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A Safe Place for Morally Corrupt Judgements: The Effect of Trust on Moral Decision Making

Robin C. Doyle
Huron University College, Western University, rdoyle42@uwo.ca

A SAFE PLACE FOR MORALLY CORRUPT JUDGEMENTS: THE EFFECT OF TRUST ON MORAL DECISION MAKING

by

Robin Doyle

Department of Psychology

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Advisor: Dr. Irene Cheung

Reader: Dr. Christine Tsang

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Robin Doyle

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Abstract

While there is an increasing body of work on social perceptions of people who make moral decisions, there is limited work on how feelings of trust affect moral dilemma judgements. This exploratory study sought to examine how hypothetical third-party observers affect moral dilemma judgments and perceptions of forgiveness, punishment, and personality traits. A total of 335 participants read a variation of the "car crash" dilemma (Conway et al., 2013), either alone or in the hypothetical presence of a stranger or trusted friend. Individuals were asked to give ratings on various dimension scales from either their own perspective, or from the perception of the stranger or friend who hypothetically observed their dilemma judgement. While participants who completed the survey alone or in the theoretical presence of a friend largely produced results consistent with the literature in this field, those who were in the hypothetical presence of a stranger performed contrary to past findings. Reasons for these findings and possible future directions will be discussed.

Keywords: utilitarian, deontological, dilemma, judgement

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Introduction

The trolley dilemma is a widely recognized and commonly used moral dilemma. In this narrative, a runaway trolley is barreling towards five individuals who are tied to the train tracks and the protagonist must choose between allowing the train to continue its deadly course or pull a lever and divert the train to a path only occupied by one innocent person (Foot 1967). While this story has gained relevancy in popular culture and entertainment, most individuals are unfamiliar with the theories that underlie these sacrificial moral dilemmas. The narrative mentioned above is referred to as a high-conflict moral dilemma. A conflict in which either option a person decides will directly or indirectly kill another individual. This popular moral dilemma has also received numerous modifications, one of which has produced interesting counter results. In this modification, the protagonist is standing atop of a bridge and is observing an oncoming train that is quickly traveling on a path towards five incapacitated victims (Singer, 2005). The protagonist is positioned directly above the train's path and can stop the train by dropping a heavy object from above. Coincidently, a large man is standing next to the protagonist and is just the right size to stop the train in its tracks. The judgment then remans, is it appropriate to push the obese man over the bridge, in order to save the remaining five? Results suggested that while most individuals approved of pulling the lever and sacrificing the one individual, most participants disapproved of pushing the man over the bridge. The reason for these contradictory results may reside in what is referred to as the "doctrine of double effect" (Foot 1967). In the latter moral dilemma, the protagonist intends for the obese man to die, whereas the protagonist from the former dilemma is left without a choice. The doctrine of double effect explains that any action that leads to negative side effects may be ethically carried out, provided the intent is not harmful. In contrast, any action that originates from harmful intent,

even if its leads to good outcomes, is morally wrong. These two dilemmas illustrate the complexity of moral dilemma frameworks and the complex processes that underlie subsequent judgements.

Most of the research examining moral dilemmas has focused almost exclusively on how the deontological and utilitarian theories help to provide a framework for conceptualizing moral judgements. According to the dual-process model, those who make deontological decisions rely more heavily on affective processes and are primarily concerned with rejecting harm (Conway & Gawronski, 2013). The principle of deontology states that the morality of an action depends on its intrinsic nature, in which harming others is always wrong, regardless of its consequences. In contrast, utilitarian decision makers rely exclusively on cognitive processes and will accept harm that leads to the greatest well-being of others. As such, the principle of utilitarianism states that an action is determined by its consequences. In sum, deontology focuses only on the morality of any action, whereas utilitarianism focuses on actions that produce the greatest amount of good for the largest amount of people. A deontological decision will reflect any option that does not inflict direct harm, even if this leads to indirectly harming a greater number of individuals. A utilitarian decision will inflict direct harm, but their actions will lead to a greater reduction in overall suffering.

Researchers have extended the research to explore how moral dilemma judgements affect social outcomes (Rom, Weiss, & Conway, 2017). Specifically, research suggests that people infer the affective and cognitive roles that underlie moral dilemma judgements, which can influence their perceptions of the decision maker such as warmth and competence. Warmth traits, such as warm, good-natured, and tolerant, were suggested to be more indicative of a person's negative or positive intentions (Cuddy, Glick, & Beninger, 2011). While competence

traits, such as independent, confident, and competitive, revealed more about a person's capability to carry out those intentions. Individuals who make decisions in line with utilitarian philosophy and choose to accept harm are generally viewed as less warm but more competent than those who make decisions in line with deontology philosophy (Rom et al., 2017). As such, those who make utilitarian judgements are often viewed more negatively than those who make deontological decisions.

Historically, because utilitarian judgements are characterized by accepting harm to maximize outcomes, those who made these types of decisions were associated with low empathetic concern (Koenigs, Kruepke, Zeier, & Newman, 2012). However, recent developments in this field of research have moved away from the previous notion that those who make utilitarian judgements possess antisocial tendencies and have started to provide alternative explanations to this popularized conceptual framework. Researchers posit that utilitarian moral judgments are not reflective of a utilitarian outlook because of the lack of essential principle features (Kahane, 2015). That is, when individuals make utilitarian decisions, they are not weighing utilitarian and deontological solutions, but rather engaging in a more meaningful process of weighing contrasting moral motives. Therefore, utilitarian decisions are not exclusively ruled by cost-benefit analysis, but rather driven by a moral need to make a judgement that saves the greatest number people; a drive that is now referred to as the "duty of rescue." In accordance with this new qualitative evidence, researchers have also begun to further analyze other external features that impact emotions and subsequent moral dilemma judgements.

A limited amount of research has begun to analyze how feelings of social connection impact moral decision making (Lucas & Livingston, 2014). The presence of others is suggested to trigger reputational concerns and a desire to act in a way that will be viewed positively.

Individuals who made moral dilemma decisions while feeling socially connected made significantly more utilitarian choices. The researchers suspected that when an individual is making the decision in the presence of someone they trust, the decision maker feels safer to decide without fear of being judged negatively. In contrast, those who made moral dilemma decisions under social observation, but lacked social connection, made significantly more deontological decisions, as compared to a control group that involved making the decision in private. It was hypothesized that these individuals were concerned that a utilitarian judgement may lead them to appear psychopathic, so they chose the decision which made them seem more prosocial (Lee, Sul, & Kim, 2018).

The concept that social observation increases prosocial behavior was further supported using functional magnetic resonance imaging (fMRI). Specifically, researchers sought to measure how participants' ethical consumption would be affected by social observation of a stranger (Jung, Sul, Lee, & Kim, 2018). Their findings suggested an observer effect, in which participants were more likely to display prosocial behaviors and purchase social products when they were being observed. The fMRI data revealed that during social observation, the anterior cingulate cortex (ACC) and the dorsomedial prefrontal cortex (dmPFC) encoded subject-specific value parameters during social and non-social purchases. In addition, the ACC showed a strong functional coupling with the amygdala and the anterior insula, during times in which the participants were purchasing social versus non-social products. Last, regardless of social observation, the ventromedial prefrontal cortex (vmPFC) activity predicted faster reaction time and increased prosocial behavior during times of social purchasing, as compared to non-social purchasing. In sum, this research provided support for the concept that the brain makes use of anatomically and functionally separate neural systems when making prosocial decisions, as

mediated by observation. While this imaging study revealed the neurological changes involved in third-party observation, the following psychological experiments will help to provide some psychological explanations.

While there is an increasing body of work on social perceptions of people who make moral decisions, there is very limited work on judgments of forgiveness and punishment of these decision makers. Although research on moral dilemma decisions have been hypothetical in nature, people's perceptions of forgiveness and punishment can have important implications for self-perceptions or social interactions. Cheung, Conway, Wright, & Lashkari-Moghaddam (in preparation) conducted one of the first set of studies to examine this idea. For example, in one study, participants were asked to read the "crying baby" dilemma, which involves choosing whether it is appropriate to smother a crying baby in order to prevent a group of townspeople from being killed by enemy soldiers (accept outcome-maximizing harm) or to let the baby cry risking the death of the townspeople (reject outcome-maximizing harm). Participants were either asked to read about a stranger's decision in response to the dilemma or to make their own decision. Following their decision, participants rated to what extent they would forgive or punish Brad or themselves. Regardless of the decisions that were made, participants tended to be less forgiving of and reported harsher punishment for themselves than the stranger. Therefore, individuals seem to be harder on themselves than a stranger. In the present study, this work is extended by examining people's concerns about being forgiven or punished by third-parties rather than looking at how much they should be forgiven or punished following a moral dilemma decision.

The present research examines how feelings of social trust impact reputational concerns related to moral decision making. This study examined how level of social connection (trusted

friend vs. stranger vs. self) and dilemma decision (harm acceptance vs. harm rejection) influence participants' self-reported ratings on concerns about forgiveness, punishment, and personality traits. Participants in all three social connection conditions were asked to read a modified version of the "car crash dilemma" (Conway et al., 2013). The participants were then asked whether they would make a judgement that accepted or rejected outcome-maximizing harm. Following this, they were asked to provide self-reported ratings on punishment, forgiveness, as well as warmth, competence and morality.

In addition, this study also measured the extent to which participants forgive or punish themselves in the stranger or friend-condition. There is no prior research to predict the outcome of this measure. However, because individuals who feel socially connected generally report less reputational concerns, it is possible that those in the friend condition might expect their friend to be more forgiving and less punishing than that of a stranger. In contrast, the stranger who they might interpret as more judgmental, may be perceived as more punishing and less forgiving.

It was predicted that those who made their moral dilemma judgements in the hypothetical presence of a trusted friend would make a decision that is more similar to how one would act when they were alone. For those who made their judgment in a stranger condition, it was expected that they would be more inclined to pick a deontological than a utilitarian decision because of reputational concerns. The study also measured warmth and competence ratings. It is expected that those in the alone condition would replicate past findings and rate themselves high on both warmth and competence (Lee et al., 2018). Due to the gap in the literature, it was unclear how participants would predict a third party would rate them on warmth and competence ratings. It was hypothesized that because one shared a positive relationship with a friend, the participants may predict a friend would rate them favorably on warmth and competence. This said, because

no relationship exists with the stranger, their predictions for how stranger would rate them on warmth and competence may be lower than those in the friend condition. The

Method

Open Science

All hypotheses, study materials, and data analysis plan can be found at https://osf.io/hd2jr/.

Participants

Participants were recruited from Amazon's Mechanical Turk (MTurk) online crowdsourcing platform via TurkPrime (Litman, Robinson, & Abberbock, 2016). It was required that participants were 18 years or older, resided in either Canada or the United states, and had an approval rating of 95% or above. Based on a power analysis using G*Power (version 3.1.9.2; Faul, Erdfelder, Lang, & Buchner, 2007), a sample size of 400 will be needed to obtain .95 power assuming a medium effect size (f = .25).

A total of 408 MTurk workers were deemed eligible for participation. Of this total, 2 participants were eliminated because of incomplete responses and an additional 71 were eliminated due to failing the manipulation check (7 from the friend condition, 27 from the stranger condition, and 37 from the alone condition). The manipulation check required participants to correctly select whether they had been alone during the car crash dilemma, or accompanied by a friend or stranger. The final sample consisted of 335 participants (186 males and 149 females), whose ages ranged from 19 to 70 years of age (M = 35.29, SD = 10.04). The ethnic background of the participants were predominantly White (80.30%), followed by Black (10.45%), and Latin American (3.58%). Due to the various eliminations, 126 participants (99 harm accepting and 27 harm rejecting) were included in the friend condition, 106 (71 harm-

accepting, 35 harm rejecting) participants completed the stranger condition, and 103 (27 harm accepting, 76 harm rejecting) made up the alone condition.

Materials and Procedures

MTurk workers were asked to complete a five-minute online survey about decision making in different contexts and were compensated 0.50 USD for their participation. Participants were first asked to provide demographic information, including age, gender, and ethnicity. Following this, participants were randomly assigned to either the trusted friend, stranger, or alone condition. Those who would be in the presence of a friend were given the additional step of providing the initials of a trusted friend that would later be piped into the car crash dilemma (Conway et al., 2013). The dilemma read:

> Imagine the following difficult situation:
>
> You are an Uber driver who is making your way down a busy city street with [**a stranger/trusted friend's initials/left blank in the alone condition**] in the adjacent seat. Suddenly, a young mother carrying a child trips and falls into the path of your vehicle. You are going too fast to break in time; your only hope is to swerve out of the way. Unfortunately, the only place you can swerve is currently occupied by a little old lady. If you swerve to avoid the young mother and baby, you will seriously injure or kill the old lady. Is it appropriate to swerve and hit the old lady in order to avoid the young mother and child?

Participants were then presented with the following options "Yes, it is appropriate" or "No, it is not appropriate". Following their decision to accept harm or reject harm, participants

were presented forgiveness and punishment scales. The parties differed depending on who they imagined was rating them on the various scales. For instance, those who were in the presence of a stranger were instructed to “In the next few moments, think about how the stranger would react to your decision”. Following this, they were asked to imagine “To what extent the stranger [would/should] forgive you” and “To what extent the stranger [would/should] punish you”. Due to the *would* and *should* variations being highly correlated, the ratings were averaged for the forgiveness (Cronbach’s α =.62) and punishment scales (Cronbach’s α =.70).

Next, the participants rated themselves, or imagined how a stranger or friend would rate them on five competence (*competent, confident, independent, competitive, intelligent*) and four warmth traits (*tolerant, warm, good natured, sincere)* and one morality trait *(moral*). A mean was computed for the competence traits (Cronbach’s α = .82) and the four warmth traits (Cronbach’s α = .89). Ratings were gathered using 7-point Likert scales which were anchored at 1 (not at all) and 7 (very much).

Finally, individuals were presented a manipulation check that asked participants to answer who was sitting adjacent to them in the car dilemma. For example, those who were in the presence of friend, would have to correctly select that a friend had been sitting adjacent to them in the car in order to pass the check and have their data be included in the final analysis. Following this, participants were informed that their completion code would be provided following the debriefing letter and the MTurk code would ensure compensation for their time.

Results

Dilemma Decisions

A Chi-Square Test of Independencewas conducted, which produced a nonsignificant relationship between third-party condition and dilemma decision type, χ^2 (2, N = 335) = 3.97, p >

.05, Cramer's V = .11. Of the 103 members of the alone condition, 74% (n = 76) participants chose the harm accepting option, and 26% (n = 27) individuals selected the harm-rejecting choice. Of the 126 participants placed in the friend-condition, 79% (n = 99) chose the harm-accepting option and 21% (n = 27) chose the harm-rejecting option. Finally, of the 106 members of the stranger-condition, 67% (n = 71) individuals chose the harm-accepting option and 33% (n = 35) participants chose the harm-rejecting option.[1]

Forgiveness, Punishment, and Trait Ratings

Zero-order correlations showed that forgiveness was positively correlated with warmth, competence, and morality, but negatively correlated with punishment. The variable of warmth was also positively correlated with competence and morality, while also being negatively correlated with punishment. Competence was also positively correlated with all other variables. Finally, morality was positively correlated with all variables except for punishment, of which it was negatively correlated. See Table 1.

All ratings were subject to a 2 (decision: harm-acceptance vs. harm-rejection) x 3 (party: stranger vs. friend vs. self) between-subjects analysis of variance (ANOVA). For each rating or dependent variable, there are 9 possible pairwise comparisons, such that there are 3 possible comparisons for the party main effect and 6 possible comparison for the decision by party interaction. Therefore, to control for Type I error, the criteria for statistical significance was corrected by dividing α = .05 by the number of possible pairwise comparisons for each rating (.05/9 = .006). Therefore the p-value used was set at $p < .006$ rather than $p < .05$ for any post-hoc pairwise comparison.

[1] Our analysis plan proposed a logistic regression, but for simplicity, a Chi-square analysis was conducted instead.

Table 1

Correlations Between Forgiveness, Punishment, Warmth, Competence and Morality Ratings

Measure	1	2	3	4	5
1. Forgive	.62				
2. Punish	-.60**	.70			
3. Warmth	.30**	-.18**	.89		
4. Competence	.33**	0.17**	.71**	.82	
5. Moral	.29**	-.21**	.77**	.68**	-

Notes. Cronbach's alpha reliabilities are reported in italics in the diagonal for each variable; N = 335. ** $p < .01$

Forgiveness. For forgiveness ratings, there was a significant main effect for party, *F(*2, 329) = 39.74, $p < .001$, $\eta_p^2 = .195$. Post-hoc comparisons for party suggest that participants were least forgiving of themselves when they were alone ($M = 3.98$, $SD = 1.58$) than in the presence of a stranger ($M = 4.62$, $SD = 1.64$), $p = .001$, or a friend ($M = 5.86$, $SD = 1.15$), $p < .001$. Further, forgiveness ratings differed between the latter two conditions, $p < .001$. There was no main effect for decision, in which forgiveness ratings did not differ between harm accepting ($M = 4.99$, $SD = 1.66$) or harm rejecting ($M = 4.61$, $SD = 1.63$) decisions, $F(1, 329) = 2.14$, $p = .144$, $\eta_p^2 = .006$. There was also no decision by party interaction effect, $F(2, 329) = .53$, $p = .590$, $\eta_p^2 = .003$.

Punishment. For punishment ratings, there was a significant main effect for party, $F(2, 329) = 13.84$, $p < .001$, $\eta_p^2 = .078$. Post-hoc comparisons suggested that participants believed a friend ($M = 2.08$, $SD = 1.46$) would be less punishing than a stranger ($M = 2.58$, $SD = 1.59$), $p < .001$, or themselves ($M = 3.38$, $SD = 1.73$), $p = .006$. Further, punishment ratings did not differ between the latter two conditions, $p = .008$. There was no main effect for decision, in which forgiveness ratings did not differ between harm accepting ($M = 2.60$, $SD = 1.63$) or harm rejecting ($M = 2.75$, $SD = 1.78$) decisions, *F(*2, 329) = .15, $p = .70$, $\eta_p^2 = 001$. There was no decision by party interaction effect, *F(*2, 329) = 13.84, $p = .13$, $\eta_p^2 = .012$.

Warmth. In regards to warmth ratings, results again suggested a main effect for party, *F(*2, 329) = 61.19, $p < .001$, $\eta_p^2 = .271$. Post-hoc comparisons revealed that those in the stranger condition ($M = 4.05$, $SD = .1.34$), rated themselves as warmer than those in the alone condition ($M = 5.42$, $SD = 1.02$), $p < .001$, and the friend condition ($M = 5.76$, $SD = .95$), $p < .001$. Further, warmth ratings did not differ between the latter two conditions, $p = .455$. There was no main effect for decision, in which warmth ratings did not differ between harm-accepting ($M =$

5.16, *SD* = 1.22) and harm-rejecting, (*M* = 5.00, *SD* = 1.60), decisions, *F(*2, 329) = .05, *p* = .82, η_p^2 = .001. There was no decision by party interaction effect, *F(*2, 329) = 3.00, *p* =.05, η_p^2 = .018.

Competence. For competence ratings, there was a significant main effect for party, *F(*2, 329) = 37.09, *p* < .001, η_p^2 = .184. Post-hoc comparisons for party suggest that participants believed a stranger (*M* = 4.26, *SD* = 1.16) would rate them as less competent, than a friend (*M* = 5.53, *SD* = .94), *p* < .001, or when they were alone, (*M* = 5.24, *SD* = .94), *p* < .001. Further, competence ratings did not differ between the latter two conditions, *p* = .275. There was no main effect for decision, in which competence ratings did not differ between harm-accepting (*M* = 5.07, *SD* = 1.07) or harm-rejecting (*M* = 4.94, *SD* = 1.35) decisions, *F*(1, 329) = .005, *p* = .95, η_p^2 = .001. There was also no decision by party interaction effect, *F*(2, 329) = 1.15, *p* = .32, η_p^2 = .007.

Morality. For morality ratings, results suggested a main effect for party, *F(*2, 329) = 44.92, *p* < .001, η_p^2 = .215. Post-hoc comparisons suggested participants believed a stranger (*M* = 4.22, *SD* = 1.63) would rate them as less moral than a friend (*M* = 5.83, *SD* = 1.13), *p* < .001, or themselves (*M* = 5.51, *SD* = 1.23), *p* < .001. Further, morality ratings did not differ between the latter two conditions, *p* = .458. There was no main effect for decision, in which morality ratings did not differ between harm-accepting (*M* = 5.23, *SD* = 1.43) and harm-rejecting (*M* = 5.19, *SD* = 1.69), *F(*2, 329) = .91, *p* = .341, η_p^2 = .003. There was, however, a significant decision by party interaction, *F(*2, 329) = 3.90, *p* = .021, η_p^2 = .023. Specifically, for harm-rejection, participants' believed that a stranger would see them as less moral than a friend, *p* < .001, or when they were alone, *p* < .001, but no differences in morality perceptions between judgements from a friend and their own, *p* = .608. For harm acceptance, participants' believed

that the friend would perceive them as more moral than themselves, $p = .015$, and more moral than a stranger, $p < .001$. Finally self-judgments were more moral than those expected from strangers, $p < .001$ (see Figure 1).

Discussion

Initially, it was expected that those who were in the presence of a stranger would be more inclined to make a decision that rejects outcome-maximizing harm. However, results revealed that these individuals were actually significantly more likely to accept outcome-maximizing harm. This finding was in direct contrast to past research which posited that the presence of a stranger would lead to a catalytic effect in which feelings of judgement would trigger reputational concerns (Lee et al., 2018). Thus, it was expected that the participants of this study would be more likely to make a harm rejecting decision, so to appear more prosocial (Lee et al., 2018). However, it should be noted that while the Car Crash dilemma has produced reliable results, the high amount of utilitarian decisions may imply that participants found it easier to murder the old woman, as opposed to the young child (Conway et al., 2013). Therefore, a future amendment to this study could involve replacing the old woman with someone who is younger, thereby making the dilemma more difficult.

While it was thought that this may lead those who were in the presence of a stranger to report the lowest forgiveness and highest punishment ratings, this prediction was unsupported. Rather, participants who completed the survey alone reported the lowest forgiveness scores. This finding is contradictory to Lee et al.'s (2018) research which posited that those who complete the survey alone should rate themselves high on warmth and competence, and instead supports Cheung et al.'s (in preparation) results that individuals appear to be more critical of themselves than third-parties. Interestingly, those who were in the presence of a friend reported the highest

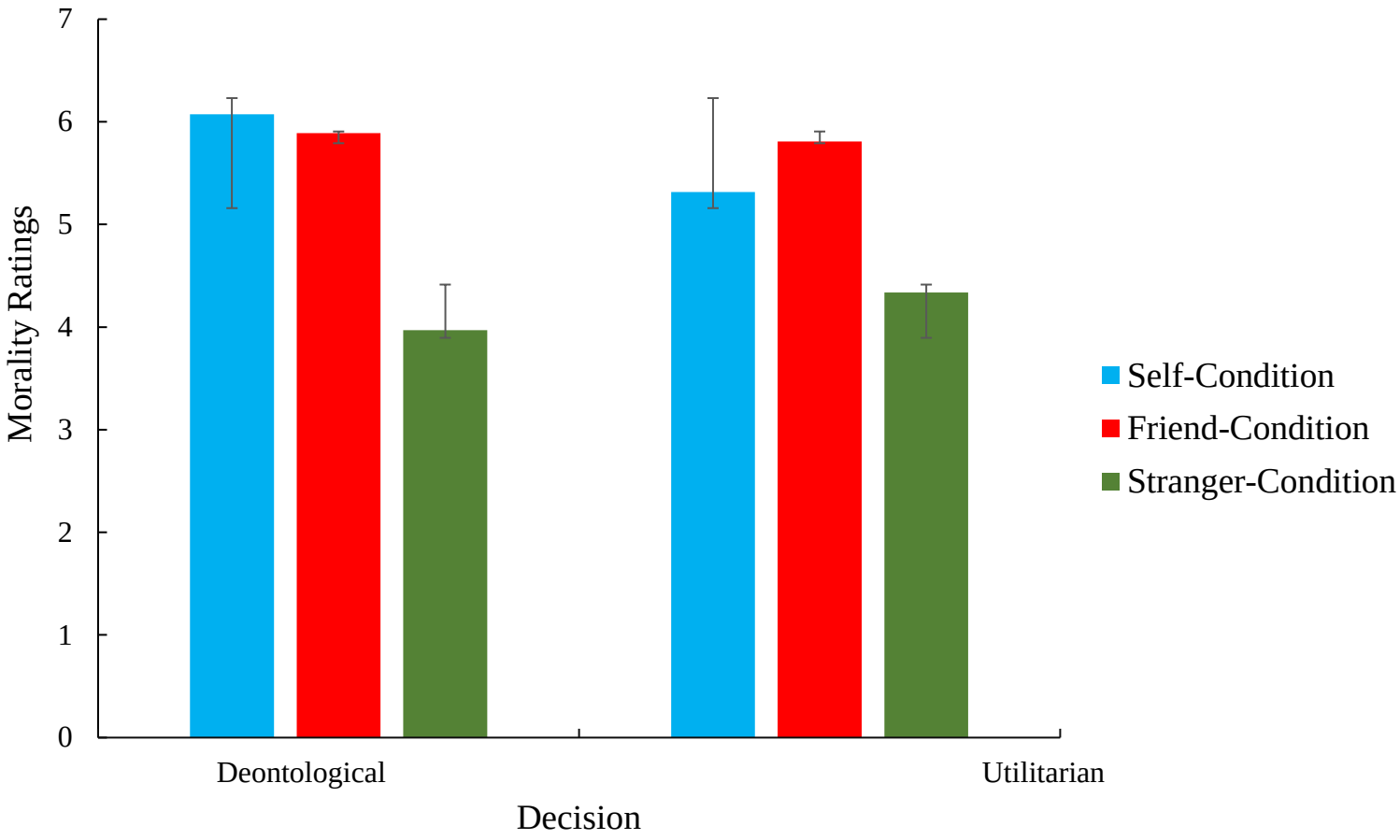

Figure 1. Morality ratings as a function of decision type and party.

forgiveness and lowest punishment scores. This provides support for the notion that one would expect a friend to be more merciful and less penalizing than a stranger, and possibly even oneself. This was based on the finding that those who completed dilemma surveys alone generally report high warmth ratings (Lee at al., 2018). Similarly, it was predicted that one would expect a friend, someone whom you maintain a close relationship with, to rate you positively on a warmth measure. Therefore, those who were in the presence of a stranger reporting the highest warmth ratings, was unexpected.

For competence ratings, those who were in the presence of a stranger reported significantly lower competence scores, as compared to the other conditions. This finding is logical when one considers the connection between competence and warmth scores. In the literature, it is well-established that when one is rated high on competence measures, they are generally rated low on warmth and vice versa (Rom et al., 2017). The aspect that is of interest is that most individuals who were in the presence of a stranger chose a harm accepting, or utilitarian judgment. Within the literature of moral dilemmas, it is generally deontological decisions that are rated as being warmer but less competent, and vice versa for the utilitarian decisions (Koenigs et al., 2012). This is due to deontological decisions involving sparing more lives (i.e., warmer) but ultimately leading to more deaths (i.e., less competent) and conversely for utilitarian decisions. Therefore, it is interesting that those in the stranger condition reported a pattern that is oppositely seen for utilitarian decisions.

In regards to the morality ratings, those in the presence of a stranger once again reported significantly lower scores than the other two conditions. However, a decision by party interaction emerged. The interaction indicated that those in the stranger condition rated a harm accepting decision as more moral than a harm rejecting decision. In accordance with the dual-process model, making a harm rejecting decision can be categorized as a deontologist decision, whereas

making a harm accepting decision can be characterized as a utilitarian decision (Rom et al., 2017). This said, it should be noted that although an individual may make a harm accepting decision, that does not infer that the person is a utilitarian. Rather, that person made a decision for the particular dilemma that was in line with the utilitarian philosophy (Kahane, 2015).

With respect to past research, utilitarian decisions were generally viewed as less moral than deontological decisions because of their harm accepting nature (Koenigs, Kruepke, Zeier, & Newman, 2012). Therefore, those in the presence of a stranger reporting a harm accepting decision as more moral, may exemplify the "duty to rescue" drive (Kahane, 2015). In essence, it is possible that participants are engaging in a cost-benefit analysis and are driven to make a decision that saves the greatest number of lives. This may explain why the utilitarian decision to purposely murder an older woman was viewed as more moral than passively allowing the car to continue its dangerous course. Hence, despite choosing to murder an innocent victim, this action allowed for the greatest number of survivors and least number of casualties. Therefore, individuals may predict that an action which has the greatest outcome, will be perceived as most moral.

In regards to the morality ratings, those who completed the survey alone produced much larger errors bars than the other two conditions. It can be speculated that this may be the result of environmental factors, such that participants may not have completed the survey alone. A key aspect of the alone condition was that the participants completed the survey without the presence of third-party members. However, because the experiment was completed online, it cannot be verified whether this aspect of the experiment was controlled. While it was mentioned at the beginning of the survey that all MTurk workers should complete the survey in a quiet environment that was free from noise and distraction, it is impossible to verify whether this instruction was carried out. A future amendment to this research could involve including a

manipulation check at the end of the study that asks participants whether they were alone while they completed the survey. This could provide some additional information regarding whether different environmental contexts contributed to the variance among those who completed the survey alone. It is promising that those who completed the survey in the presence of a friend produced the lowest error bars and lowest discrepancy amongst the conditions. It is suspected that because those who completed the survey in the hypothetical presence of a friend had a similar imagined prototypical individual, this resulting in less variance amongst the condition. Such that those who completed the survey in the presence of a friend were more similar to one another.

As well, while this study was largely based on Lee et al.'s (2018) research, there exists many methodological differences that may account for the disparity in results For instance, while past research used in-person observers, this experiment made use of hypothetical third-parties. Thus, perhaps there exists a difference in the way participants view a hypothetical vs. a real observer's judgements. While the current research determined participants were more inclined to make utilitarian decisions, Lee et al.'s (2018) work posited different results. They determined that participants who were under third-party observation were more inclined to make deontological decisions, because of reputational concerns. In turn, these concerns would lead these individuals to make less harm accepting decisions, for fear of appearing psychopathic. One explanation for the variation in results may reside in the fact that a hypothetical person's judgements are not consequential. That is, participants may only feel reputational concerns when the person who is judging them can do actual harm to their reputation (Izuma, 2012). Thus, perhaps participants who were under third-party observation did not report more deontological judgements because they were not fully influenced by the observer's hypothetical presence.

Due to the brevity of research on how social observation effects warmth and competence ratings, this study provides interesting information regarding the parameters of social influence.

Interestingly, this lack of reputational concerns may also explain why those in the presence of a stranger unexpectedly rated themselves as warmer than the other two conditions. Based on the work of Lee et al. (2018), it was suggested that social observation increases the proclivity of making deontological decisions because of fear of being perceived as cold. Thus, deontological decisions can be thought of as an act of self-preservation of warmth. However, results suggest that participants predicted the stranger would rate their utilitarian decision as fairly warm. Therefore, the lack of concern that one will be perceived as cold, compounded with the hypothetical observer reducing reputational concerns, may have impacted warmth ratings.

Like all moral dilemma research, this study does suffer from methodological limitations. One of the greatest limitations of studying moral dilemma judgements is using unrealistic dilemmas to infer how people would really behave in morally ambiguous situations. Much like the larger field of psychology, there exists a trade off between control and realism. For instance, this research used an online survey to introduce a situation and asked participants which dilemma choice they would prefer. This experimental design provides great control, and provides high reliability that the survey is measuring what the experimenter is attempting to capture from the proposed population. In this case, how moral dilemmas are influenced by feelings of trust. However, because this experiment is so controlled, it remains speculative whether the results are representative of how these same participants would behave in a real life moral dilemma. This was largely the reason why the Car Crash dilemma was chosen as the moral dilemma situation. The dilemma, which has produced highly reliable results, is more realistic because it represents a situation that could potentially occur (Conway et al., 2013). Unlike the more traditionally used "Trolley Dilemma", this dilemma involved a more modern context which participants could

better imagine encountering (Foot 1967). The issue of control and realism has resulted in this topic of study beginning to researching more realistic moral dilemmas and comparing their results with those produced by more traditional and popular dilemmas. Thus, while the Car Crash dilemma was determined to be one of the most realistic and reliable dilemma during the time of this paper, it cannot be ignored that this experiment may have sacrificed realism for a more controlled experimental design.

Further, recently published work by Bostyn, Sevenhant, and Roets (2018) have further examined whether hypothetical dilemmas are representative of real life decisions and have produced fairly fascinating results. In their study, participants were asked to make a real-life decision to administer an electroshock (they were not aware was fake) to either a single mouse, or five additional mice. Their results suggested that while responses to hypothetical dilemmas may not be predictive of real-life dilemma behavior, they are predictive of affective and cognitive aspects of real-life decision making. Therefore, replicating this research in a more realistic manner may provide an interesting future avenue of study.

With this in mind, a future direction could include introducing virtual reality technology and replicating the car crash dilemma. This way, participants could actually make a "real-life" decision, while still completing the experiment in a controlled and safe environment. Moreover, recent advancements in technology may present a further avenue in which researchers can examine moral dilemmas in a way that is more representative of how people would actually behave in moral ambiguous and often time strapped situations.

A future amendment to this study could also include incorporating in-person observers to the experimental design. Due to suspected lack of reputational concerns on behalf of those in the presence of a stranger, it may be valuable to incorporate a real observer who could watch the participants as they make their dilemma decision. In this sense, all participants would complete

the experiment alone, or in the physical presence of a friend, or stranger. This would likely result in more audience effects because an actual person is likely to have more effect on one's behavior than a hypothetical being (Izuma, 2012). As well, having a real individual may also incorporate more consequence into the design. For instance, participants may have deduced that moot ramifications will occur if a hypothetical person is unhappy with your dilemma choice. Thus, a theoretical person will do essentially no damage to one's self-image and reputation. However, introducing an actual person into the dilemma will likely amplify reputational concerns because the risk that one is actually being judged will become unavoidable. Due to the gap in the literature addressing how individuals predict their moral dilemma judgements are being perceived, this could provide a promising future avenue of investigation.

Overall, forgiveness, punishment, and morality ratings appeared to be influenced by perceived social connection, such that making a moral decision in the company of a trusted friend led to higher forgiveness and lower punishment ratings compared to being in the company of a stranger or being alone. However, being with a friend did not appear to change perceptions of warmth and competence of the person making the moral decision, perhaps because the friend was only a hypothetical being and could do no damage to their reputation. Thus, it is plausible the observed findings were not driven by reputational concerns. While the exploratory nature of this experiment leaves many unanswered questions, this research may provide some insight into the cognitive and affective roles that underlie moral dilemma decisions. It is recommended that future research make use of more realistic and challenging moral dilemmas, as well as using more consequential observers.

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Curriculum Vitae

Name:	Robin Doyle
Place and Year or Birth:	Canada, 1997
Secondary School Diploma:	Senior Matriculation, St. Christopher's High School, Sarnia, Ontario
Experience:	100+ hours shadowing a speech-language pathologist.
Awards:	Huron University College Centre for Undergraduate Research Student Research Fellowship (2016) Dean's Honor List Entrance Scholarship at Huron University
Publications:	Practice Safe Sun: The Effectiveness of Fear Appeals on University Undergraduates' Sunscreen Use. The Huron University College Journal of Learning and Motivation (Vol. 56). In press.