

The Influence of Personality and Religiosity on Decision-Making Associated with Moral Judgments

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Abstract Moral dilemmas are defined as a hypothetical situation where two different moral duties conflict such as the duty not to kill and the duty to help. While not universal, previous research concerned with moral dilemmas has suggested that those informed by religious belief tend to give more weight to deontological or rule-based judgments than to considerations based on utilitarian or outcome-based judgments. The present study specifically focused on the effect of religion when college students from a Christian affiliated campus were presented with moral dilemmas. Specifically, the participants responded to a series of moral dilemmas that differed in terms of conflict as well as whether they were personal or impersonal decisions. In addition, the participants were queried concerning religious orientation (evangelical or mainline), religious moral self-image, empathic responsiveness, level of narcissistic thinking, and the intrinsic and extrinsic aspects of their religiosity. It was hypothesized that evangelical affiliations as well as frequency of church attendance would be predictive of deontological based judgment in moral dilemmas. The results indicated that evangelical affiliation, church attendance, empathy, and moral self-image were predictive of lower levels of acceptability of a moral transgression. The results are considered in the context of contemporary involvement in Christian worship, degree of engagement in worship activities, and the role of personality in moral decision-making.

Keywords Moral Dilemmas, Religiosity, Personality, Decision-Making, Christian

1. Introduction

For individuals of faith, religious values or views can be considered a fundamental part of decision-making when faced with a dilemma, especially when dealing with moral decisions. Moral dilemmas are hypothetical situations where an individual is faced with a decision involving two conflicting moral duties existing simultaneously such as the duty to help but also the duty to not kill someone [1]. If a sense of morality exists within everyone, will a difference be present between evangelical Christian college students and self-identifying mainline Christian college students' moral decision-making?

Can someone be moral if they do not believe in God? Does religion make us more moral? Revered thinkers and philosophers have questioned the relationship between God and goodness in an ageless debate. For example, in the famous Euthyphro dilemma [see 2], Socrates asks if the gods love good because it is good, or if good is good

because it is loved by the gods. Another adaptation of this dilemma consists of two horns: whether good is good because God commands it, or if good is independent of what God commands. In other words, is morality dependent on religion or does it exist independently from religion? The divine command theory, the first horn, states that something is moral because God says that it is. The pushback to this theory is that there are no justifications for morality besides it being right just because God says so. A common example of the divine command theory is seen when God commands Abraham to sacrifice Abraham's son (Genesis 22, NIV). Is this good because God commanded it?

On the other hand, the natural law theory, the second horn, states that God commands something because it is good. Here, good exists not only in God but in human nature. Morality is thus argued to be universally binding to all despite cultural or religious differences [3]. If the natural law theory is true, then good exists independently of God, and one could conclude that people can act morally without believing in God. Other thinkers counter this questioning what would make people desire to behave morally if people are not answering to a higher power.

Research that examines the decision-making when faced with moral dilemmas usually require that participants face a choice involving the permissibility of two courses of action.

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In the context of each moral dilemma, each course of action is considered unpalatable and choice is guided by deontological versus utilitarian judgments [4-17].

For individuals who believe in a higher power, experiences in situations such as those presented in typical moral dilemmas often require personal judgments that may well test the limits of congruency with their personal faith. Indeed, the heart of a moral dilemma is where the individual is required to choose between equally undesirable alternatives. While not universal, previous research concerned with moral dilemmas has suggested that those informed by religious belief tend to give more weight to deontological or rule-based judgment than to considerations based on utilitarian or outcome-based judgments [4].

1.1. Morality

Morality defines what is right and what is wrong. Moral dilemmas require an individual to choose between equally undesirable alternatives. The “Trolley Problem” is perhaps the most well-known example of a moral dilemma. Developed by Foot [18] and Thomson [19], this dilemma has two versions: the run-away trolley and the footbridge trolley. In the run-away trolley dilemma, without action, a hypothetical trolley will run over five workers. The individual participating in the thought experiment has the choice to either switch the course to another track where only one person would die and the initial five would be saved. This idea then causes individuals to decide if it is morally acceptable to tamper with the train or if they should intervene and sacrifice the one to save the many. The foot-bridge dilemma takes this hypothetical situation a step further.

In the foot-bridge dilemma, the trolley is still initially on course to kill five people. Rather than having the option to change the tracks to kill one person instead of five, the participant must choose to either push a single person onto the tracks to save the five or allow the train to run over the five knowing that they could have intervened. More often, participants will quickly choose the track switch than the act of sacrificing one person to save five. The actions taken in a moral dilemma are called a *moral transgression* or violation, but the choice is called a *moral judgment* which can be either committed or omitted [1]. In the foot bridge dilemma, the moral transgression would be pushing the person or choosing not to intervene consequently allowing five people to be run over by a train.

A moral judgment that weighs out the costs and benefits to commit harm is known as a utilitarian moral judgment. Utilitarianism is a form of consequentialism, which determines an action as moral if it brings more good than harm as a whole. While a deontological moral judgment focuses on whether the harmful action is right or wrong [1,20].

1.2. Intrinsic & Extrinsic Religiosity

Moral dilemmas have been used to study emotions and

decisions in order to test a connection between religion [16]. When religious faith is examined, considerable debate about the relationship between faith and decisions that involve moral dilemmas exist [21,22,23]. Supported by theoretical advances in religiosity, personality, and individual differences in moral dilemma resolution, the processes associated with cognitive reasoning and emotionality have been explored [16]. Such research has also opened avenues for the examination of moral judgments while simultaneously considering multidimensional character of religiosity and religious faith [16,24,25].

For example, in a classic study by Allport and Ross [24] the relationship between church attendance and prejudice was examined. One aspect of the study involved development of a scale to determine the extent that religious motivation was primarily driven by intrinsic or extrinsic factors. The intrinsic motivations of religious motivation reflect devout, internalized church members. Conversely, extrinsic motivations are associated with casual and/or irregular church attendance, which are often related to the mainline Christians or the proportion of individuals that do not describe themselves as evangelical.

Studies have found that a person who claims to follow a type of religion is less likely to follow a “harm to save” mentality of harming someone to save others. This stems from religious convictions and practices [16]. These findings support the strong relationship between moral decision making and religious influences on that process. Additionally, evidence from a study indicated that those who follow religious guidance daily and desire positive perception in social settings were more likely to make deontological moral choices, which are moral decisions based on duty [16]. Other studies have found that the neurological basis for moral decision making is shown in different areas of the brain depending on if the moral dilemma is personal or impersonal to the subject [9]. This suggests that these moral decisions made can also be observed on a neurological, physical level. However, in the present study, we focused on moral dilemmas that involved an indirect action that issues harm in the individual’s choice such as the trolley dilemma. The present study was developed to investigate the influence of individual differences in religious thoughts and feelings on decisions that involve moral dilemmas that pit social welfare against harming another. It is important because we were trying to find whether these differences truly influence moral decisions and how large a role religious belief inform these actions.

2. Method

2.1. Participants

A total of 266 college students enrolled at a small Christian university responded to digital invitations to participate. Details of the demographic characteristics of the

participants are provided in Table 1. Of these, 206 students completed all the responses associated with the full questionnaire. All participants completed the review of the moral dilemmas and accompanied questionnaires online, with missing data the limiting factor in a given data analysis.

Table 1. Demographic Characteristics of the Participants

Variable	N	Percent
Age		
Under 18	2	0.9
18-24	218	96.5
25-34	5	2.2
65+	1	0.4
Gender		
Female	185	81.9
Male	41	18.1
Race/Ethnicity		
Asian / Pacific Islander	8	3.5
Black or African American	4	1.8
Hispanic American	19	8.4
White / Caucasian	191	84.5
Multi-Racial	4	1.8
Education		
Freshman, Sophomore	124	54.9
Junior, Senior, Plus	102	45.1
Christian Affiliation ^a		
Evangelical	144	63.7
Mainline	74	32.7
Church Attendance? ^b		
Only on Important Holidays	4	1.8
Monthly	4	1.8
A Few Times a Month	46	20.4
Weekly	127	56.2
More Than Once per Week	37	16.4

Notes. ^an = 8 did not respond. ^bn = 8 participants did not respond.

The students, ranging in age from 17 to 65 (Median = 23) majored in areas including psychology, business, nursing, the humanities, and ministry. More than 85% of the sample identified as white/Caucasian with the remainder identifying as Hispanic, Black/African-American, or multi-racial. All participants identified as Christian, with 63.7% ($N = 144$) attending an evangelical church. A breakdown of the church denomination of the participants is provided in Appendix 1.

2.2. Materials

2.2.1. Religiosity (I/E-R)

Respondent religiosity was considered using the 14 item Religious Orientation Scale-Revised [I/E-R, 26], with Kirpatrick's [27] further delineation of the extrinsic dimension into extrinsic personal and extrinsic social domains. Originally developed by Allport and Ross [24], the Gorsuch and McPherson version of the I/E-R allows for

measurement of both intrinsic and extrinsic dimensions of religiosity with acceptable Cronbach α s of .90 and .86, respectively. Respondents choose their level of agreement on a five-point scale such as "Prayer is for peace and happiness" (extrinsic-personal), "I go to church because it helps me to make friends" (extrinsic-social), and "I have often had a strong sense of God's presence" (intrinsic).

2.2.2. Moral Self-Image Scale (MSI)

Respondent perceptions of their moral self was examined using the Moral Self-Image Scale [MSI, 28]. The MSIS consists of 9 statements where the respondent indicates where on a 9-point scale, with a score of 5 indicating satisfaction with their current self. For example, for the statement, "Compared to the fair person I want to be, I am:" responses range from a low score of 1 (Much less fair than the person I want to be) to a high score of 9 (Much more fair than the person I want to be). Accordingly, using an internal – as opposed to external standard – the instrument was designed to assess the individual's comparison of who he or she relative to who they wish they could be [28].

2.2.3. Brief Interpersonal Reactivity Scale (B-IRI)

Empathic responsiveness, that is the ability to relate to the plight and emotions of others, was assessed using a brief 16-item version of the Interpersonal Reactivity Index [29]. The brief form of the Interpersonal Reactivity Index [B-IRI, 30] permits an assessment of the ability of the respondent to consider both the viewpoint of another as well as experience the emotional states of others. The scale consists of four subscales measuring four different dimensions of interpersonal reactivity, two of which (empathic concern and personal distress) tap the experiential components associated with the vicarious experience of emotion. The third subscale, fantasy, assesses the ability to imagine the thoughts and feelings of fictitious characters. Finally, a fourth subscale explores individual facility with spontaneously adopting the view of another – perspective taking [30].

2.2.4. Narcissism (NPI-16)

Narcissism was measured using the 16 item Narcissism Personality Inventory (NPI-16). Developed by Ames, Rose, and Anderson [31], the NPI-16 consists of 16 pairs of statements such as "I like to be the center of attention" and "I prefer to blend in with the crowd." For each pair, respondents chose the statement that was most indicative of personal feelings or beliefs.

2.2.5. Moral Dilemmas

The moral dilemmas employed here were developed by or adapted from Green and colleagues [8]. The dilemmas were considered as part of one of three categories (a) high-conflict-personal (HC-P), (b) low conflict-personal (LC-P), or c) impersonal (I). According to Greene and colleagues, moral decisions that are "personal" include actions that are emotionally charged and are "those that

“could reasonably be expected to lead to serious bodily harm... to a particular person or a member or members of a particular group of people ... where this harm is not the result of deflecting an existing threat onto a different party” [10, p. 2107). Conversely, those dilemmas that do not meet these criteria are operationally defined as “impersonal”. Individual moral dilemmas employed in the present study are found in Appendix 1.

2.3. Instructions for Moral Dilemmas

You will read through 22 moral dilemmas. For each dilemma, you simply read the narrative and respond to three questions at the end of each dilemma, including be asked whether or not it is morally acceptable to perform the described action.

Moral judgments can be difficult to make, and we understand that people sometimes change their minds about moral questions or feel conflicted about the answers they're given. Don't think of your answers as "written in stone." All we want from you is a thoughtful first response.

While we want your answers to be thoughtful, you may find that in some cases the right answer seems immediately obvious. If that happens, it's okay to answer quickly. There are no trick questions, and in every case we have done our best to make the relevant information as clear as possible for you.

Note, however, that no two questions are the same, although many questions are similar to each other. To answer a question properly you will have to read it carefully because it will always be different in some way from the questions you have already answered.

When you are done with this screen please choose OK to begin the first section.

2.4. Data Analysis Plan

The analytic plan included the decision for each moral dilemma, the rated acceptability of action described in each moral dilemma, and the amount of difficulty in deciding on an appropriate course of action. Across all the dilemmas we used here, the percentage of deontological choices was considered. The differences in moral choices were analysed using chi-square (χ^2). Within each category (e.g., HC-P) of moral dilemmas, acceptability of the action and perceived difficulty choosing a course of action were analysed using one-sample *t*-tests, comparing the responses to midrange scores on the corresponding Likert scales. Bivariate correlations among the proportion of deontological responses, acceptability and difficulty with decision choice were calculated averaging responses across the three categories of moral dilemmas. In addition, the plan included the use of a series of stepwise regression analyses for each type of dilemmas (i.e., HC-P, LC-P, & I) with the mean approval rates, mean acceptability of the responses, and the mean difficulty of the dilemmas as dependent variables. The models were fitted with moral choice coded as deontological = 0, utilitarian = 1. Predictor variables included the sex of the

respondent, church (mainline, evangelical), frequency of church attendance (more than once per week, weekly, less than weekly or once per month), NPI-16 and MSI scores, the three religiosity scores of the I/E-R, and the four subscales of B-IRI. All statistical analyses were performed using IBM-SPSS version 23 (Armonk, NY).

3. Results

3.1. Descriptive Analyses

The descriptive statistics for each of the scales is presented in Table 2. The number of viable responses was lower for the NPI-16 than for the remaining scales.

Table 2. Descriptive Statistics for Each of the Scales Included in the Study

	<i>N</i>	<i>M</i>	<i>SD</i>	Range
NPI-16	206	.27	.21	.81
MSI	222	4.58	1.09	6.67
I/E-Intrinsic Scale	226	32.47	4.52	22
I/E-Extrinsic Social Scale	226	6.35	2.27	9
I/E-Extrinsic Personal Scale	226	9.84	2.48	10
B-IRI-Empathic Concern	226	4.13	.59	2.25
B-IRI-Fantasy	226	3.75	1.02	3.50
B-IRI-Perspective Taking	226	3.68	.74	3.25
B-IRI-Personal Distress	226	2.37	.69	2.75

Notes. MSI = Moral Self-Image Scale. NPI-16 = Narcissistic Personality Inventory-16; I/E-R = Intrinsic/Extrinsic Religion-Revised; B-IRI = Brief Interpersonal Reactivity Index.

As seen in Table 3, across moral dilemmas, the portion of deontological responses differed both within each category as well as between categories. When HC-P scenarios are considered, the proportion of deontological responses was decidedly mixed. In 5 of 8 scenarios, the majority made a deontological response. However, in only two scenarios (see Table 3), the proportion of deontological responses was in a clear majority as determined by chi-square. Further, in the “torture terrorist’s child”, shoot injured crew”, and “vaccine” scenarios, the majority of respondents endorsed a utilitarian decision. Conversely, in LC-P situations, the respondents overwhelmingly endorsed a deontological decision. Finally, when impersonal moral dilemmas were presented, the decisions generally reflected a utilitarian decision, with the exception of the “tax cheat” and “wallet” dilemmas. For these two, a deontological response was the norm.

One-sample *t*-tests indicated that across HC-P and LC-P scenarios, the participants did not consider the act to be acceptable. The sole exception was the Submarine scenario (see Appendix 1). Conversely, when the data associated with the I scenarios were examined, apart from the Lost Wallet scenario, the participants considered the act to be acceptable.

Generally, when confronted with HC-P scenarios, the difficulties associated with the dilemmas provided to be challenging. However, the inverse was true for both the LC-P and I scenarios.

Table 3. Deontological Responses to Moral Dilemmas, Acceptability of the Act, And Participant Rated Difficulty of the Dilemma

Moral Dilemma	Deontological (No) Responses		Acceptability of the Act		Difficulty of the Dilemma	
High Conflict - Personal	Median = 53.00%	X ²	M(SD)	t-test	M(SD)	t-test
Crying Baby	72.6%	50.58	1.90(0.97)	-17.98***	3.66(1.45)	7.18***
Euthanasia	53.4%	n.s.	2.49(1.14)	-6.83***	3.54(1.32)	6.27***
Modified Lifeboat	53.4%	n.s.	2.17(0.95)	-13.39***	3.37(1.36)	4.21***
Modified Safari	52.5%	n.s.	2.14(0.99)	-13.20***	3.84(1.31)	9.83***
Modified Bomb	22.4%	70.62	3.25(1.22)	3.14**	3.40(1.43)	4.23***
Submarine	29.8%	37.12	2.90(1.23)	n.s.	3.65(1.25)	7.88***
Vaccine Test	33.6%	24.90	2.84(1.13)	-2.08*	3.22(1.14)	2.99**
Vitamins	71.7%	45.07	2.10(1.04)	-13.32***	2.73(1.28)	-3.23**
Low Conflict - Personal	Median = 98.3%					
Country Road	94.9%	190.44	1.73(1.39)	-14.04***	1.39(0.81)	-30.74***
Hard Times	98.3%	216.28	1.16(0.45)	-62.88***	1.70(1.09)	-17.92***
Infanticide	100%	----	1.03(0.18)	-163.72***	1.41(0.95)	-25.44***
Transplant	98.3%	220.27	1.38(0.64)	-38.97***	2.10(1.19)	-11.58***
Architect	100%	----	1.03(0.26)	-119.75***	1.13(0.43)	-68.18***
Smother for Dollars	95.7%	193.72	1.20(0.53)	-51.78***	1.64(1.05)	-19.80***
Impersonal	Median = 12.1%					
Donation	10.2%	149.76	4.03(0.88)	17.96***	2.21(0.97)	-12.53***
Environmental Policy A2	7.5%	173.40	3.86(0.96)	13.82***	2.45(0.96)	-8.89***
Environmental Policy A1	11.9%	137.28	3.63(1.09)	8.84***	2.66(1.09)	-4.80***
Speedboat	10.0%	153.60	3.77(1.08)	11.15***	2.34(0.98)	-10.50***
Tax	83.6%	110.23	1.98(1.12)	-14.27***	1.88(0.97)	-18.02***
Vaccine Policy	12.1%	133.52	3.84(1.10)	11.72***	2.32(1.10)	-9.45***
Wallet	89.8%	149.76	1.72(1.02)	-19.31***	1.64(0.86)	-24.31***

Notes. *** $p < .001$; ** $p < .01$; * $p < .05$. All t -tests are two-tailed

When the intercorrelations among the proportion of affirmative (utilitarian) responses, acceptability, and difficulty ratings were calculated by first averaging the responses within each of the three categories of moral dilemmas – HC-P, LC-P, and I – the following emerged. For HC-P dilemmas, the proportion of deontological decisions was inversely related to the perceived acceptability of the act, $r(222) = -.640$, $p < .001$, and the rating difficulty in making the decision, $r(216) = -.243$, $p < .01$. Similarly, in the consideration of LC-P situations, although the correlations were more modest ($rs(223) = -.221$ & $-.160$, $p < .01$, acceptability & difficulty, respectively. Here, however, acceptability and difficulty were closely linked, $r(228) = .591$, $p < .001$.

For I dilemmas, an inverse correlation between deontological responses and perceived acceptability of the action, $r(216) = -.534$, $p < .001$. However, approval and perceived difficulty were unrelated, $r(216) = -.016$.

3.2. Stepwise Multiple Regression Analyses

3.2.1. High Conflict -Personal Dilemmas (HC-P)

Consideration of the HC-P dilemmas revealed the following. The results of the analyses are found in Table 4). First, a stepwise multiple linear regression ($N = 182$) was conducted to examine the variance in approval rates

($M = 46.86\%$, $SD = 28.27\%$) for the usable data from the participants. The analysis resulted in a significant final model with 4 predictor variables, $R = .508$, $F(4, 177) = 15.41$, $p < .001$. Two of the I/E-R scales, Intrinsic and Extrinsic Social, were associated with overall approval decision rates ($\beta = .451$ & $.163$) as was, the gender of the respondent, with females generally finding action permissible at lower rates ($\beta = -.222$). Last, NPI-16 scores were predictive of approval rates as well ($\beta = -.143$), accounting for an additional but modest 1.8% of the variance.

Next, judgments about the moral dilemmas were considered in terms of the mean rated acceptability ($M = 2.48$, $SD = 0.68$). Using stepwise multiple regression ($N = 186$), the resulting model was significant, with four predictor variables, $R = .494$, $F(4, 181) = 14.62$, $p < .001$. Once again, the I/E-R Intrinsic scale made the most important contribution to the equation ($\beta = -.197$) accounting for 8.2% of the variance. The B-IRI-Personal Distress scale ($\beta = .298$) and the NPI-16 ($\beta = .286$) were both associated with rated acceptability, with the fourth, church attendance, significant as well. Of note here, as the frequency of attendance increased, rated acceptability of action decreased ($\beta = -.184$), accounting for 3.2% of the variance in the model.

Table 4. Stepwise Multiple Regression Predicting Agreement with the Moral Dilemmas Associated with High Conflict Personal (HC-P) Situations

Predictor Variable	B(SE)	B	<i>t</i>	<i>R</i> ²	ΔR^2	<i>F</i> change
Mean Percentage Approved ^a						
Constant	-57.07(16.83)		-3.39***			
I/E-R Intrinsic Scale	3.02(.45)	.451	6.68***	.150	.150	31.64***
Gender	-15.09(4.79)	-.222	-3.15**	.211	.062	14.04***
I/E-R Extrinsic Social Scale	2.18(.88)	.163	2.49*	.240	.029	6.72**
NPI-16	-18.97(9.09)	-.143	02.09*	.258	.018	4.36*
Mean Acceptability of Action ^b						
Constant	3.34(.44)		7.52***			
I/E-R Intrinsic Scale	-.03(.01)	-.197	-2.93**	.082	.082	16.34***
NPI-16	.91(.21)	.286	4.36***	.137	.056	11.77***
BIRI-Personal Distress	.291(.065)	.298	4.49***	.213	.076	17.48***
Church Attendance	-.16(.06)	-.184	-2.75**	.244	.032	7.56**
Mean Difficulty Associated with Choice ^c						
Constant	2.24(.514)		4.35***			
Moral Self-Image scale	.27(.05)	.381	5.97***	.097		19.87***
Church Attendance	.20(.06)	.232	3.46***	.128	.031	6.42*
NPI-16	-.77(.22)	-.235	-3.52**	.154	.069	5.52*
Gender	.58(.12)	.345	4.78***	.191	.022	8.39**
B-IRI-Personal Distress	.27(.07)	.270	3.89***	.230	.031	9.14**
I/E-R Extrinsic Social Scale Religion Scale	-.09(.02)	-.268	-3.95***	.280	.018	12.39***
I/E-R Intrinsic Scale	-.03(.01)	-.163	-2.40*	.303	.022	5.75*

Notes. *** $p < .001$, ** $p < .01$, * $p < .05$. ^a $R = .508$, $F(4, 177) = 15.41$, $p < .001$. ^b $R = .494$, $F(4, 181) = 14.62$, $p < .001$. ^c $R = .508$, $F(7, 178) = 11.04$, $p < .001$.

The final analysis ($N = 186$) of the HC-P data involved consideration of the average difficulty expressed by the participants when making a choice. Here, the analysis revealed a 7-predictor model that was significant, $R = .508$, $F(7, 178) = 11.04$, $p < .001$. In the case of difficulty, the I/E-R Intrinsic ($\beta = -.163$) and Extrinsic Social ($\beta = -.268$) scales made small but significant contributions to the equation. NPI-R and B-IRI-Personal Distress scores were significant as well, collectively accounting for 10% of the variance. Frequency of church attendance was significant as well, albeit in the opposite direction ($\beta = .232$). Last, scores on the Moral Self-Image Scale ($\beta = .381$) accounted for 9.7% of the variance in the model.

3.2.2. Low Conflict -Personal Dilemmas (LC-P)

As noted earlier, personal moral dilemmas may be classified as high-conflict and low-conflict personal moral dilemmas [8,12]. The results of the multiple regression analyses using each of the three LC-P dependent variables are presented in Table 5. When the mean percentage of scenarios approved was considered, the resulting stepwise multiple regression analysis ($N = 190$) revealed a final 8-variable model, $R = .508$, $F(8, 181) = 11.27$, $p < .001$.

The B-IRI-Empathic Concern scale was the single largest contributor to the equation ($\beta = -.409$), accounting for 8.2% of the variance in the final model. B-IRI-Perspective Taking was a significant contributor ($\beta = -.188$) to the model as well. All three I/E-R scales were significant as well, collectively accounting for 11.5% of the variance. The MSI scale ($\beta = -.158$) contributed significantly to the equation as well and, both gender ($\beta = -.248$) and Christian affiliation ($\beta = -.187$) were both significant. As was the case with HC-P scenarios, female respondents and those affiliated with an evangelical church expressed a lower level of agreement than male respondents.

Stepwise multiple regression of the mean acceptability of the action ($N = 190$) revealed, with some important differences, a generally similar result, $R = .601$, $F(6, 181) = 14.28$, $p < .001$. Noteworthy, the frequency of church attendance was the most important contributor to the equation, accounting for 9.1% of the variance. Three of four B-IRI-subcales were significant – Empathic Concern ($\beta = -.387$), Personal Stress ($\beta = .411$), and Perspective taking ($\beta = .137$). Once again, the contribution of the NPI-16 scale was significant although, oddly, the relationship was positive ($\beta = .199$).

Table 5. Stepwise Multiple Regression Predicting Agreement with the Low Conflict Personal (LC-P) Moral Dilemmas

Predictor Variable	B(SE)	B	<i>t</i>	<i>R</i> ²	ΔR^2	<i>F</i> change
Mean Percentage Approved						
Constant	-97.65(3.33)		-3.39***			
B-IRI-Empathic Concern	-2.73(.44)	-.409	-6.21***	.082	.082	16.78***
I/E-R – Extrinsic Social Scale	.39(.12)	.215	3.42***	.133	.051	11.02***
I/E-R – Intrinsic Scale	.40(.07)	.421	5.51***	.167	.034	7.51**
Gender	-2.37(.63)	-.248	-3.75***	.210	.043	10.09**
I/E-R – Extrinsic Personal Scale	.49(.13)	.296	3.93***	.240	.030	7.38**
Christian Affiliation	-1.55(.54)	-.187	-2.86**	.277	.037	9.36**
BIR -Perspective Taking	-.988(.34)	-.188	-2.98*	.310	.032	8.52**
Moral Self-Image Scale	-.62(.25)	-.158	-.249*	.332	.023	6.21*
Mean Acceptability of Action						
Constant	2.07(.29)		7.25***			
Church Attendance	-.15(.03)	-.286	-4.77***	.091	.091	18.90***
BIR-Empathic Concern	-.27(.05)	-.387	-6.04***	.174	.082	18.60***
BIR-Personal Distress	.24(.04)	.411	6.41***	.274	.100	25.74***
Education	.18(.05)	.212	3.46***	.318	.044	11.80***
NPI-16	.39(.12)	.199	3.16**	.344	.027	7.50**
B-IRI-Perspective Taking	.08(.04)	.137	2.23*	.362	.017	4.99*
Mean Difficulty Associated with Choice						
Constant	1.51(.34)		4.40***			
Church Attendance	-.17(.04)	-.275	-4.69***	.115	.115	24.42***
Education	.32(.06)	.310	5.17***	.169	.063	14.37***
B-IRI-Perspective Taking	.19(.04)	.284	4.83***	.212	.046	11.02***
B-IRI-Personal Distress	.23(.04)	.325	5.25***	.258	.050	12.63***
B-IRI-Empathetic Concern	-.25(.05)	-.287	-4.68***	.327	.071	20.09***
Moral Self-Image	.11(.03)	.223	3.82***	.374	.048	14.57***

Notes. *** $p < .001$, ** $p < .01$, * $p < .05$. $R = .508$, $F(8, 181) = 11.27$, $p < .001$. $R = .601$, $F(6, 181) = 14.28$, $p < .001$. $R = .627$, $F(6, 183) = 19.79$, $p < .001$.

For the LC-P data, the final model included the mean rated difficulty associated with the response choice of the participants ($N = 190$) as the dependent variable. The resulting stepwise regression analysis revealed a final model that included 6 predictor variables, $R = .627$, $F(6, 183) = 19.79$, $p < .001$. As an influence in the decision-making seen in earlier analyses, both church attendance and education contributed significantly to the equation. Indeed, the frequency of church attendance was the single largest contributor to the equation (11.5%) with education contributing an additional 6.3% to the final model. Here, as before, as church attendance increased, choice difficulty decreased as well. Once again three of four the BIRI-subcales were significant – Empathic Concern ($\beta = -.287$), Personal Stress ($\beta = .325$), and Perspective taking ($\beta = .284$). Last, the contribution of MSI scale scores was significant ($\beta = .223$).

3.2.3. Impersonal Dilemmas (I)

As described earlier, personal dilemmas require that, for an actor to achieve a specific outcome, the harm or death of another individual or individuals. In addition, the actor must personally generate said harm themselves [10]. Conversely, impersonal dilemmas reflect situations lacking some aspect

of these requirements. Given this, it would seem a reasonable supposition that a different subset of factors might have been predictive of the responses of the participants ($N = 186$). Nonetheless, most of the significant predictor variables reported above were significant here as well. When the mean percentage of approved responses was considered, the overall model was significant, $R = .663$, $F(9, 176) = 15.29$, $p < .001$, and the stepwise regression revealed nine significant predictor variables (see Table 6). The MSI Scale was the single most important predictor with three demographic variables – education ($\beta = .336$), church attendance ($-.168$) and Christian affiliation ($-.151$) – contributing significantly as well. Three of the B-IRI scales including Empathic Concern ($\beta = -.295$) were included in the final model as was the I/E-R Intrinsic and the I/E-R Extrinsic Personal scales ($\beta = .267$ & $\beta = .294$).

Examination of the mean rated acceptability of the action produced a five-variable model, $R = .520$, $F(5, 180) = 13.34$, $p < .001$. Once again, the MSI scale was the most important predictor to the equation ($\beta = .310$) and the Christian affiliation was significant as well ($\beta = .246$). Additional predictor variables included the I/E-R Extrinsic Personal ($\beta = -.224$), B-IRI Personal Distress ($\beta = .212$), and, of note, the NPI-16 ($\beta = .301$).

Table 6. Stepwise Multiple Regression Predicting Agreement with the Impersonal (I) Moral Dilemmas

Predictor Variable	B(SE)	B	<i>t</i>	<i>R</i> ²	ΔR^2	<i>F</i> change
Mean Percentage Approved						
Constant	40.05(10.77)		-3.72***			
Moral Self-Image Scale	-.60(.73)	.484	8.19***	.166	.166	36.75***
Education	8.58(1.57)	.336	5.45***	.246	.080	19.33***
BIR-Perspective Taking	2.39(1.02)	.143	2.34*	.286	.040	10.12**
BIR-Empathic Concern	-6.48(1.33)	-.295	-4.88***	.321	.035	9.45**
I/E-R-Extrinsic Personal	1.55(.36)	.294	4.26***	.348	.027	7.49**
I/E-R-Intrinsic	.79(.20)	.267	3.88***	.383	.034	9.93**
Church Attendance	-2.63(.95)	-.168	-2.76**	.401	.019	5.60*
BIR-Fantasy	2.13(.79)	.167	2.69**	.421	.019	5.83*
Christian Affiliation	-3.98(1.65)	-.151	-2.40*	.439	.018	5.78*
Mean Acceptability of Action						
Constant	2.534(.17)		14.58***			
Moral Self-Image Scale	.13(.03)	.310	4.65***	.105	.109	22.61***
NPI-16	.59(.13)	.301	4.60***	.181	.071	15.94***
Christian Affiliation	.22(.06)	.246	3.61***	.209	.028	6.40*
I/E-R-Extrinsic Personal	-.04(.01)	-.224	-3.22**	.232	.023	5.53*
B-IRI-Personal Distress	.13(.04)	.212	3.07**	.270	.038	9.43**
Mean Difficulty Associated with Choice						
Constant	2.08(.20)		10.44****			
Moral Self-Image scale	.18(.03)	.398	6.18***	.145	.145	31.33***
NPI-16	-.59(.14)	-.288	-4.38	.194	.057	13.11***
B-IRI-Perspective Taking	-.14(.04)	-.231	-3.52**	.241	.051	12.39***

Notes. *** $p < .001$, ** $p < .01$, * $p < .05$. $R = .663$, $F(9, 176) = 15.29$, $p < .001$. $R = .520$, $F(5, 180) = 13.34$, $p < .001$. $R = .503$, $F(3, 182) = 20.59$, $p < .001$.

Last, a stepwise multiple regression with the mean choice difficulty as the dependent measure yielded a three variable that included the MSI Scale ($\beta = .398$) and BRI-Perspective Taking Scale ($\beta = -.231$) as well as the NPI-16 ($-.288$).

4. Discussion

In the present study, we sought to determine whether evangelical affiliations as well as church attendance were predictive of deontological-based judgments in moral dilemmas. As previously mentioned, the majority of the participants identified as Christians with 63.7% identifying as evangelical Christians. In addition, we examined several dimensions of the participants including moral self-image, participant reactivity and narcissistic tendencies, and aspects of religiosity. Across categories of scenarios, the intrinsic scale of the I/E-R was a reliable predictor of response choice as was Gender for HC-P and LC-P dilemmas. Elements of the BIR were as well. When rated acceptability and difficulty of the action were considered, both the frequency of church attendance and. To a somewhat lesser extent, Christian affiliation were predictive. Last, of note, the NPI-16 was predictive of deontological responses in HC-P situations, although the relationship was inverse in nature. This was also true for rated difficulty of the action. On the other hand, the correlation between the

mean acceptability of the action and NPI-16 scores was positive.

For high-conflict personal scenarios, the participants' responses resulted in a mix between utilitarian and deontological responses. This finding corresponds with a study that showed an increase of utilitarian choices in high-conflict moral dilemmas [40]. As expected, the participants viewed decisions made in high-conflict personal dilemmas to be difficult. The acceptability of the act and difficulty in making the decision were inversely rated, meaning the participants did not find the situation acceptable and had difficulty in making their decision. The results also indicated that as the frequency of church attendance increased, the rated acceptability of action decreased. The finding of the inverse relationship between church attendance and rated acceptability of the action supports the claim that those who follow religious values were more likely to make deontological moral choices [16,24].

Prior research has suggested that utilitarian-based moral decisions result in a longer reaction time as well as are primarily driven by cognitive rather than emotive processes [7,32]. This would help explain why the high-conflict dilemmas resulted in a greater number of utilitarian responses than in the other dilemmas in a sample of Christian college students. Because they reported greater

difficulty in making their decision, it may be inferred that the decision-making process took a longer amount of time. Because utilitarian judgments are driven by cognitive processes and not automatic processes [8], the results of utilitarian judgments were expected in high-conflict personal dilemmas for Christians.

In low-conflict personal scenarios, the results reflected an overwhelmingly deontological decision. The acceptability of the act and difficulty in making the decision were closely related showing the participants decided the situation was acceptable but found the decision difficult to make. The primarily deontological responses of the participants support the prior prediction of Christians (evangelical and mainline) moral judgments relating to empathic concern instead of cognition [7].

In both high-conflict and low-conflict personal dilemmas, female respondents and those affiliated with the evangelical church expressed a lower level of agreement than male respondents. This finding supports prior research that found participants high in testosterone were more likely to make utilitarian decisions—especially when it involved acts of aggression and social cost [5].

Perhaps unsurprisingly, in impersonal scenarios, the decisions reflected a utilitarian decision. Additionally, approval and difficulty were not related. These results support previous research [33] suggesting that religion does have an impact on moral decision making, especially the ones that are impersonal because it does not affect the person directly. This comes from the cognitive process reflecting the participants' grounded belief system, which falls back on their religious values rather than their own personal feelings.

Related to this, was the observation that as the frequency of church attendance increased, the rated acceptability of action or moral transgressions decreased. With acceptance of action being related to a more deontological-based decision making, these results suggest that church attendance is a strong influence in moral decision making. This finding corresponds with other studies displaying a higher emotional reactivity to moral transgressions in religious individuals [1,34]. Another study found that it was more motivational influence rather than the person's religion [16]. The degree of religious involvement also influenced decisions. For example, a research was conducted to see the relationship between submission and religion. The study found that more submissive individuals were influenced by religion [35].

Both deontological and utilitarian decisions are both common and a part of culture. Indeed, deontological and utilitarian examples can be found in both classic [36,37] and contemporary work as well as in modern film. Utilitarianism labels an act as moral if it brings more good than harm to the whole of the people involved. Unlike utilitarianism, deontology does not focus on the consequences of the action. Instead, deontology focuses on the intent behind the action. For example, in *Star Trek II: The Wrath of Kahn* [38], the Spock character states, "...

that the needs of the many outweigh the needs of the few." Captain Kirk responds with, "Or the one." This is arguably an example of choice guided by utilitarian judgment. Conversely, within a deontological framework, killing would be morally unacceptable. Thus, in the film *Extreme Measures* [39], the character, Dr. Lawrence Myrick, conducts illegal experiments on homeless people in order to find a way to cure paralysis. The protagonist, Dr. Guy Luthan, discovers the unsanctioned work and exposes Dr. Myrick. Dr. Myrick asks, "If you could kill cancer by killing one person, wouldn't you just have to do that?" Dr. Luthan responds with "...you're a doctor, and you took an oath, and you're not God." As such, from a deontological standpoint, experimenting and killing an innocent person is simply immoral regardless of how many lives may be saved. Greene's [40] dual-process theory of moral judgment further distinguishes deontological inclinations as rooted in emotional responses to harmful action, while utilitarian inclinations are dependent on cognitive deliberation concerning the costs and benefits of such actions.

On a methodological level, the presentation of moral dilemmas has provided considerable insight into the psychological processes that lead to a specific choice when faced with moral dilemmas. Normally, participants are required to define actions that entail some form of harm, using utilitarian or deontological criteria to establish the acceptability of a given behaviour. However, such methods typically provide a dichotomous choice, where adopting one position simultaneously involves rejection of the opposing choice. Dichotomies such as this are acceptable only when the two comprise an inverse relationship, where one type of judgment likely precludes the other. Unfortunately, as Conway and Gawronski [7] have suggested, the predisposition to use deontological or utilitarian-based judgment may involve demonstrably separable and independent processes. Therefore, such processes could be concurrently active and, as Conway and Gawronski [7] noted, that in high-conflict dilemmas where such judgments may well be at odds [10,12], choice is ultimately driven by the dominant process at that time [7].

Traditionally, moral psychology emphasized the role of reason in moral decision-making. However, beginning in the 1990s, the role of emotion in moral dilemmas been introduced into cognitive neuroscience [10].

A perceived breach in morality is normally accompanied by heightened emotional reactions, which are a pervasive part of moral judgment [41]. Tassy and colleagues reported a negative relationship between emotional arousal and the probability of utilitarian judgment [32]. Complimentarily, findings have reported a correlation between higher emotional arousal and deontological judgments [1]. More specifically, fear and sadness were the most common emotions experienced in harm-to-save moral dilemmas [16]. Further, it is not rare for individuals to view harming the innocent as morally impermissible, even when such harm may well benefit or save the lives of multiple persons [10,42] As an emotive reaction, moral condemnation is

often potentiated when harm is couched in emotive terms [8,10,12] and when negative emotions are highlighted by the situation [43]. Nonetheless, high interpersonal differences in moral judgments and emotionality are observed in reaction to both real and hypothetical actions [44,45]. Given this, deficits in the ability to feel guilt and empathize with others often is manifest in morally inappropriate behaviour [46].

The present study as well as others [47-49] lends support to the proposition that religiosity, religious engagement influence moral judgment. Individuals vary in terms of spirituality as well as religiosity with a strong association with a propensity to choose a deontological stance reported elsewhere [4]. Recently, when people of faith are considered, there experimental evidence has been reported linking religious context to a concomitant increase in deontological reasoning [4]. Such findings are important in studying where people draw the line and what drives such decisions in life. For example, beliefs systems that have a foundation based on faith in an all-powerful, omnipotent God - such as Christianity - are responsible are linked to higher levels of support in state-sponsored punishment for moral transgressions but decreased levels of altruistic punishment [50,51]. Laurin and her colleagues explained the reluctance to punish in the attribution of responsibility for that punishment to God (rather than humans; 51). Given the finding that frequency of church attendance is associated with choice in the present study, reports of a selective increase in the desirability and perceived morality of inaction on Sunday [4].

Nonetheless, such drivers are heavily influenced by the faith of the individual. As noted earlier, religious faith can be assessed in terms of both intrinsic and extrinsic dimensions [26]. Here the research is equivocal [4,52,53]. On the one hand, there is research that suggests outward expressions of faith such as frequency of attendance at services are not as predictive of deontological moral judgments [4]. Conversely, participation in religious services - but not private prayer - is associated with hostility towards outgroups [52,54]. Here, however, such findings may be selectively associated with the tenets of a specific faith walk. Judeo-Christian beliefs include adherence to a number of moral rules as commanded by an omnipotent and engaged God [55,56]. Participation in religious services but not private prayer is positively associated with both higher levels of volunteerism and charitable giving [52], as well as highly levels of cooperative behaviour [57].

In the present study, the moral self-image (MISI) was generally predictive of both response as well as acceptability and difficulty ratings. Previous research has found a positive relationship between religiosity and social compliance [58], as well as higher levels of concern for social image [16,59]. As noted elsewhere [16], it would be valuable to examine whether social desirability measures are a moderating factor when considering the role of religious faith in responses to moral dilemmas.

While there is often considerable overlap between the Christian denominations designated as mainline protestant and those designated as evangelical, there are relevant distinctions between the two. The full scope of such distinctions is beyond the scope of our report [see 60]. Briefly, the label of mainline Christian (protestant) denominations emerged in the early 20th century [61]. Examples in the United States include the United Methodist Church, the Presbyterian Church (USA), Evangelical Lutheran Church in America (ELCA) and the Episcopal Church, with the denominations often aligned and partner on a variety of social issues [62]. This group is differentiated as Protestant denominations that are considered more charismatic, evangelical, and/or fundamentalist in practices. Examples include including Baptist, Mennonite, Holiness, Pentecostal, and nondenominational churches [63,64]. At least in the United States, evangelical denominations stress belief in the necessity of being a born-again believer, a central mission of evangelism, and full affirmation of the traditional position of the full authority, historicity, and inerrancy of the Bible [63]. Nearly a quarter of the US population, evangelicals are diverse and drawn from a variety of denominational backgrounds, including Baptist, Mennonite, Methodist, Holiness, Pentecostal, Reformed and nondenominational churches. [63,64].

Relevant here is relationship between religious affiliation and responses to moral decisions including moral dilemmas [see 62]. Prior research has suggested three ethical drivers of moral reasoning that differ in terms of focus. The three, the ethic of divinity, community, and autonomy each may dominate moral reasoning but are nonetheless not incompatible [62] and are embraced cross a variety of cultures [e.g., 65-69] as well as American adults [70]. Central for the present discussion are the ethics of community and divinity. Here, the former informs moral reasoning in terms of social groups and defined by their members, with heightened consideration of embedded customs, group interests, and the welfare of groups. Conversely, the ethic of divinity emphasizes the role of spiritual or religious entities as moral agents [62], and a concomitant focus on God as the final authority, the cleanliness of spirit, and the natural law [71,72]. Both evangelical and mainline Protestants often evoke the ethic of divinity but diverge on the type of issue - public for the former and private for the latter group of Protestants.

A major limitation of this study was that the sample was limited to one Christian university, located in a specific region of the United States. In addition, the results were based on a cross-sectional consideration of evangelical and mainline Christian college students. It would be of interest to extend our research framework to a more representative national and perhaps multi-national sample. Consideration of how the variables considered on the present study inform changes in decision-making across time may well be of interest. Nonetheless, the present results do highlight the importance of a number of participant characteristics that

influence moral decisions, especially among those who are active participants in the Christian faith. Future research should explore further the practical implications of our results, not only with Christian college students but individuals of other faith walks and the larger community of adults.

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