

# Published Results for Graham et. al. (2009)

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## Contents

<b>Preamble</b>	<b>1</b>
<b>Study 1</b>	<b>2</b>
Demographics . . . . .	2
Cronbach's Alpha . . . . .	2
Results . . . . .	3
<b>Study 2</b>	<b>4</b>
Demographics . . . . .	4
Cronbach's Alpha . . . . .	4
Results . . . . .	4
<b>Study 3</b>	<b>6</b>
Demographics . . . . .	6
Cronbach's Alpha . . . . .	6
Results . . . . .	6
<b>Study 4</b>	<b>8</b>
Dictionary Creation . . . . .	8
Verification Method . . . . .	8

## Preamble

The paper that this thesis is based on can be found on [Google Scholar](#). The published results can be downloaded from the [Harvard Dataverse](#)

For reference, I include all the results that are published in the paper that are relevant for this thesis which includes descriptive figures and general linear model results. Latent Variable model results are excluded in this reference guide.

# Study 1

## Demographics

- Participants:  $n = 1613$  (53% male, median age 29)
- Political Identity Distribution
  - 902 Liberal
  - 366 Moderate
  - 264 Conservative
- 65 participants were removed because they answered on the upper half of the relevance scale for the Astrology item
  - The number of observations in the dataset posted on the dataverse reflects the total considered for the data analysis once these participants were removed

## Cronbach's Alpha

- Moral Relevance
  - Harm: .62
  - Fairness: .67
  - Ingroup: .59
  - Authority: .39
  - Purity: .70

## Results

Figure 1

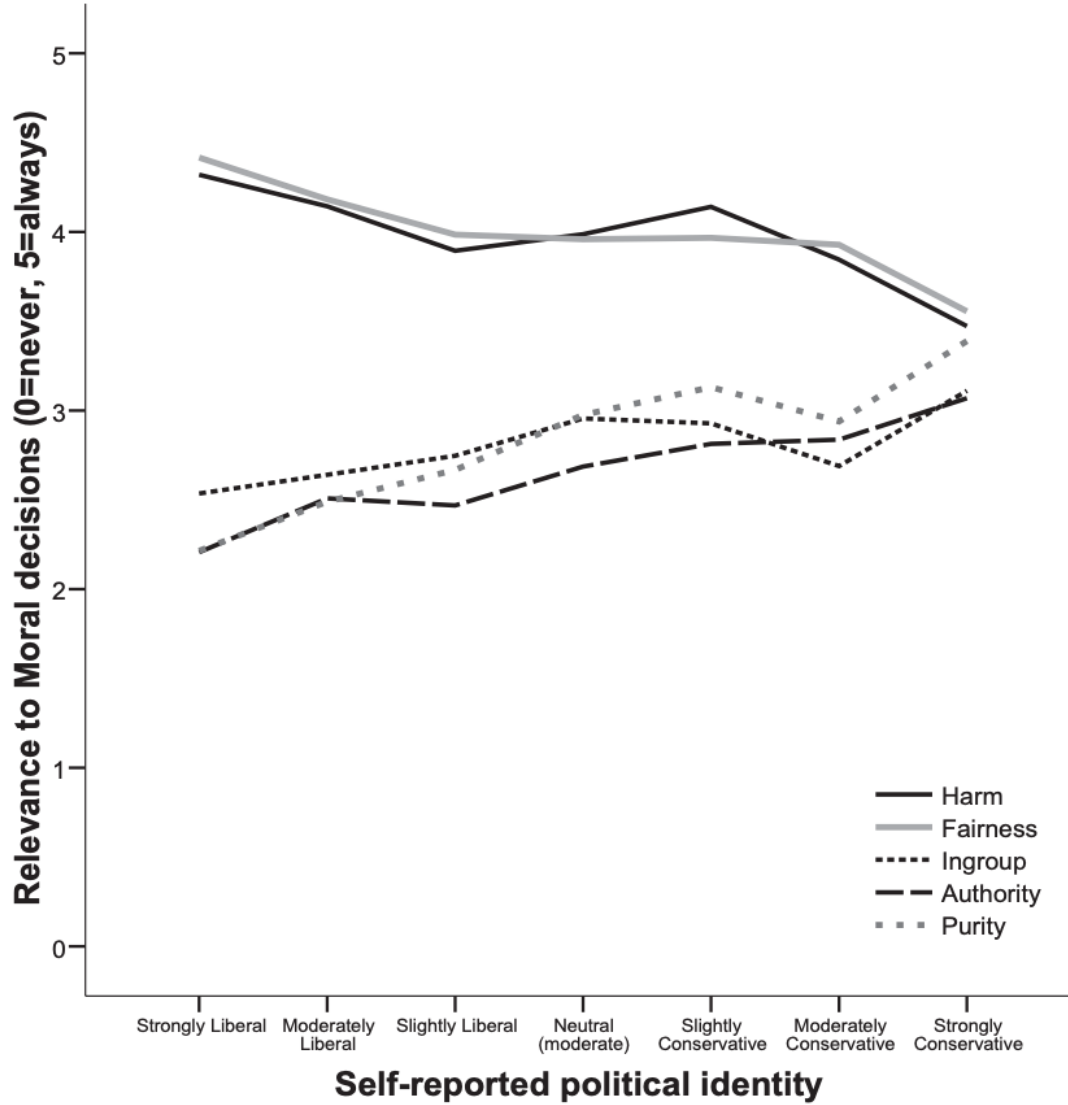


Figure 1. Relevance of moral foundations across political identity, Study 1.

### General Liberal Model

Comparison of the different sets of moral foundations using a **repeated-measures general linear model** including politics as a covariate.

- The aggregate moral relevance ratings for individualizing foundations were higher than the aggregated ratings for the binding foundations  $F(1, 1207) = 1895.09, p < .001, \eta^2$

= .61.

- The effect as moderated by politics:  $F(1, 1207) = 224.34$ ,  $p < .001$ ,  $\eta^2 = .16$ .

## Study 2

### Demographics

- Participants:  $n = 2212$  (62% female, 38% male; median age 32)
- Political identity Distribution
  - 1174 Liberal
  - 538 Moderate
  - 500 Conservative
- 77 participants were excluded because of high ratings on the astrology item

### Crombach's Alpha

- Moral Relevance
  - Harm: .71
  - Fairness: .70
  - Ingroup: .71
  - Authority: .64
  - Purity: .76
- Moral Judgment
  - Harm: .50
  - Fairness: .39
  - Ingroup: .24
  - Authority: .64
  - Purity: .74

## Results

Figure 3

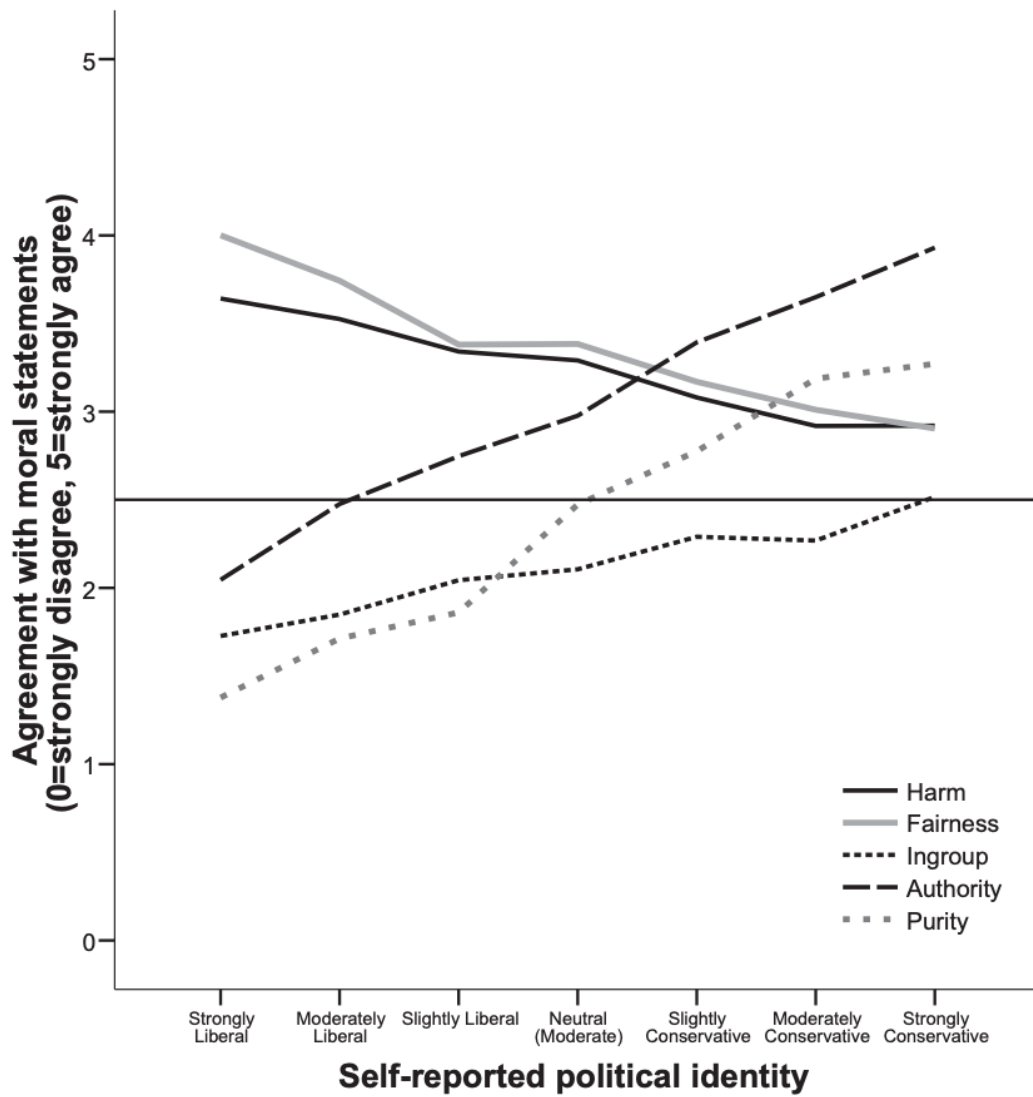


Figure 3. Agreement with moral statements across political identity, Study 2. The horizontal line at 2.5 indicates division of agreement and disagreement (2 indicates slight disagreement and 3 indicates slight agreement).

## Moral Relevance

- Ratings for individualizing foundations were higher than ratings for the binding foundations for relevance items  $F(1, 1205) = 1215.62, p < .001, \eta^2 = .50$ .
- This effect was moderated by politics  $F(1, 1205) = 450.42, p < .001, \eta^2 = .27$ .

## Moral Judgment

- Ratings for individualizing foundations were higher than ratings for the binding foundations for relevance items  $F(1, 1200) = 635.58, p < .001, \eta^2 = .35$ .
- This effect was moderated by politics  $F(1, 1200) = 649.40, p < .001, \eta^2 = .35$ .

## Study 3

### Demographics

- Participants:  $n = 8193$  (40% female, 60% male, median age 34)
- Place of origin
  - 6728 US
  - 513 Europe
  - 281 Canada
  - 183 Latin America
  - 488 other areas
- Political Ideology Distribution
  - 4679 Liberal
  - 847 Moderate
  - 1093 Conservative
  - 1034 Libertarian
  - 304 Other
  - 233 Don't Know/Not Political
  - Analysis focused on 6619 participants who indicated something on the 7-point liberal-conservative scale

### Cronbach's Alpha

- Harm: .69
- Fairness: .69
- Ingroup: .69
- Authority: .67
- Purity: .58

## Results

Figure 4

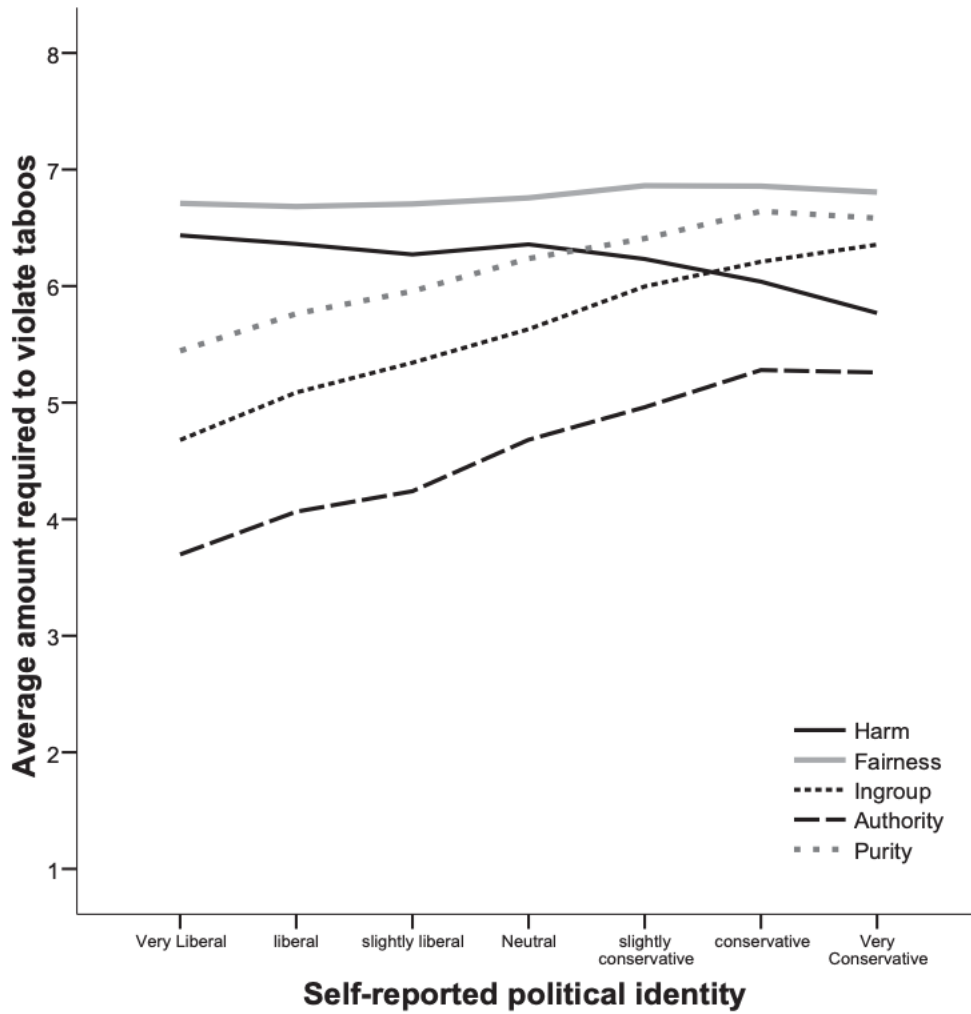


Figure 4. Average amount required to violate foundation-related taboo trade-offs across political identity, Study 3. Response scale was as follows: 1 = \$0 (*I'd do it for free*), 2 = \$10, 3 = \$100, 4 = \$1,000, 5 = \$10,000, 6 = \$100,000, 7 = a million dollars, 8 = never for any amount of money.

- The aggregated moral sacredness ratings for individualizing foundations were higher than the aggregated ratings for binding foundations  $F(1, 6596) = 3689.66, p < .001, \eta^2 = .36$ .
- This effect was moderated by politics  $F(1, 6596) = 236.28, p < .001, \eta^2 = .18$ .
- The more liberal participants showed a greater difference between the individualizing and binding moral foundations for their overall degree of unwillingness to violate the foundations.

# Study 4

## Dictionary Creation

### Method

1. Start with the core concepts from each of the five foundations
2. Contained expansive phase and contractive phase – occurred before reading the sermons
  - **Expansive phase:** generate as many associations, synonyms and antonyms for foundation words as possible using thesauruses and conversations
  - **Contractive Phase:** deleted words that seemed too distantly related to the five foundations and also words whose primary meanings were not moral

### Source

- Original Moral Foundations Dictionary
  - on [OSF](#)
  - on [Moral Foundations Webpage](#)
- Moral Foundations 2.0 – New Version
  - on [OSF](#)
  - on Frimer’s [Personal Webpage](#)

## Verification Method

The work was verified by selecting 23 words from the dictionary that yielded more than a 0.02% difference and verified it in context. Raters scored a usage as a 1 if it supported or was consistent with the foundation, a -1 if it negated or rejected the foundation, and 0 if it was irrelevant to the foundation in question.

### 23 Words

- violent and war (for Harm)
- justice and justifi (for Fairness)
- community, group, individual, and nation (for Ingroup)
- authority, command, father, law, leader, mother, obedient, obey, rebel, submit, and tradition (for Authority)
- holy, sin, sinner, and sins (for Purity).