# Proposed Study 3

**Method**

Study 3 will analyze the interaction between moral conviction and social consensus using a within-subjects design. Participants will be randomly assigned to either the low or high social consensus manipulation condition, then, they will be randomly assigned to either the low or high moral conviction manipulation condition. This results in a 2x2 design, where participants will be in 1 of 4 experimental conditions (low consensus/low conviction, low consensus/high conviction, high consensus/low conviction, high consensus/high conviction). The primary outcome, attitude towards the highly polarized issues, will be measured both before and after experimental manipulation. The Institutional Review Board at the University of Missouri will review and approve all submitted materials for Study 3 before research begins.

***Participants***

An estimated 210 undergraduate students 18 years of age or older at the University of Missouri will participate in this study. Participants will be recruited through an online survey platform and offered psychology course credit in exchange for their participation. Participants will be asked to select categories that best described their race/ethnicity. Participants will also self-selected their preferred gender identity.

***Materials and Procedure***

Participants will begin by reading our cover letter and providing consent. Next, they are provided the Ethical Standards of Judgement Questionnaire. Then, for our two highly polarized issues (Universal Health Care and Capital Punishment), participants will provide their level of support for the issue (our primary outcome), as well as how much moral conviction they have regarding their position. Next, as in Study 2, participants will be asked to read a short essay about each of our two issues and respond to a series of survey questions. To manipulate the perception of moral conviction, participants will be randomized one of two conditions: 1) Moral Responsibility (increasing moral conviction) or 2) Hedonic (decreasing moral conviction). Thus, each participant in will be receiving two essays, one on each topic, that all share the same moral framing. We chose to focus on the moral responsibility and hedonic framings based on preliminary data from Study 2, as well as to be mindful of power, given that the study is a 2x2 design. All essays are readable at a high school level, as assessed by a Flesh-Kincaid readability score and have comparable word counts.

Then, as in Study 1, participants will estimate the proportion of the US population in 2018 that would be in support of the two polarized issues. Afterwards, participants will be given information about social consensus on each of these four issues. To manipulate the perception of social consensus, participants will be randomized into a ‘high social consensus’ or ‘low social consensus’ condition. In both conditions, participants will be given feedback consisting of the base rate of support that the general American public (in 2018) had for the two highly polarized issues. Participants in the ‘high social consensus’ condition saw results that will be 20% higher than the true base rate. Participants in our ‘low social consensus’ condition saw results that will be 20% lower than the true base rate. For example, if 65% of Americans agree that the Death Penalty is necessary in the US, the high social consensus condition would be told that 85% agree, and the low social consensus condition would be told that 45% agree. After the social consensus information, participants are asked to indicate their degree of surprise at the stated level of public support and estimate levels of public levels support in 2023. After receiving both the moral conviction and social consensus manipulations participants are measured on the primary outcome again (asked to identify their level of support for each of each of the two highly polarized issues). Finally, participants will complete several individual difference measures and provide demographic information.

***Measures***

**Primary Outcome.** Participant support for the highly polarized issues will be captured in the same way as Study 2, as a continuous variable ranging from strong disagreement (-50) to strong agreement (50) with the following statements: 1) “The US government needs to implement Universal Health Care because basic population needs are not being met.” (*Universal Healthcare*), and 2) “Capital Punishment (the Death Penalty) is necessary in the US” (*Death Penalty*). Likewise, moral conviction will be assessed using the same composite measure as in Study 2.

Secondary Outcomes. Estimates of public support for the four highly polarized issues will be obtained by asking participants to estimate what percentage of the American public would agree with the above statements. Participants provided a number ranging from 0-100%. Separate estimates will be obtained for 2018 and 2023. Participants also will be asked to rate how ‘surprised’ they will be at the 2018 social consensus information provided. Surprise was measured with a 5-point Likert scale ranging from ‘Not Surprised’ (1) to ‘Very Surprised’ (5).

Individual differences in deontological and utilitarian orientation will be measured using the Ethical Standards of Judgement Questionnaire (ESJQ) developed by Love, Salinas, and Rotman (2020). Six items measure deontological orientation (e.g., “Solutions to ethical problems are usually black and white”), and six items measure utilitarian orientation (e.g., “When people disagree over ethical matters, I strive for workable compromises”). Participant agreement with these statements was measured with 5-point Likert scales ranging from ‘Strongly Disagree’ (1) to ‘Strongly Agree’ (5). Each six-item subscale showed satisfactory internal consistencies with Cronbach’s α of .783 (deontology) and .750 (utilitarianism).

Health literacy will be measured using the Single Item Health Literacy Screener (SILS) developed by Morris, MacLean, Chew, and Littenberg (2006). Health literacy is measured by self-reported confidence with medical forms (e.g., “How confident are you filling out medical forms by yourself?”) using a 5-point Likert scale ranging from ‘Never’ (1) to ‘Always’ (5). We used two separate measures of numeracy. The Subjective Numeracy Scale (SNS) developed by Zikmund-Fisher, Smith, Ubel, and Fagerlin (2007) contains four items that measure cognitive abilities, e.g., “How good are you at working with fractions”), rated with 5-point Likert scales ranging from ‘Not at all good’ (1) to ‘Extremely good’ (5). An additional four items measure preference for numeric information, e.g., “When reading the newspaper, how helpful do you find tables and graphs that are parts of a story?”), rated with 5-point Likert scales such as ‘Not at all helpful’ (1) to ‘Extremely helpful’ (5).

***Power and Statistical Analysis***

A minimum sample of 210 participants was needed to achieve 95% power for a linear multiple regression with the following parameters: ANOVA, Fixed effects, special, main effects and interactions, an effect size of .25, an alpha of .05, four groups. Power was determined a-priori using G-power 3.1.9.7 (Faul, Erdfelder, Lang, and Buchner, 2007; Faul, Erdfelder, Buchner, and Lang, 2009). The two highly polarized beliefs that will be surveyed will all be treated as continuous variables. We will examine the effects of the moral conviction condition (increasing or decreasing moral conviction), the effect of the social consensus condition (high or low social consensus), as well as the interaction between moral conviction and social consensus on our outcome measure. All tests will be conducted in R and considered statistically significant when P <.05.

***Study 3 Hypotheses***

We predicted high social consensus would lead to more positive support for highly polarized issues (H1), which would be a replication of Study 1. Additionally, our second hypothesis is that increased moral conviction will reduce the effect of social consensus and conversely, decreased moral conviction will increase the effect of social consensus (H2). This seems likely, given prior literature indicating that high levels of moral conviction inoculate individuals from the effects of social consensus, however, this has not been experimentally tested previously.

**Results**

We plan on testing our hypotheses with a within-subjects analysis of variance (ANOVA) model comparing support for the highly polarized issues both before and after our paired social consensus and moral conviction manipulation. The alpha level for these analyses was .05.