditions was more detail oriented given the scores reported in both the other-oriented format of experiment 1 and the self-oriented format of experiment 2.

Additionally, Zarinpoush et al. (2000) concluded that in other-oriented moral dilemmas,
lower levels of reasoning were seen among those in the happy condition as compared to those in the sad and neutral conditions. In the self-oriented dilemmas of experiment 2, however, those in the happy condition did not have significantly lower P scores than those in the neutral condition, as was the case in experiment 1. Zarinpoush et al. (2000) therefore maintained that when dilemmas are self relevant, positive affective states such as happiness are likely to be more closely regulated and attended to, which leads to reasoning that resembles those who are not impacted by a particular affective state.

That Olejnic and Larue (1980) and Zarinpoush et al. (2000) have conflicting findings is a point that future research should explore. It might be the result of using different forms of the DIT. Whereas Olejnic and Larue (1980) used a full-form (6 dilemma) DIT, Zarinpoush et al. (2000) used a short-form version with three dilemmas. The conflicting findings might also be the result of using different affect inductions.

While it is a worthwhile pursuit to explore the role of induced affective states on traditional measures of moral judgment, it may be premature to do so. If moral dilemmas are emotionally arousing, then the induction of affective states might be interacting with the emotions elicited from the dilemmas themselves. Additionally, different dilemmas might affect emotional responses in different ways, which would mean that when using a short-form DIT, as Zarinpoush et al. (2000) did, the dilemmas selected might have different individual and cumulative effects on information processing as compared to the full form DIT that Olejnic and Larue (1980) used. It would therefore be prudent to first explore affective reactions elicited from traditional moral dilemmas before attempting to see what effect induced emotions have on moral judgment scores. A recent study that
Skoe et al. (2002) conducted is the lone study thus far that has looked at feeling states reported in response to traditional moral judgment dilemmas.

Skoe et al. (2002) looked at how the hypothetical moral dilemmas from Kohlberg’s MJI and real-life moral dilemmas elicit emotional states among a sample of 209 college students. In this study, Skoe et al. (2002) asked participants to relay one real life moral dilemma that they had personally experienced and then read three MJI hypothetical moral dilemmas. After reading each hypothetical dilemma the participants wrote a page about their reasons for believing what should be done in the dilemma. Participants were next asked to rate on a 5-point scale the emotions they would feel if they were experiencing this dilemma. Participants were then asked to consider their reported real life dilemma and were asked to rate on the same scale how they felt.

Skoe et al. (2002) performed a factor rotation on a set of 11 feeling adjectives that participants reported including anger, confusion, fear, frustration, guilt, inner turmoil, regret, sadness, shame, sympathy, and uncertainty to arrive at four affective groups which they labeled as upset, remorse, anger, and sympathy. Separate factor rotations were done for both the personal and hypothetical moral dilemmas. In the real life dilemmas, sympathy, sadness, and fear failed to significantly load on any factors. In the hypothetical dilemmas, anger did not significantly load on any factors. Skoe et al. (2002) opted to use the uncertainty, inner turmoil, and confusion adjectives for the upset factor; the shame, guilt, and regret adjectives for the remorse factor; the anger and frustration adjectives for the anger factor; and the sympathy adjective in defining a sympathy construct even though no other adjectives shared a significant amount of variance with this adjective in the factor rotation. In considering the degree to which each of the four factors are related
to the considered moral dilemmas, Skoe et al. (2002) found that anger and sympathy were more likely to be evoked from hypothetical moral dilemmas than real life dilemmas ($p < .05$ and $.01$, respectively). Real life moral dilemmas were more likely to evoke feeling states related to the upset and remorse factors ($p < .06$ and $.01$ respectively). Additionally, women were found to produce higher ratings of emotions when compared to men on upset for both real life and hypothetical dilemmas on the upset category ($p < .01$) and hypothetical dilemmas for sympathy ($p < .01$), but men scored higher on sympathy than women in real life dilemmas ($p < .01$).

Skoe et al. (2002) research findings are a useful guide in that evidence was found that feeling states occur after reading moral judgment dilemmas, although there are some limitations. First, Skoe et al. (2002) asked participants to rate their emotions after the dilemma and questions pertaining to it. Answering of the questions could have affected the participants’ affective states, thus influencing their subsequent responses. Second, the participants were asked to think back and tell how they would feel if they were making the decision. Such a task is inconsistent with the protocol of traditional assessments of moral reasoning and judgment such as the MJI and DIT where participants are asked to make decisions about hypothetical individuals involved in moral dilemmas. This aspect is particularly problematic because there is evidence that making moral dilemmas self-oriented (i.e., the person reading the dilemma is encountering the dilemma) can lower moral judgment scores (Krebs et al., 1991). Additionally, recent neuroscience research indicates that emotion tends to be more readily aroused in hypothetical dilemmas that are made to be more personally relevant (Greene et al, 2001). Thus, Skoe et al. (2002) might have hit upon emotional responses that occur in self-oriented moral dilemmas, but not in
the other-oriented dilemmas format of the MJI of DIT. Another limitation is that Skoe et al. (2002) did not include a baseline emotion condition, so it is uncertain as to whether the emotions reported are reflective of the influence of the moral judgment task. A final limitation is Skoe et al. (2002) focus on complex social emotion adjectives as opposed to more basic emotions shown to influence information processing. Shaver and colleagues (Shaver, Schwartz, Kirson, & O'Connor, 1987; Shaver, Wu, & Schwartz, 1992) and others (Fountaine, Poortinga, Setiadi, & Markam, 2002) have posited that within different cultures there appears to be four basic emotion concepts from which other more complex emotions are but variations rooted in these: joy, anger, sadness, and fear. Interestingly, each of these emotions has been found to have unique influences on information processing as already noted. In Skoe et al. (2002) study, fear and sadness were basic emotions left out of the analyses even though they correlated with sympathy in the hypothetical emotion questions. Anger was the only “basic” emotion adjective used in their analyses; it was used only because of its high correlation with frustration. It is important for these emotions that have been linked to influences on information processing to be studied in relationship to moral judgment dilemmas as the scoring might be inadvertently influenced by them.

**Purpose of the Current Study**

The purpose of the current study was to further explore this relationship by investigating the hypothetical moral dilemmas of the DIT (Rest et al., 1999), a popular paper and pencil measurement of moral judgment development, to see if its dilemmas elicit emotional responses. Emotional responses were explored in four different DIT conditions (see Method section for more information regarding these conditions).
including: 1) other-oriented DIT condition with reasoning section, 2) self-oriented DIT condition with reasoning section, 3) other-oriented DIT condition without reasoning section, and 4) self-oriented DIT condition without reasoning section. How emotional responses vary among males and females was also considered.

As such, this study addresses four research questions. Research Question 1 - Do the dilemmas used on the DIT elicit emotions? Research Question 2 - Does answering the reasoning items on the DIT have an effect on reported emotions? Research Question 3 - Is there a difference between self-oriented moral dilemmas and other-oriented moral dilemmas in terms of elicited emotion? Research Question 4 - Do males and females differ in their reported emotions during moral judgment tasks?
Methods

Participants

Participants included 155 students from a large Southeastern university. Participants were recruited via class visits and through the Psychology department’s study board. Of those who identified their gender, 105 were female and 47 were male. Of those who reported class year, 15 were freshmen, 37 were sophomores, 39 were juniors, and 47 were seniors; four were graduate students. In terms of ethnicity, 121 classified themselves as white, 8 as black, 8 as other, and 12 did not provide information about ethnicity. Average age of the sample was 21.39 years ($SD = 4.80$).

Measures

Demographic questionnaire. Demographics information noted in this questionnaire included age, sex, ethnicity (optional), college year classification, and major.

Neutral affect inducement. Neutral affect was induced using a screen saver of abstract shapes (Screenpeace screensaver). Research has shown this approach to be an effective neutral emotion induction procedure (Gross & Levenson, 1995; Rottenberg, Ray, & Gross, in press). The screensaver was used in order to reduce the likelihood of an existing positive or negative emotional state as each participant began the session. Additionally, its use serves as a baseline affective condition from which to compare affective states after the moral judgment tasks.

Emotion Questionnaire. An Emotion Questionnaire was completed after participants completed the neutral affective induction and was also completed after each of the six DIT dilemmas was read. The questionnaire indicates emotions felt at the given
moment on a 5-point scale (1 = not at all to 5 = extremely). Emotion adjectives included love, joy, surprise, anger, sadness, and fear. Research has revealed that in the U.S. these six terms represent broad emotion categories to which other feelings are likely to be primarily related (Shaver et al., 1987). In order to ensure that pre-existing emotional states did not confound the results, those with scores of 4 and 5 in any of the four emotional states known to impact information processing (e.g., anger, sadness, fear, and joy) at the initial assessment were not considered in the analyses. The result was the removal of 48 of the original 155 participants.

In order to account for order effects, the emotion questionnaire was counterbalanced across subjects using three different orderings of the emotion adjectives. The three different orderings included: 1. Sadness, Anger, Joy, Surprise, Fear, and Love; 2. Love, Fear, Surprise, Joy, Anger, and Sadness; and 3. Fear, Joy, Sadness, Anger, Love, and Surprise.

In the current study, Confirmatory Factor Analysis (CFA) of the initial scores on the Emotion Questionnaire verified the contentions of Shaver et al. (1987) regarding the uniqueness of these six emotions. Specifically, one-factor, two-factor, and three-factor models were tested, and all were found to have poor fit based on the reports of six considered goodness of fit statistics. In the one-factor model, all considered goodness of fit statistics suggested poor fit including the chi square index \( \chi^2 = 134.02, p = .000 \), chi square ratio (14.89), the Goodness of Fit Index (.77), the Adjusted Goodness of Fit Index (.46), the Normed Fit Index (.45), and Standardized Root Mean Squared Residual (.18). In the two-factor model, the negative emotions (e.g., anger, sadness, and fear) and positive emotions (e.g., love, surprise, and joy) were defined as separate latent constructs.
Five of the six considered goodness of fit statistics were suggestive of poor fit including the chi square index ($\chi^2 = 26.78, p < .0008$), chi square ratio (3.35), the Adjusted Goodness of Fit Index (.85), the Normed Fit Index (.87), and Standardized Root Mean Squared Residual (.10). Additionally, none of the three positive emotions significantly loaded upon their intended latent construct. In the three-factor model, the observed variables with the strongest correlations comprised the three latent constructs. Included were the negative emotions as the first latent construct, love and joy as the second latent construct, and surprise as the third latent construct. Four of the six considered goodness of fit statistics were suggestive of poor fit including the chi square index ($\chi^2 = 23.67, p < .001$), chi square ratio (3.38), the Adjusted Goodness of Fit Index (.85), and the Normed Fit Index (.89). Additionally, neither love nor joy significantly loaded upon their intended latent construct.

*Defining Issues Test.* Four versions of the Defining Issues Test (DIT; Rest et al., 1999) were used in this study. Each condition is described below:

*Condition 1: Other-oriented with reasoning DIT.* Those assigned to this condition completed the Defining Issues Test (DIT; Rest, et al., 1999) according to its standardized instructions and procedures. On the DIT, participants were asked to read 6 individual dilemmas involving a moral situation. The dilemmas that were read included: Heinz and the Drug (i.e., a man is deciding whether to steal drug for dying wife), Escaped Prisoner (i.e., a neighbor is deciding whether to turn in an escaped convict who turned into a good standing citizen), School Newspaper (i.e., a school principal is deciding whether to shut down a controversial school newspaper), Doctor’s Dilemma (i.e., a doctor is deciding whether or not to administer euthanasia), Mr. Webster (i.e., a
shopkeeper is deciding whether to hire a foreigner even though it might hurt business), and Student Revolt (i.e., a student is deciding whether to protest a war through means of a sit-in). After each dilemma was read, participants were asked to indicate what they thought the main character in the dilemma should do. Next were 12 issues that the participants were asked to rate and rank in terms of importance in making their decisions about the actions of the main character. Participants in this condition completed the emotion checklist after reading each individual moral dilemma and rating and ranking the 12 subsequent issues.

In order to account for order effects, the Other-oriented with reasoning DIT was counterbalanced using three different orderings of the moral dilemmas. The three different orderings included: 1. Heinz and the Drug, Escaped Prisoner, School Newspaper, Doctor’s Dilemma, Mr. Webster, and Student Revolt; 2. Student Revolt, Mr. Webster, Doctor’s Dilemma, School Newspaper, Escaped Prisoner, and Heinz and the Drug; and 3. Doctor’s Dilemma, Mr. Webster, Student Revolt, Heinz and the Drug, Escaped Prisoner, and School Newspaper.

**Condition 2: Self-oriented with reasoning DIT.** Those assigned to this condition completed the self-oriented DIT. The self-oriented DIT followed the same protocol as the others-oriented with reasoning DIT, and the dilemmas were the same except that the participant was the main character of the dilemma and was facing the decision that must be made. Additionally, the subsequent rating and ranking sections were worded such that the person taking the test was implicated in the scenario (i.e., wouldn’t you love your spouse so much that you would steal for him/her?). Participants in this condition completed the emotion checklist after reading each individual moral dilemma and rating
and ranking the 12 subsequent issues. In order to account for order effects, the *Self-oriented with reasoning DIT* was counterbalanced using the same three orderings noted for condition 1.

**Condition 3: Other-oriented without reasoning DIT.** Those assigned to this condition read the dilemmas of the other-oriented DIT and provided action choices about what the main character should do. Those in this condition were not required to rate and rank items that pertained to each dilemma’s action choice. Participants in this condition completed the emotion checklist after each individual moral dilemma and action choice. In order to account for order effects, the *Others-oriented without reasoning DIT* was counterbalanced using three orderings noted in conditions 1 and 2.

**Condition 4: Self-oriented without reasoning section DIT.** Those assigned to this condition read the dilemmas of the self-oriented DIT and provided action choices about what they would do. Those in this condition were not required to rate and rank items that pertain to each dilemma’s action choice. Participants in this condition completed the emotion checklist after each individual moral dilemma and action choice. In order to account for order effects, the *Self-oriented without reasoning DIT* was counterbalanced using three aforementioned orderings of the moral dilemmas.

**Procedures**

Students signed up for this study's required session via the department’s study board and online study register. In keeping with typical DIT research conditions, all sessions took place in available classrooms so that up to 25 participants could take part in a scheduled session. At the sessions, participants were randomly assigned to one of the four DIT conditions and were provided a study packet containing all the study materials.
Study packets were passed out randomly to participants, and condition assignment was dependent upon where participants happened to be sitting. An informed consent document was on top of the study packet with instructions for participants to not begin reading their study packets until instructed to do so. A researcher then briefly explained that this particular study as looking at the relationship between reported emotions and social situations. The researcher then read the informed consent to the participants after which they signed them. Next, the researcher asked the participants to fill out the demographics questionnaire. Participants were then given the neutral emotion induction for two minutes via the overhead screen. After the emotion induction, participants were instructed to complete their study packet. When participants were finished they were allowed to quietly leave the room.
Results

Descriptive information for the emotional states of the participants following the neutral affect induction can be found in Table 1. A 4 (condition) x 2 (gender) Multivariate Analysis of Variance (MANOVA) was conducted in order to uncover any initial differences in the dependent variable emotions among groups. Multivariate tests reported no significant differences among conditions or between genders. There was not a significant condition by gender interaction at the multivariate level. Univariate tests revealed significant condition differences in anger ($F[3, 99] = 2.706, p < .05, \eta^2 = .076$). Bonferroni post hoc tests revealed this difference was due to those in the Other-Oriented with reasoning section condition reporting significantly higher levels of anger ($M = 1.79, SD = .738$) than the Self-Oriented with reasoning section condition ($M = 1.30, SD = .542; p < .05$). Additionally, a significant interaction was found for condition and gender ($F[3, 99] = 4.115, p < .01, \eta^2 = .111$) on sadness. This interaction appears to be the result of females reporting more sadness in the Other-Oriented without reasoning section condition ($M = 1.40, SD = .632$) and males reporting higher levels of sadness in the Self-Oriented without reasoning section condition ($M = 1.89, SD = .601$). No other significant differences in emotion were seen in the analysis, which supports that the emotional states were largely similar prior to reading the dilemmas regardless of gender or condition.

In order to assess change in the considered emotions, six 4 (condition) x 2 (gender) x 7 (time) repeated measures MANOVA’s were completed for each emotion. In each analysis, sphericity violations were reported at the multivariate level. Thus, the more conservative Greenhouse-Geisser and Huynh-Feldt univariate tests were considered in assessing changes in emotion across time. These within-subjects tests revealed
Table 1

*Descriptive Statistics*

<table>
<thead>
<tr>
<th>Emotion</th>
<th>Time</th>
<th>Time</th>
<th>Time</th>
<th>Time</th>
<th>Time</th>
<th>Time</th>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Joy</td>
<td>M</td>
<td>1.99</td>
<td>1.62</td>
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<td>1.38</td>
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<td>107</td>
</tr>
<tr>
<td>Love</td>
<td>M</td>
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<td>107</td>
<td>107</td>
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<td>107</td>
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<tr>
<td>Surprise</td>
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<td>.837</td>
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<td>107</td>
</tr>
<tr>
<td>Anger</td>
<td>M</td>
<td>1.50</td>
<td>1.89</td>
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<td>1.98</td>
<td>2.07</td>
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<td>1.10</td>
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<td>1.85</td>
<td>2.17</td>
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<td></td>
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<td>.742</td>
<td>.971</td>
<td>.990</td>
<td>1.01</td>
<td>1.232</td>
<td>1.19</td>
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<tr>
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<td>107</td>
<td>107</td>
<td>107</td>
<td>107</td>
<td>107</td>
<td>107</td>
</tr>
<tr>
<td>Fear</td>
<td>M</td>
<td>1.40</td>
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<td>1.39</td>
<td>1.38</td>
<td>1.48</td>
<td>1.49</td>
</tr>
<tr>
<td></td>
<td>SD</td>
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<td>.873</td>
<td>.749</td>
<td>.709</td>
<td>.862</td>
<td>.965</td>
</tr>
<tr>
<td></td>
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<td>107</td>
<td>107</td>
<td>107</td>
<td>107</td>
<td>107</td>
<td>107</td>
</tr>
</tbody>
</table>
significant decreases in Joy (Greenhouse-Geisser: $F[4.7, 94] = 17.618, p < .001, \eta^2 = .154$; Huynh-Feldt: $F[5.3, 94] = 5.176, p < .001, \eta^2 = .154$) (see Figure 1), Surprise (Greenhouse-Geisser: $F[4.3, 94] = 6.638, p < .001, \eta^2 = .060$; Huynh-Feldt: $F[4.9, 94] = 6.368, p < .001, \eta^2 = .060$) (see Figure 2), and Love (Greenhouse-Geisser: $F[3.9, 94] = 13.620, p < .01, \eta^2 = .035$; Huynh-Feldt: $F[4.4, 94] = 3.620, p < .01, \eta^2 = .019$) (see Figure 3). Significant increases were reported for Anger (Greenhouse-Geisser: $F[5.8, 94] = 7.955, p < .001, \eta^2 = .074$; Huynh-Feldt: $F[5.2, 94] = 9.206, p < .001, \eta^2 = .074$) (see Figure 4) and Sadness (Greenhouse-Geisser: $F[4.3, 94] = 4.796, p < .001, \eta^2 = .046$; Huynh-Feldt: $F[4.8, 94] = 4.796, p < .001, \eta^2 = .046$) (see Figure 5). In assessing these changes in these five emotions over time, Bonferroni post-hoc tests indicated that changes are the result of significant decreases or increases after the first assessment. Each of the five emotions stabilize by the third measurement as Bonferroni post-hoc tests reported no significant changes in any of the 5 emotional states among times 3 – 7.

Figure 1

*Changes in Joy over Time*
Figure 2

*Changes in Surprise over Time*

![Graph showing changes in surprise over time.](image)

Figure 3

*Changes in Love over Time*

![Graph showing changes in love over time.](image)
Figure 4

*Changes in Anger over Time*

![Graph showing changes in anger over time.](image)

Figure 5

*Changes in Sadness over Time*

![Graph showing changes in sadness over time.](image)
Condition x time interactions were seen for Joy (Greenhouse-Geisser: $F[4.7, 94] = 17.618, p < .05, \eta^2 = .048$; Huynh-Feldt: $F[4.7, 94] = 1.678, p = .057, \eta^2 = .048$) and Surprise (Greenhouse-Geisser: $F[13.1, 94] = 2.049, p < .05, \eta^2 = .058$; Huynh-Feldt: $F[14.6, 94] = 2.049, p < .05, \eta^2 = .058$). The Joy interaction is most likely due to the Other-Oriented without reasoning section condition increasing at time four ($M = 1.88, SD = .864$) as compared to the Other-Oriented with reasoning section condition ($M = 1.46, SD = .637$), Self-Oriented with reasoning section condition ($M = 1.44, SD = .892$), and Self-Oriented without reasoning section condition ($M = 1.41, SD = .842$) (see Figure 6). The Surprise interaction appears to be the result of those in the Other-Oriented without reasoning section condition reporting lower surprise initially ($M = 1.85, SD = 1.08$) relative to the Other-Oriented with reasoning section condition ($M = 2.18, SD = 1.16$) and the Self-Oriented with reasoning section condition ($M = 2.00, SD = 1.14$) and then ultimately reporting higher surprise ($M = 2.38, SD = 1.10$) relative to these conditions ($M = 1.50, SD = .923$ and $M = 1.30, SD = .669$ respectively) (see Figure 7).

Between-subjects tests indicated that the noted changes in emotion reported in the within-subjects test are largely the same across conditions and between genders. However, there were exceptions. Specifically, differences among conditions were found for Sadness ($F[3, 99] = 3.488, p < .05, \eta^2 = .096$) and Fear ($F[3,99] = 3.351, p < .05, \eta^2 = .097$) (see Table 2). A significant gender difference was seen showing higher amount of Sadness among females ($F[1, 99] = 10.230, p < .01, \eta^2 = .094$) with females reporting higher levels of sadness ($M = 2.17, SD = .835$) than males ($M = 1.70, SD = .646$).

Because no significant differences were seen over time among times 2-7 for reported sadness and fear, the six reports for each of these two emotions were averaged
Figure 6

*Changes in Joy over Time per Condition*

![Graph showing changes in joy over time per condition.](image)

Figure 7

*Change in Surprise over Time per Condition*

![Graph showing changes in surprise over time per condition.](image)
Table 2

*Anger and Fear and Condition for Times 1 – 7*

<table>
<thead>
<tr>
<th></th>
<th>Other-Oriented with reasoning</th>
<th>Other-Oriented without reasoning</th>
<th>Self-Oriented with reasoning</th>
<th>Self-Oriented without reasoning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sadness</td>
<td>M 2.00</td>
<td>1.93</td>
<td>1.61</td>
<td>2.19</td>
</tr>
<tr>
<td></td>
<td>SD .719</td>
<td>.852</td>
<td>.604</td>
<td>.651</td>
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<tr>
<td></td>
<td>N 28</td>
<td>26</td>
<td>27</td>
<td>26</td>
</tr>
<tr>
<td>Fear</td>
<td>M 1.35</td>
<td>1.39</td>
<td>1.38</td>
<td>1.76</td>
</tr>
<tr>
<td></td>
<td>SD .502</td>
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<td>.800</td>
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<td></td>
<td>N 28</td>
<td>26</td>
<td>27</td>
<td>26</td>
</tr>
</tbody>
</table>

together in order to more closely examine the noted differences among conditions and between genders. Thus, two new variables were created: sadave and fearave. Analyses of each of these emotions are addressed below.

**Sadness**

A 4-way (condition) ANOVA revealed significant differences \( F [3, 103] = 3.103, p < .05, \eta^2 = .083 \) for sadave. Bonferonni post-hoc tests revealed significant differences favoring sadave in Self-Oriented dilemmas without reasoning sections condition over Self-Oriented dilemmas with reasoning sections conditions \( p < .05 \) (see Table 3). A 2-way (gender) ANOVA was also conducted for Sadness revealing that females reported significantly higher amounts of Sadness overall \( F [1, 105] = 9.448, p < .01, \eta^2 = .083 \).
Table 3

Sadness and Condition for Times 2 – 7

<table>
<thead>
<tr>
<th></th>
<th>Other-Oriented with reasoning</th>
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<th>Self-Oriented with reasoning</th>
<th>Self-Oriented without reasoning</th>
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<td>1.99</td>
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<td>1.60</td>
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<tr>
<td>SD</td>
<td>.748</td>
<td>.956</td>
<td>.639</td>
<td>.639</td>
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<tr>
<td>N</td>
<td>28</td>
<td>26</td>
<td>27</td>
<td>26</td>
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</tbody>
</table>

Fear

For Fear a 4-way (condition) ANOVA revealed significant differences ($F[3, 103] = 2.766, p < .05$) among groups in *fearave* (see Table 4). Bonferonni post-hoc tests revealed this differences was due to Self-Oriented without reasoning sections conditions being higher in *fearave* than the Other-Oriented with reasoning section condition, but these differences did not attain significance ($p < .10$) (See Table 4).

Table 4

Fear and Condition for Times 2 – 7

<table>
<thead>
<tr>
<th></th>
<th>Other-oriented with reasoning</th>
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<td>1.32</td>
<td>1.42</td>
<td>1.37</td>
<td>1.82</td>
</tr>
<tr>
<td>SD</td>
<td>.505</td>
<td>.540</td>
<td>.614</td>
<td>.861</td>
</tr>
<tr>
<td>N</td>
<td>28</td>
<td>26</td>
<td>27</td>
<td>26</td>
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</table>
Discussion

The purpose of this study was to determine if the six dilemmas of the DIT elicit discrete emotional states that have been shown to influence information processing. Six specific emotional states were considered including joy, love, surprise, anger, sadness, and fear. Shaver et al. (1987) suggested these six emotions form the primary cultural emotion lexicon for Americans from which all other emotion terms are but elaborations on these primary themes. In order to determine how particular aspects of the DIT might pertain to emotional elicitation, four different DIT conditions were considered including an Other-Oriented condition with moral reasoning questions, an Other-Oriented condition without moral reasoning questions, a Self-Oriented condition with moral reasoning questions, and a Self-Oriented condition without moral reasoning questions. Because emotion has varied between genders in prior study (Skoe et al., 2002), the role of gender was also addressed. As such, four research questions were addressed.

The first research question asked whether the dilemmas used on the DIT elicit emotions. The data presented here indicate that the DIT’s moral dilemmas can impact the emotional states considered in this study. In particular, the within-subjects tests found a significant decrease in joy, surprise, and love and a significant increase in anger and sadness after the DIT’s moral dilemmas were read. Overall, then, individuals are becoming increasingly less positive and increasingly more negative in their affective state as they take the DIT.

That changes in reported anger and sadness were seen across the conditions is interesting since anger and sadness are thought to elicit very different information processing styles. For example, Bodenhausen et al. (1994) showed that anger promotes a
reliance on more schematic or stereotypical information; that is, individuals who are angry are more likely to use heuristic information and not process information deeply. On the other hand, Bodenhausen et al. (1994) also illustrated how sad individuals are prone to be more detailed in their information processing. Emotion elicitation research using films has shown that scenes involving acts of injustice elicit the highest amount of anger responses, but even these responses are marked by relatively high levels of sadness (Rottenberg, et al., in press). Given the DIT’s emphasis on the consideration of justice principles, it should not be surprising that some people become angry with the druggist who will not give Heinz the drug. On the other hand Heinz is a sympathetic character and for many people the thought of a dying spouse, whether choosing to steal the drug or not, would elicit sadness. Whether it is anger or sadness that colors the information processing of individuals taking the DIT is unknown at this point. Loose information processing as a result of increased anger or more detailed information processing as a result of increased sadness may depend upon individual differences such as trait/state anger or depression. Future research should therefore flesh out the influence of the increases in these emotional states while taking the DIT.

A decrease in joy was also seen. Joy or happiness has been linked to the incorporation of a loose “heuristic” information processing style (Aspinwall, 1998; Isen, 2000). Given the aforementioned increase in sadness, this decrease in joy is not surprising. As such, this decrease in joy further supports that taking the DIT results in a more negative emotional state.

Unlike anger, sadness, and joy, the influence of surprise and love on information processing is not a well-studied phenomenon. That love and surprise decrease along with
joy gives testament to Shaver et al. (1987) contention that these are positive emotions, however. Research on the emotion lexicons of other cultures (Shaver, Murdaya, & Fraley, 2001; Shaver et al., 1992) indicates that Shaver et al. (1987) findings of lexical delineations for groupings of love and surprise in U.S. populations might be cultural artifacts. Shaver et al. (2001) found that in the Indonesian emotion lexicon a general concept of surprise is not found. In another study comparing the Indonesian emotion lexicon and the Netherlands lexicon, Fontaine et al. (2002) found evidence for only a positive emotion category in addition to anger, sadness, and fear. Similarly, Shaver et al. (1992) found that in the Chinese lexicon “love” and related terms are subsumed under the broad concept of “happiness” or “joy.” As such, Shaver et al. (2001) states “joy, anger, fear, and sadness categories might be universal, but the composition and meaning of love… might be a cross cultural variable” (p. 204). Thus, the decreases seen in surprise and love are likely due to their general relation to a broader “positive emotion” category that is depressed by the elicitation of the negative emotions of sadness and anger.

The second research question asked whether answering the reasoning items on the DIT has an effect on reported emotions. Some interesting findings provide partial support that exclusion of the reasoning items may heighten experienced emotion. Specifically, between-subject analyses illustrated significant differences in reported sadness where a greater increase was seen for those in the Self-Oriented condition without reasoning section condition over those in the Self-Oriented with reasoning section condition. The significant interactions for joy x condition and surprise x condition also support how the exclusion of the reasoning items can heighten experienced emotion. In both instances, reported joy and surprise were initially similar for those in
the Other-Oriented without reasoning section condition relative to those in the Other-Oriented with reasoning section. By the final measurements of these two emotions, however, those in the Other-Oriented without reasoning condition reported greater amounts of joy and surprise relative to those in the Other-Oriented with reasoning condition. Thus, it appears that the rating and ranking sections on the DIT might attenuate both negative and positive emotions. It is worth noting, however, that distinctions in sadness were seen only between the self-oriented conditions, and changes in joy and surprise were seen only in the other-oriented conditions. Therefore, future research should attempt to make sense of why the exclusion of reasoning items exacerbates only negative emotions when reading self-oriented dilemmas and why the exclusion of reasoning items impacts only positive emotions when reading other-oriented dilemmas.

The third research question addressed whether there is a difference between self-oriented moral dilemmas and other-oriented moral dilemmas in terms of elicited emotion. Considering the aforementioned findings regarding the inclusion of reasoning section, comparisons of the two conditions containing reasoning sections were only considered in examining this question. Bonferroni’s post-hoc tests showed that there was not a significant difference between those in the Other-Oriented with moral reasoning section condition and those in the Self-Oriented with moral reasoning section in terms of emotions elicited. Those in both of these conditions showed a significant decrease in joy, surprise, and love along with increases in anger and sadness. Overall, then, the between-subjects analyses support that the dilemmas used on both traditional Other-oriented moral judgment tasks and Self-Oriented moral judgment tasks are impacting primary emotions.
similarly. The implication is that there should not be unique information processing elicited by a particular kind of moral judgment task.

The fourth research question considered whether males and females differ in their reported emotions during moral judgment tasks. Between subjects effects revealed that females reported significantly more sadness than did males. No other significant gender differences in reported emotion were seen and no significant gender interactions were seen. Thus, with the exception of sadness, there is no evidence that the tasks considered in this study evoke emotion differently for females than they do males. Given that sadness has been cited as causing a more detailed form of information processing, however, it may be that this distinction has some important implications where DIT scores are concerned. For example, Gilligan (1982) argued that traditional moral judgment assessments in the cognitive developmental tradition are gender biased favoring males. According to Gilligan (1982), this difference is due to females' preference of a care-centered approach in making moral judgments over the justice-centered concerns that are emphasized on cognitive developmental measurements. Since that time, research has not supported Gilligan's contention. Specifically, males and females have been shown to be equitable in their ability to use justice-centered moral reasoning (Al-Ansari, 2002; Cortese, 2001; Gibbs, Arnold, & Burkhart, 1984; Krettenauer & Edelstein, 1999; Lifton, 1985; Thoma, 1986; Walker, 1995). Some studies have shown though that females do tend to incorporate care-centered reasoning during moral reasoning tasks more often than do males (Gibbs et al., 1984), which could be related to feeling similar levels of sadness for others as they would for themselves.
**Strengths and Limitations**

Before mentioning strengths, several limitations to this study must be addressed. Although this study illustrates decreases in positive emotions and increases in negative emotions during a moral judgment task, it is important to note that the means of the emotion groups started low and generally ended not far from where they started. Usually the change was within a single point from time one. In retrospect, perhaps a 7- or 9- point scale allowing individuals to make finer distinctions in emotion levels might have been more informative and sensitive to changes in reported affect. The point must be made here that just because the reported levels of emotion are low does not necessarily imply that information processing is not affected. For example, Bodenhausen et al. (1994) reported differences in stereotypical judgments between individuals with low levels of manipulated anger and sadness (1.98 and 2.48, respectively, on a 7- point scale). Granted, this is not necessarily the norm and it is more typical to have higher levels of reported manipulated affect.

Another concern is the fact that the researcher presenting the study was male. Recently, Barret, Robin, Pietromonaco, and Eyssell (1998) found that individuals of the same gender were less likely to express higher levels of emotion to each other as compared to those of the opposite sex. Additionally, it has been shown that women tend to be more aware of their emotional experience than do men (Barret, Lane, Sechrest, & Schwartz, 2000). As such, males might be having stronger affective responses to moral dilemmas and not reporting them due to either the influence of a same sex investigator or being less aware of their emotional states.
Another limitation of this study is the fact that the study was pitched as a study of "the influence of emotion on social decision making." Consequently, participants were aware that we were looking for experienced emotions. It could be that that introspection upon one’s internal affective state affects the subjective emotional feeling. Thus, having participants consider their feelings could alter the emotional response.

A final limitation of this study is the length of the individual dilemmas and their ability to influence overall affect in participants. Although quite a few studies have displayed the ability of short stories to affect the mood state of individuals, these short stories are typically a bit longer than the short stories (e.g., 1 page) used on measures of moral judgment. As such, the length of time spent considering the short story might be a factor influencing the global affective state of the participant. Thus, the time spent reading the quarter to a half a page stories used on the DIT might not be sufficient to influence the global affect of those reading it. In conjunction with this concern is the fact that while it appears that the dilemmas are causing the change in emotion, it could just be the passage of time while doing an undesirable task that is changing individuals’ affect.

One of the primary strengths of this study was the incorporation of the film technique in order to assess a baseline affective state. Like researchers propagating this approach (Gross & Levenson, 1995), the baseline emotions of participants were mild. This verification therefore allowed investigation into whether the dilemmas negatively influenced participants’ reported emotion. A common practice amongst emotion researchers is a comparison between specific emotion groups after affective induction technique. For example, a researcher might check to see if a group exposed to an anger inducing film reports higher levels of felt anger than a group exposed to a film inducing
sadness. This kind of comparison gives no indication as to whether the film caused the change in affective state or if the differences were present despite the induction. Future emotion researchers might consider using this technique as a baseline condition from which to consider their data. In this study this technique allowed us to say with a fair amount of certainty that moral dilemmas elicit higher levels of reported anger and sadness while decreasing levels of reported joy, love, and surprise.

Another strength of this study is that its approach blends newer emotion research techniques in order to investigate traditional moral judgment measurements. Emotions are ubiquitous occurrences and may be elicited in numerous instances, particularly socially. Social psychologists and other researchers using social scenarios in order to assess cognitive traits, such as moral schemas, would do well to bear in mind that the influence of emotions elicited in social situations might affect the cognitive construct they are attempting to measure. Finally, by cross balancing the dilemmas we obtained a picture of moral judgment tasks wherein negative affect is increased, despite the order of the dilemmas.

**Future Directions**

In the future, moral judgment researchers would do well to explore the specific reported emotions to individual dilemmas used on measurements such as the DIT as different dilemmas might be eliciting higher levels of reported emotions. This exploration is particularly important for researchers who use the short form DIT (Zarinpoush et al. 2000), a quick moral judgment assessment that uses only three moral dilemmas. If the dilemmas chosen are more likely to elicit higher reported anger, then the moral judgment indices reflected might be lower than a group who received dilemmas eliciting higher
levels of sadness. If it is found that certain dilemmas elicit higher anger than sadness or vice versa, then a comparison of short form DIT indices between the “angry” dilemmas and the “sad” dilemmas should indicate whether the elicitation of emotion has real effects on DIT outcomes. Another area for moral judgment researchers to investigate is individual differences in terms of trait and state anger, depression, and anxiety. Several researchers have shown that these individual differences influence the way individuals process information (Raghunathan & Pham, 1999). As such, these might be important individual differences affecting the reasoning people give for their moral judgments.

Conclusion

In conclusion, evidence was found for the elicitation of mildly negative and positive emotional states on a traditional measurement of moral judgment. These trends were true regardless of whether the dilemma was other-oriented or self-oriented. Support was also found for reasoning stems possibly quelling certain emotions including joy, surprise, sadness, and fear. Furthermore, males and females were found to be relatively similar in experienced emotions with the exception of sadness. Although it is uncertain as to whether the changes in reported emotion while taking the DIT are solely attributable to the dilemmas themselves, it is apparent that the emotional experience changes while taking the DIT. Thus, it appears that further efforts to explore the role of emotion on moral judgment development from within the cognitive developmental paradigm are warranted.
References


Appendix A

Demographic Questionnaire
Demographic Questionnaire

DIRECTIONS: Please respond to the following questions by circling the number beside the most appropriate response, checking the appropriate selection, or filling in the blank.

a. Are you: 1. male 2. female

b. How old were you on your last birthday: _____


d. What is your major? ______________

e. Optional: What is your ethnic origin (i.e., Caucasian, Native American, African American, Asian American, Latino, etc.)? ______________
Appendix B

Neutral Affect Induction Website
Neutral Affect Inducement Film

The neutral affect inducing film may be viewed at
http://www-psych.stanford.edu/~psyphy/resources.htm
Once on this page go to the “Abstract Shapes” link
Appendix C

Emotion Questionnaire
Emotion Checklist

1. Sadness.

2. Anger.

3. Joy

4. Surprise.

5. Fear.

Appendix D

Other-Oriented Defining Issues Test
DEFINING ISSUES TEST-original, others-oriented version

Instructions
The purpose of this questionnaire is to help us understand how people think about social problems. Different people have different opinions about questions of right and wrong. There are no "right" answers to such problems in the way that math problems have right answers. We would like you to tell us what you think about several problem stories. You will be asked to read a story and answer questions about it. Following the questions about each story you will be also asked to complete a checklist in describing any emotions that you are experiencing as a result of reading and thinking about the story. This will be the same as the checklist that you completed earlier.

IN THIS QUESTIONNAIRE YOU WILL BE ASKED TO READ A STORY AND THEN TO ANSWER A SERIES OF QUESTIONS. In order to illustrate how we would like for you to do this, consider the following story:

Please read the following story
Example 1: Frank and the Car

Frank Jones has been thinking about buying a car. He is married, has two small children and earns an average income. The car he buys will be his family's only car. It will be used mostly to get to work and drive around town, but sometimes for vacation trips also. In trying to decide what car to buy, Frank Jones realized that there are a lot of questions to consider. For instance, should he buy a larger used car or a smaller new car for about the same amount of money? Other questions occur to him.

Let's say that the following are types of questions that you might be asked to respond to during the study:

1. Whether the car dealer was in the same block as where Frank lives?
2. Would a used car be more economical in the long run than a new car?
3. Whether the color was green, Frank's favorite color?
4. Whether the cubic inch displacement was at least 200?
5. Would a large, roomy car be better than a compact car?
6. Whether the front connibilies were differential?

Your task in this case would be to rate each issue in terms of how important it should be in Frank's decision about which car to buy (e.g., Great, Much, Some, Little, No).
Once you have rated these items, you will then rank them from most important to fourth most important.

Once you finish ranking the items you will again complete the emotion checklist that you completed earlier. Since this is a practice session, you do not need to complete the emotion checklist right now.

That completes the example portion of this study. Basically, you are asked to follow the same instructions as you respond to the next series of stories and questions. You will simply be writing the number that corresponds to how important you feel each question is in making a decision about what to do - one way or another. Additionally, you will be asked to select the choice of action that you believe the main character should engage in.

Do you have any questions at this time? If so, mention them to the researcher who is working with you during this study. If not, you may continue.

**Heinz and the drug**

In Europe a woman was near death from a special kind of cancer. There was one drug that doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the cost to make. He paid $200 for the radium and charged $2000 for a small dose of the drug. The sick woman’s husband, Heinz, went to everyone he knew, but he could only get together about $1000, which is half of what it cost. He told the druggist that his wife was dying, and asked him to sell it cheaper or let him pay it later. But the druggist said, "No, I discovered the drug and I’m going to make money from it." So Heinz got desperate and began to think about breaking into the man’s store to steal the drug for his life. Should Heinz steal the drug?

___ Yes  ___ No  ___ Cannot Decide

Please rate in the space beside each statement how important each particular item/question is in making a decision about what Heinz should do one way or another.

1=Great  2=Much  3=Some  4=Little  5=No

1. Whether the communities’ laws are going to be upheld? ___
2. Isn't it only natural for a loving husband to care so much for his wife that he'd steal?____

3. Is Heinz willing to risk getting shot as a burglar or going to jail for the chance that stealing the drug might help?____

4. Whether Heinz is a professional wrestler, or has considerable influence with professional wrestlers.____

5. Whether Heinz is stealing the drug for himself or doing this solely to help someone else.____

6. Whether the druggists rights to his invention have to be respected.____

7. Whether the essence of living is more encompassing than the termination of dying, socially and individually.____

8. What values are going to the basis for how people act toward each other? _____

9. Whether the druggist is going to be allowed to hide behind a worthless law which only protects the rich anyway.____

10. Whether the law in this case is getting in the way of the most basic claim of any member of society.____

11. Whether the druggist deserves to be robbed for being so greedy and cruel.____

12. Would stealing in such a case bring about more total good for the whole society or not?____

Now that you have rated these items, please rank them below from most important to fourth most important.

_____ # of Most important item

_____ # of Second most important

_____ # of Third most important

_____ # of Fourth most important
Escaped Prisoner

A man had been sentenced to prison for ten years. After one year, however, he escaped from prison moved to a new area of the country, and took on the name Thompson. For eight years he worked hard, and gradually saved enough money to start his own business. He was fair to his customers, gave his employees top wages, and gave most of his profits to charity. Then one day, Mrs. Jones, an old neighbor, recognized him as the man who had escaped from prison eight years before, and whom the police had been looking for. Should Mrs. Jones report Mr. Thompson to the police and have him sent back to prison?

___ Yes ___ No ___ Cannot Decide

Please rate in the space beside each statement how important each particular item/question is in making a decision about what Mrs. Jones should do one way or another.

1. Great 2=Much 3=Some 4=Little 5=No

1. "Hasn't Mr. Thompson been good enough for such a long time to prove he isn't a bad person?"_____

2. "Every time someone escapes punishment for a crime, doesn't that just encourage more crime?"_____

3. "Wouldn't we be better off without prisons and the oppression of our legal system?"_____

4. "Has Mr. Thompson really paid off his debt to society?"_____

5. "Would society be failing what Mr. Thompson should fairly expect?"_____

6. "What benefits would prisons be apart from society, especially for a charitable man?"_____

7. "How could anyone be so cruel and heartless as to send Mr. Thompson to prison?"_____

8. "Would it be fair to all the prisoners to serve out their full sentences if Mr. Thompson was let off?"_____

9. "Was Mrs. Jones a good friend of Mr. Thompson?"_____

10. "Wouldn't it be a citizen's duty to report an escaped criminal, regardless of the circumstances?"_____
Fred, a senior in high school, wanted to publish a mimeographed newspaper for students so he could express many of his opinions. He wanted to speak out against the military in international disputes and to speak out against some of the school's rules, like the rule forbidding boys to wear long hair. When Fred started his newspaper, he asked his principal for permission. The principal said it would be all right if before every publication Fred would turn in all his articles for the principal's approval. The principal approved all of them and Fred published two issues of the paper in the next two weeks. But the principal had not expected Fred's newspaper would receive so much attention. Students were so excited by the newspaper they began to organize protests against the hair regulation and other school rules. Angry parents objected to Fred's opinions. They phoned the principal telling him that the newspaper was unpatriotic and should not be published. As a result of the rising excitement, the principal ordered Fred to stop publishing. He gave as a reason that Fred's activities were disruptive to the operation of the school. Should the principal stop the newspaper?

___ Yes   ___ No   ___ Cannot Decide

Please rate in the space beside each statement how important each particular item/question is in making a decision about what the principal should do one way or another.

1 = Great 2 = Much 3 = Some 4 = Little 5 = No

1. "Is the principal more responsible to the students of the parents?"
2. "Did the principal give his word that the newspaper could be published for a long time, or did he just promise to approve the newspaper one issue at a time?"

3. "Would the students start protesting even more if the principal stopped the newspaper?"

4. "When the welfare of the school is threatened, does the principal have the right to give orders to the students?"

5. "Does the principal have the freedom of speech to say "no" in this case?"

6. "If the principle stopped the newspaper would he be preventing full discussion of important problems?"

7. "Whether the principal's order would make Fred lose faith in the principal."

8. "Whether Fred was really loyal to his school and patriotic to his country."

9. "What effect would stopping the paper have on the student's education in critical thinking and judgment?"

10. "Whether Fred was in any way violating the rights of others in publishing his own opinions."

11. "Whether the principal should be influenced by some angry parents when it is the principal that knows best what is going on in the school."

12. "Whether Fred was using the paper to stir up hatred and discontent."

Now that you have rated these items, please rank them below from most important to fourth most important.

_____ # of Most important item

_____ # of Second most important

_____ # of Third most important

_____ # of Fourth most important

Doctors Dilemma
A lady was dying of cancer which could not be cured and she had only about six months to live. She was in terrible pain, but she was so weak that a good dose of pain-killer like morphine would make her die sooner. She was delirious and almost crazy with pain, and in her calm periods, she would ask the doctor to give her enough morphine to kill her. She said she couldn't stand the pain and that she was going to die in a few months anyway. Should the doctor give her an overdose of morphine that would make her die?

___ Yes    ___ No    ___ Cannot Decide

Please rate in the space beside each statement how important each particular item/question is in making a decision about what the doctor should do one way or another.

1 = Great  2 = Much  3 = Some  4 = Little  5 = No

1. "Whether the woman's family is in favor of giving her an overdose or not." _____

2. "Is the doctor obligated to the same laws as everybody else if giving the overdose is the same as killing her." _____

3. "Whether people would be much better off without society regimenting their lives and even their deaths." _____

4. "Whether the doctor could make it appear like an accident." _____

5. "Does the state have the right to force continued existence on those that don't want to live." _____

6. "What is the value of death prior to society's perspective on personal values?" _____

7. "Whether the doctor has sympathy for the woman's suffering or cares more about what society might think." _____

8. "Is helping to end another's life ever a responsible act of cooperation?" _____

9. "Whether only God should decide when a person's life should end." _____

10. "What values the doctor has set for himself in his own personal code of behavior." _____

11. "Can society afford to let everybody end their lives when they want to?" _____

12. "Can society allow suicides or mercy killing and still protect the lives of innocents?" _____
Now that you have rated these items, please rank them below from most important to fourth most important.

_____ # of Most important item
_____ # of Second most important
_____ # of Third most important
_____ # of Fourth most important

Webster

Mr. Webster was the owner and manager of a gas station. He wanted to hire another mechanic to help him, but good mechanics were hard to find. The only person who seemed to be a good mechanic was Mr. Lee, but he was Chinese. While Mr. Webster didn't have anything against Asians, he was afraid to hire Mr. Lee because many of his customers didn't like Asians. His customers might take their business elsewhere if Mr. Lee was working in the gas station.

When Mr. Lee asked Mr. Webster if he could have the job, Mr. Webster said he had already hired somebody else. But Mr. Webster had not hired anybody, because he could not find anybody that was a good mechanic besides Mr. Lee. Should Mr. Webster have hired Mr. Lee?

_____ Yes  _____ No  _____ Cannot Decide

Please rate in the space beside each statement how important each particular item/question is in making a decision about what Mr. Webster should do one way or another.

1=Great  2=Much  3=Some  4=Little  5=No

1. "Does the owner of the business have the right to make his own business decisions or not?"

2. "Whether there is a law that forbids racial discrimination in hiring for jobs."

3. "Whether Mr. Webster is prejudice against Asians himself or whether he means nothing personal in refusing the job."
4. "Whether hiring a good mechanic or paying attention to his customers wishes would be best for his business."

5. "What individual differences might be relevant in deciding how society's rules are fulfilled?"

6. "Whether the greedy and competitive capitalistic system ought to be completely abandoned."

7. "Do a majority of people in Mr. Webster's society feel like his customers or are a majority against prejudice?"

8. "Whether hiring capable men like Mr. Lee would use talents that would otherwise be lost to society."

9. "Would refusing the job to Mr. Lee be consistent with Mr. Webster's own moral beliefs?"

10. "Could Mr. Lee be so hard-hearted as to refuse the job, knowing how much it means to Mr. Lee?"

11. "Whether the Christian commandment to love your fellow man applies in this place."

12. "If someone is in need, shouldn't he be helped regardless of what you get back from him?"

Now that you have rated these items, please rank them below from most important to fourth most important.

_____ # of Most important item

_____ # of Second most important

_____ # of Third most important

_____ # of Fourth most important

Student take over

Back in the 1960's at Harvard University there was a student group called Students for a Democratic Society (SDS). SDS students were against the war in Vietnam, and were against the army training program (ROTC) that helped to send men to fight in Vietnam. While the war was still going on, the SDS students demanded that Harvard end the army
ROTC program as a University course. This would mean that Harvard students could not get army training as part of their regular course work and not get credit for it towards their degree. Harvard’s professors agreed with the SDS students. The professors voted to end the ROTC program as a University course. But the president of the University took a different view. He stated that the army program should stay on campus as a course. The SDS students felt that the president of the University was not going to pay attention to the vote of the professors, and was going to keep the ROTC program on campus as a course. The SDS students then marched to the university administration building and told everyone to get out. They said they were taking over the building to force Harvard's President to get rid of the army ROTC program on campus for credit as a course. Were the students right to take over the administration building?

___ Yes  ___ No  ___ Cannot Decide

Please rate in the space beside each statement how important each particular item/question is in making a decision about what the students should do one way or another.

1=Great  2=Much  3=Some  4=Little  5=No

1. "Are the students doing this to really help each other or are they doing it just for kicks?" _____

2. "Do the students have any right to take over property that doesn't belong to them?" _____

3. "Do the students realize that they might be arrested or fined, or even expelled from school?" _____

4. "Would taking over the building in the long run benefit more people in the long run?" _____

5. "Whether the president stayed within the limits of his authority in ignoring the faculty vote." _____

6. "Will the takeover anger the public and give the students a bad name." _____

7. "Is taking over a building consistent with the principles of justice?" _____

8. "Would allowing one student take over encourage many student take overs?" _____

9. "Did the president bring this misunderstanding on himself by being so unreasonable and uncooperative?" _____

10. "Whether running the University ought to be in the hands of a few administrators or in the hands of all the people." _____
11. "Are the students following principles which they believe are above the law."________

12. "Whether or not University decisions ought to be respected by students."______

Now that you have rated these items, please rank them below from most important to fourth most important.

____ # of Most important item

_____ # of Second most important

_____ # of Third most important

_____ # of Fourth most important
Appendix E

Self-Oriented Defining Issues Test
DEFINING ISSUES TEST - self-oriented version

Instructions
The purpose of this questionnaire is to help us understand how people think about social problems.
Different people have different opinions about questions of right and wrong. There are no "right" answers to such problems in the way that math problems have right answers. We would like you to tell us what you think about several problem stories. You will be asked to read a story and answer questions about it. Following the questions about each story you will be also asked to complete a checklist in describing any emotions that you are experiencing as a result of reading and thinking about the story. This will be the same as the checklist that you completed earlier.

IN THIS QUESTIONNAIRE YOU WILL BE ASKED TO READ A STORY AND THEN TO ANSWER A SERIES OF QUESTIONS. In order to illustrate how we would like for you to do this, consider the following story:

Please read the following story
Example 1: Buying a Car

You have been thinking about buying a car. You are married, have two small children and earn an average income. The car you buy will be your family's only car. It will be used mostly to get to work and drive around town, but sometimes for vacation trips also. In trying to decide what car to buy, you realize that there are a lot of questions to consider. For instance, should you buy a larger used car or a smaller new car for about the same amount of money? Other questions occur to you.

Let's say that the following are types of questions that you might be asked to respond to during the study:

1. Whether the car dealer was in the same block as where you live?
2. Would a used car be more economical in the long run than a new car?
3. Whether the color was green, your favorite color?
4. Whether the cubic inch displacement was at least 200?
5. Would a large, roomy car be better than a compact car?
6. Whether the front condibilities were differential?

Your task in this case would be to rate each issue in terms of how important it should be in your decision about which car to buy (e.g., Great, Much, Some, Little, No).

Once you have rated these items, you will then rank them from most important to fourth most important.
Once you finish ranking the items you will again complete the emotion checklist that you completed earlier. Since this is a practice session, you do not need to complete the emotion checklist right now.

That completes the example portion of this study. Basically, you are asked to follow the same instructions as you respond to the next series of stories and questions. You will simply be writing the number that corresponds to how important you feel each question is in making a decision about what to do - one way or another. Additionally, you will be asked to select the choice of action that you believe the main character should engage in.

Do you have any questions at this time? If so, mention them to the researcher who is working with you during this study. If not, you may continue.

Acquiring the drug

Your husband/wife is near death from a special kind of cancer. There is one drug that doctors think might save him/her. It is a form of radium that a druggist in your town has recently discovered. The drug is expensive to make, but the druggist is charging ten times what the cost to make. You have gone to everyone you know, but can only get together about $1000, which is half of what it cost. You tell the druggist that your husband/wife is dying, and ask him to sell it cheaper or let you pay it later. But the druggist says, "No, I discovered the drug and I'm going to make money from it." So you get desperate and begin to think about breaking into the man's store to steal the drug for your husband/wife. Should you steal the drug?

___ Yes    ___ No    ___ Cannot Decide

Please rate in the space beside each statement how important each particular item/question is in making a decision about what you should do one way or another.

1=Great  2=Much  3=Some  4=Little  5=No

1. Whether the communities laws are going to be upheld?

2. Isn't it only natural for a loving spouse to care so much for his/her husband/wife that they'd steal?

3. Am I willing to risk getting shot as a burglar or going to jail for the chance that stealing the drug might help?

4. Am I a professional wrestler, or have considerable influence with professional wrestlers.
5. Whether I am stealing the drug for myself or doing this solely to help someone else.

6. Whether the druggists’ rights to his invention have to be respected.

7. Whether the essence of living is more encompassing than the termination of dying, socially and individually.

8. What values are going to the basis for how people act toward each other.

9. Whether the druggist is going to be allowed to hide behind a worthless law which only protects the rich anyway.

10. Whether the law in this case is getting in the way of the most basic claim of any member of society.

11. Whether the druggist deserves to be robbed for being so greedy and cruel.

12. Would stealing in such a case bring about more total good for the whole society or not.

Now that you have rated these items, please rank them below from most important to fourth most important.

_____ # of Most important item

_____ # of Second most important

_____ # of Third most important

_____ # of Fourth most important

Escaped Prisoner

A man had been sentenced to prison for ten years. After one year, however, he escaped from prison moved to a new area of the country, and took on the name Thompson. For eight years he worked hard, and gradually saved enough money to start his own business. He was fair to his customers, gave his employees top wages, and gave most of his profits to charity. Then one day, you, an old neighbor, recognized him as the man who had
escaped from prison eight years before, and whom the police had been looking for. Should you report Mr. Thompson to the police and have him sent back to prison?

___ Yes ___ No ___ Cannot Decide

Please rate in the space beside each statement how important each particular item/question is in making a decision about what you should do one way or another.

1 = Great 2 = Much 3 = Some 4 = Little 5 = No

1. "Hasn't Mr. Thompson been good enough for such a long time to prove he isn't a bad person?" ______

2. "Every time someone escapes punishment for a crime, doesn't that just encourage more crime?" ______

3. "Wouldn't we be better off without prisons and the oppression of our legal system?" ______

4. "Has Mr. Thompson really paid off his debt to society?" ______

5. "Would society be failing what Mr. Thompson should fairly expect?" ______

6. "What benefits would prisons be apart from society, especially for a charitable man?" ______

7. "How could anyone be so cruel and heartless as to send Mr. Thompson to prison?" ______

8. "Would it be fair to all the prisoners to serve out their full sentences if Mr. Thompson was let off?" ______

9. "Was I a good friend of Mr. Thompson?" ______

10. "Wouldn't it be a citizen's duty to report an escaped criminal, regardless of the circumstances?" ______

11. "How would the will of the people and the public be best served?" ______

12. "Would going to prison do any good for Mr. Thompson or protect anybody?" ______

Now that you have rated these items, please rank them below from most important to fourth most important.

____ # of Most important item
Fred, a senior in high school, wanted to publish a mimeographed newspaper for students so he could express many of his opinions. He wanted to speak out against the military in international disputes and to speak out against some of the school's rules, like the rule forbidding boys to wear long hair. When Fred started his newspaper, he asked you, his principal for permission. You said it would be all right if before every publication Fred would turn in all his articles for your approval. You approved all of them and Fred published two issues of the paper in the next two weeks. But you had not expected Fred's newspaper would receive so much attention. Students were so excited by the newspaper they began to organize protests against the hair regulation and other school rules. Angry parents objected to Fred's opinions. They phoned you telling you that the newspaper was unpatriotic and should not be published. As a result of the rising excitement, you've ordered Fred to stop publishing. You gave as a reason that Fred's activities were disruptive to the operation of the school. Should you stop the newspaper?

____ Yes  ____ No  ____ Cannot decide

Please rate in the space beside each statement how important each particular item/question is in making a decision about what you should do one way or another.

1=Great  2=Much  3=Some  4=Little  5=No

1. "Are you more responsible to the students of the parents?" ______
2. "Did you give your word that the newspaper could be published for a long time, or did you just promise to approve the newspaper one issue at a time?" ______
3. "Would the students start protesting even more if you stopped the newspaper?"

4. "When the welfare of the school is threatened, do you have the right to give orders to the students?"

5. "Do you have the freedom of speech to say "no" in this case?"

6. "If you stopped the newspaper would you be preventing full discussion of important problems?"

7. "Whether your order would make Fred lose faith in the principal."

8. "Whether Fred was really loyal to his school and patriotic to his country."

9. "What effect would stopping the paper have on the student's education in critical thinking and judgment?"

10. "Whether Fred was in any way violating the rights of others in publishing his own opinions."

11. "Whether you should be influenced by some angry parents when it is the principal that knows best what is going on in the school."

12. "Whether Fred was using the paper to stir up hatred and discontent."

Now that you have rated these items, please rank them below from most important to fourth most important.

_____ # of Most important item

_____ # of Second most important

_____ # of Third most important

_____ # of Fourth most important

**Doctors Dilemma**

A lady was dying of cancer which could not be cured and she had only about six months to live. She was in terrible pain, but she was so weak that a good dose of pain-killer like morphine would make her die sooner. She was delirious and almost crazy with pain, and
in her calm periods, she would ask you, the doctor, to give her enough morphine to kill her. She said she couldn't stand the pain and that she was going to die in a few months anyway. Should you give her an overdose of morphine that would make her die?

___Yes  ___No  ___Cannot decide

Please rate in the space beside each statement how important each particular item/question is in making a decision about what you should do one way or another.

1=Great  2=Much  3=Some  4=Little  5=No

1. "Whether the woman's family is in favor of giving her an overdose or not." _____

2. "Are you obligated to the same laws as everybody else if giving the overdose is the same as killing her." _____

3. "Whether people would be much better off without society regimenting their lives and even their deaths." _____

4. "Whether you could make it appear like an accident." _____

5. "Does the state have the right to force continued existence on those that don't want to live." _____

6. "What is the value of death prior to society's perspective on personal values?" _____

7. "Whether you have sympathy for the woman's suffering or care more about what society might think." _____

8. "Is helping to end another's life ever a responsible act of cooperation?" _____

9. "Whether only God should decide when a person's life should end." _____

10. "What values have you set for yourself in your own personal code of behavior." _____

11. "Can society afford to let everybody end their lives when they want to?" _____

12. "Can society allow suicides or mercy killing and still protect the lives of innocents?" _____

Now that you have rated these items, please rank them below from most important to fourth most important.

_____ # of Most important item
Mr. Lee

You are the owner and manager of a gas station. You want to hire another mechanic to help you, but good mechanics are hard to find. The only person who seemed to be a good mechanic was Mr. Lee, but he is Asian. While you don't have anything against Asians, you are afraid to hire Mr. Lee because many of your customers didn't like Asians. Your customers might take their business elsewhere if Mr. Lee was working in the gas station. When Mr. Lee asks you if he could have the job, you say he have already hired somebody else. But you have not hired anybody, because you could not find anybody that was a good mechanic besides Mr. Lee. Should you have hired Mr. Lee?

___ Yes ___ No ___ Cannot decide

Please rate in the space beside each statement how important each particular item/question is in making a decision about what you should do one way or another.

1. "Do you have the right to make your own business decisions or not?"

2. "Whether there is a law that forbids racial discrimination in hiring for jobs."

3. "Whether you are prejudiced against Asians yourself or whether you mean nothing personal in refusing the job."

4. "Whether hiring a good mechanic or paying attention to your customers' wishes would be best for your business."

5. "What individual differences might be relevant in deciding how society's rules are fulfilled?"
6. "Whether the greedy and competitive capitalistic system ought to be completely abandoned."

7. "Do a majority of people in your society feel like your customers or are a majority against prejudice?"

8. "Whether hiring capable men like Mr. Lee would use talents that would otherwise be lost to society."

9. "Would refusing the job to Mr. Lee be consistent with your own moral beliefs?"

10. "Could you be so hard-hearted as to refuse the job, knowing how much it means to Mr. Lee?"

11. "Whether the Christian commandment to love your fellow man applies in this place."

12. "If someone is in need, shouldn't he be helped regardless of what you get back from him?"

Now that you have rated these items, please rank them below from most important to fourth most important.

_____ # of Most important item

_____ # of Second most important

_____ # of Third most important

_____ # of Fourth most important

Student take over

You are part of there was a student group called Students for a Democratic Society (SDS). SDS students were against the war in Vietnam, and were against the army training program (ROTC) that helped to send men to fight in Vietnam. While the war was still going on, the SDS students demanded that Harvard end the army ROTC program as a University course. This would mean that Harvard students could not get army training as
part of their regular course work and not get credit for it towards their degree. Harvard's professors agreed with the SDS students. The professors voted to end the ROTC program as a University course. But the president of the University took a different view. He stated that the army program should stay on campus as a course. The SDS students felt that the president of the University was not going to pay attention to the vote of the professors, and was going to keep the ROTC program on campus as a course. The SDS students then marched to the university administration building and told everyone to get out. They said they were taking over the building to force Harvard's President to get rid of the army ROTC program on campus for credit as a course. If you were one of the students would it be right to take over the administration building?

___ Yes  ___ No  ___ Cannot decide

Please rate in the space beside each statement how important each particular item/question is in making a decision about what you should do one way or another.

1=Great  2=Much  3=Some  4=Little  5=No

1. "Are you really doing this to really help each other or are they doing it just for kicks?" ______

2. "Do you have any right to take over property that doesn't belong to you?" ______

3. "Do you realize that you might be arrested or fined, or even expelled from school?" ______

4. "Would taking over the building in the long run benefit more people in the long run?" ______

5. "Whether the president stayed within the limits of his authority in ignoring the faculty vote."

6. "Will the takeover anger the public and give you a bad name." ______

7. "Is taking over a building consistent with the principles of justice?" ______

8. "Would allowing one student take over encourage many student takeovers?" ______

9. "Did the president bring this misunderstanding on himself by being so unreasonable and uncooperative?" ______

10. "Whether running the University ought to be in the hands of a few administrators or in the hands of all the people." ______

11. "Are you following principles which you believe are above the law." ______
12. "Whether or not University decisions ought to be respected by you."

Now that you have rated these items, please rank them on the handout you were given from most important to fourth most important.

_____ # of Most important item

_____ # of Second most important

_____ # of Third most important

_____ # of Fourth most important
Appendix F

Informed Consent
INFORMED CONSENT DOCUMENT

Project Title: Emotion and Social Decision Making

Investigator: Brian Barger
Psychology Department 270-745-4413 brian.barger@wku.edu

Faculty Sponsor: W. Pitt Derryberry, Ph.D.
Psychology Department 270-745-5250 pitt.derryberry@wku.edu

You are being asked to participate in a project conducted through Western Kentucky University. The University requires that you give your signed agreement to participate in this project.

The investigator will explain to you in detail the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation. You may ask him/her any questions you have to help you understand the project. A basic explanation of the project is written below. Please read this explanation and discuss with the researcher any questions you may have.

If you then decide to participate in the project, please sign the last page of this form in the presence of the person who explained the project to you. You should be given a copy of this form to keep.

1. Nature and Purpose of the Project: The purpose of this project is to explore the role of emotions in social decisions.

2. Explanation of Procedures: Your participation involves providing demographic information, reading and responding to six different social situations, and completing a checklist about the emotions you are experiencing on seven different occasions during the session. Time to complete these questionnaires ranges from 20 – 50 minutes.

3. Discomfort and Risks: There is minimal discomfort involved in this study. If you experience discomfort at any point in time, you are free to discontinue the study. There will be no penalty for discontinuation.

4. Benefits: Your participation in this research will contribute to psychological research by helping to better understand how people make social decisions.

5. Confidentiality: Answers and information obtained in this study will remain anonymous and confidential and will be used solely for the purpose of this study. Additionally, answers and information obtained will not be identifiable as your specific answers. If you should become uncomfortable at any time, you have the right to discontinue your participation, and your answers will be removed from the study. You also have the option to refuse to answer any questions and remain in the study. Only group data will appear in any reports of this study.

6. Refusal/Withdrawal: Refusal to participate in this study will have no effect on any future services you may be entitled to from the University. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.
If you have read and understand the parameters of this study and wish to participate, please sign below after reading the following statement:

*I understand the conditions set forth above, and I agree to participate in this study. I also understand that it is not possible to identify all potential risks in an experimental procedure and believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.*

__________________________________________________________________________  ____________
Signature of Participant   Date

__________________________________________________________________________  ____________
Witness   Date

THE DATED APPROVAL ON THIS CONSENT FORM INDICATES THAT THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY THE WESTERN KENTUCKY UNIVERSITY HUMAN SUBJECTS REVIEW BOARD
Dr. Phillip E. Myers, Human Protections Administrator
TELEPHONE: (270) 745-4652
Appendix G

Human Subjects Review Board Approval
Subject: Human Subjects Research Project HS05-144
From: Sean Rubino <Sean.Rubino@wku.edu>
Date: Fri, 18 Mar 2005 09:00:39 -0600
To: Brian D Barger <brian.barger@wku.edu>
CC: Pitt Derryberry <pitt.derryberry@wku.edu>

In future correspondence please refer to HS05-144, March 18, 2005

Brian Barger
1200 Dean Drive
Bowling Green, KY 42101

Dear Brian:

Your revision to your research project, "Emotion and Social Decision Making," was reviewed by the HSRB and it has been determined that risks to subjects are: (1) minimized and reasonable; and that (2) research procedures are consistent with a sound research design and do not expose the subjects to unnecessary risk. Reviewers determined that: (1) benefits to subjects are considered along with the importance of the topic and that outcomes are reasonable; (2) selection of subjects is equitable; and (3) the purposes of the research and the research setting is amenable to subjects’ welfare and producing desired outcomes; that indications of coercion or prejudice are absent, and that participation is clearly voluntary.

1. In addition, the IRB found that you need to orient participants as follows: (1) signed informed consent is required; (2) Provision is made for collecting, using and storing data in a manner that protects the safety and privacy of the subjects and the confidentiality of the data. (3) Appropriate safeguards are included to protect the rights and welfare of the subjects.

*This project is therefore approved at the Expedited Review Level until May 28, 2005.*

2. Please note that the institution is not responsible for any actions regarding this protocol before approval. If you expand the project at a later date to use other instruments please re-apply. Copies of your request for human subjects review, your application, and this approval, are maintained in the Office of Sponsored Programs at the above address. Please report any changes to this approved protocol to this office. A Continuing Review protocol will be sent to you in May to determine the status of the project.

Sincerely,
Sean Rubino, M.P.A.
Compliance Manager
Office of Sponsored Programs
Western Kentucky University

cc: HS file number Barger HS05-144
cc: Dr. Derryberry

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Sean Rubino, M.P.A.
Compliance Manager
Office of Sponsored Programs
Western Kentucky University
(270) 745-2129