

# Change My View

## Do Moral Appeals Facilitate Compromise?

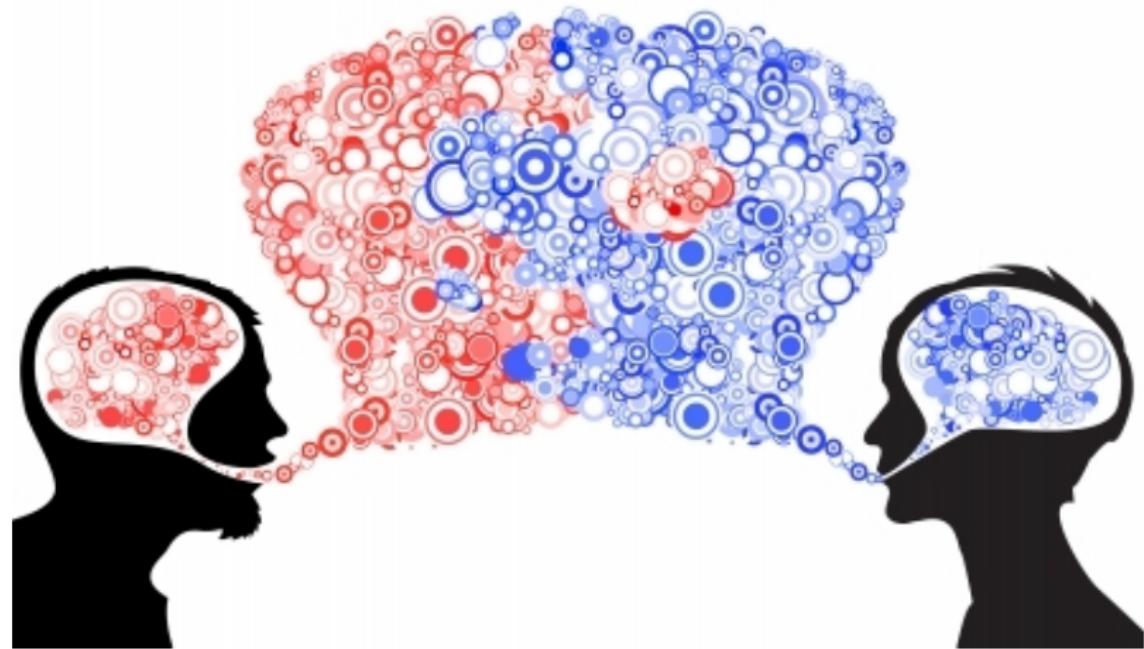
Patrick W. Kraft

MAPPS Meeting  
Marquette University

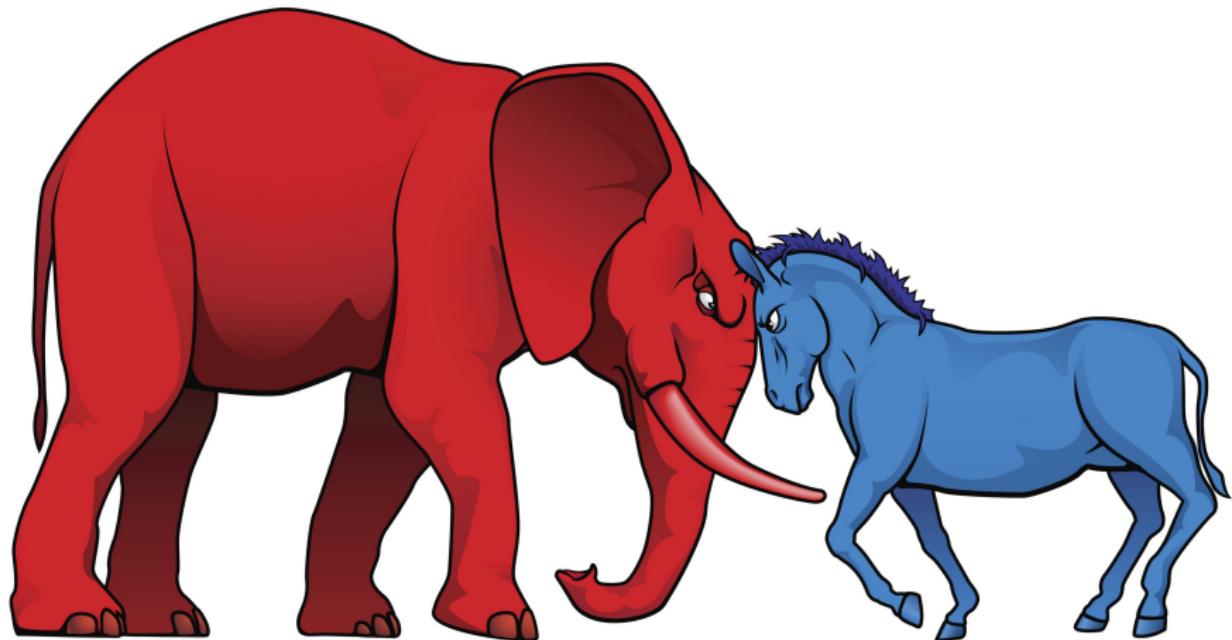
October 12<sup>th</sup> 2018



# Introduction



# How Can We Overcome Political Disagreements?



# Political Disagreements and Moral Considerations

## ► Moral Conviction Literature:

Liberals and conservatives are less likely to compromise if they hold moral convictions about politics.

(e.g., Skitka and Morgan, 2014; Ryan, 2017)

# Political Disagreements and Moral Considerations

- ▶ **Moral Conviction Literature:**

Liberals and conservatives are less likely to compromise if they hold moral convictions about politics.

(e.g., Skitka and Morgan, 2014; Ryan, 2017)

- ▶ **Moral Foundations Literature:**

Liberals and conservatives are more likely to compromise if they focus on the same moral foundations.

(e.g., Graham, Haidt, and Nosek, 2009; Haidt, 2012)

# Analyzing Online Discussions



## Analyzing Online Discussions

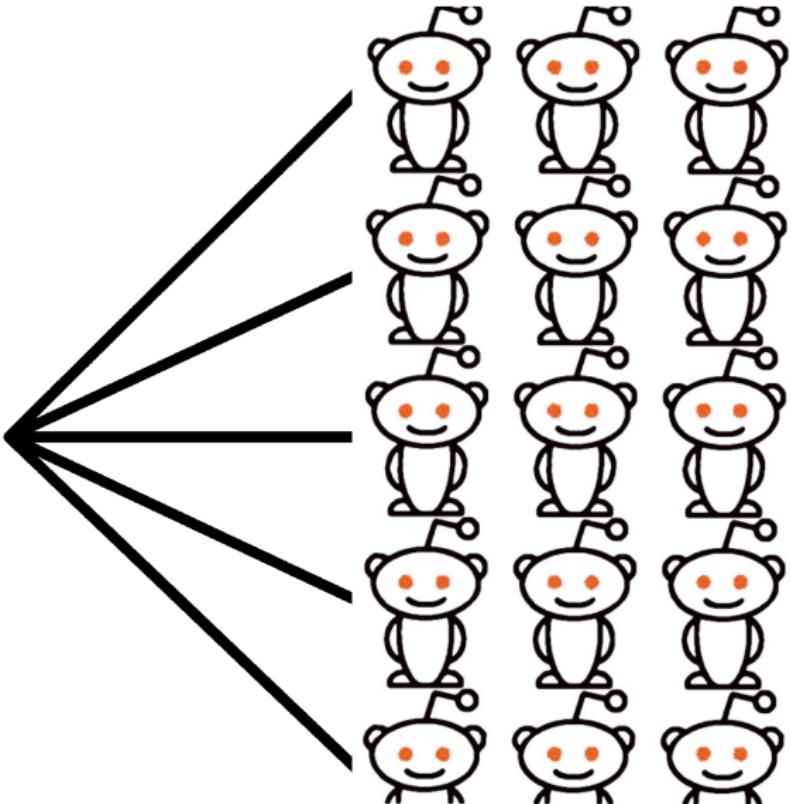


reddit

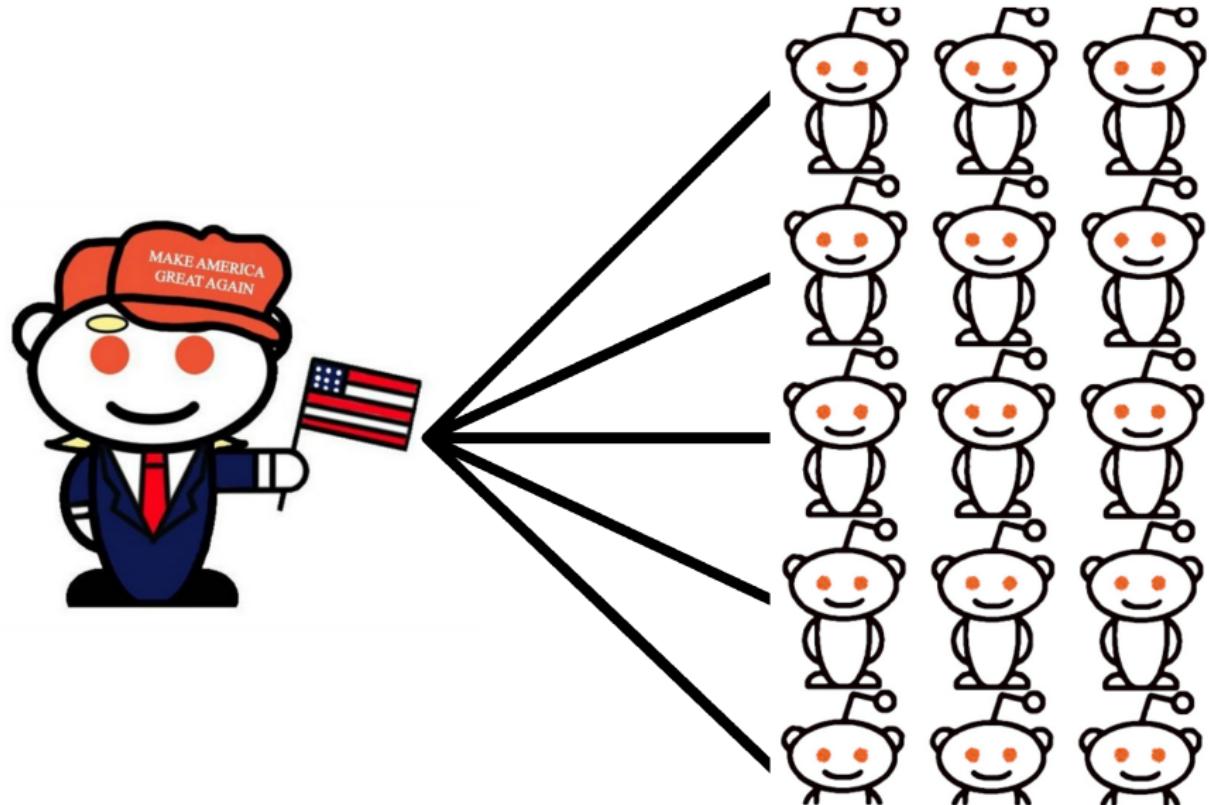
# The Subreddit /r/ChangeMyView



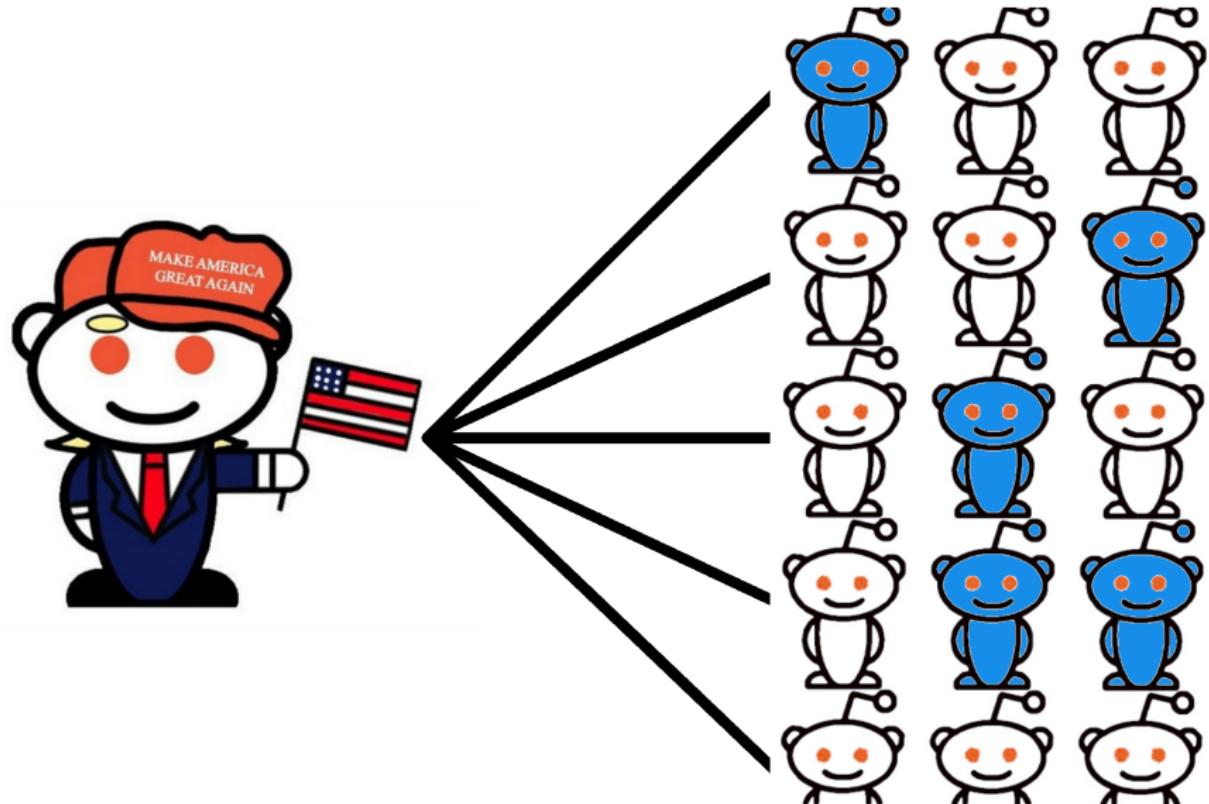
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Change My View

HOT NEW RISING TOP GILDED Wiki of CMV

Get Internet speeds starting at 100 Mbps. Make it a bundle and enjoy 200+ TV channels and unlimited calling.

CMV: A company going public inevitably will sacrifice its humanity and become inherently concerned about money only

CMV: Before bringing someone else into your life, you should have a happy independent life worth sharing. Adding a romantic partner to fix your unhappiness is not a solution.

CMV: An entire class performing extremely poor on a test is a clear indicator a professors teaching style needs to be evaluated

CMV: Religious freedom should not include the right to turn away gay children and teachers

CMV: People who wish to transition genders need to wait until they are at least 21

CMV: Reddit is just as bad as most other social media networks

CMV: Very few people in the 1% are actually "self made."

CMV: People do not put human life as highly as they say they do

CMV: People should have to disclose if they are trans before intercourse

CMV: defensive gun uses are very rare.

CMV: China, not the US, will be the leading figure in the fight against global warming

CMV: The US should abolish the death penalty. It is morally wrong, economically inefficient, ineffective as a deterrent for heinous crimes, and it implicates each citizen (as a participant in the democracy) as part of state-sponsored murder.

CMV: Having an Abortion is more harmful than going through a pregnancy.

Submit a CMV post

Delta from Popular Topics

612,245 subscribers 2,209 here now

search

remember me reset password login

weebly START YOUR WEBSITE

What is /r/change my view?

A place to post an opinion you accept may be flawed, in an effort to understand it better and move on the issue. Enter with a mindset for conversation, not debate.  
More Detail

Message the Moderators

CMV Podcast Episodes

Submission Rules

Never ever actions for more info

A Explain the reasoning behind your view, not just what that view is (50+ characters required).  
B You must personally hold the view and demonstrate that you are open to it changing.  
C Submission titles must adequately sum up your view and include "CMV" at the beginning.  
D Posts cannot express a neutral stance, must have a bias against a specific person, be self-promotional, or discuss this subreddit (visit /r/ideasforchange instead).  
E Only post if you are willing to have a

## Data Overview

Dataset of more than 10,000 discussions on /r/ChangeMyView:

- ▶ Posted between January 2013 and May 2015
- ▶ Includes matched pairs of successful and unsuccessful arguments
- ▶ Compiled by Tan et al. (2016), who studied linguistic features (e.g., use of personal pronouns) and differences in style (formatting etc.) that predict persuasiveness
- ▶ This analysis: Exploring the role of moral appeals in facilitating or inhibiting compromise

# Extracting Topics from Text – Latent Dirichlet Allocation

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**Topics**

gene	0.04
dna	0.02
genetic	0.01
...	

life	0.02
evolve	0.01
organism	0.01
...	

brain	0.04
neuron	0.02
nerve	0.01
...	

data	0.02
number	0.02
computer	0.01
...	

**Documents**

**Topic proportions and assignments**

**Seeking Life's Bare (Genetic) Necessities**

COLD SPRING HARBOR, NEW YORK—How many genes does an organism need to survive? Last week at the genome meeting here,<sup>9</sup> two genome researchers with radically different approaches presented complementary views of the basic genes needed for life. One research team, using computer analyses to compare known genomes, concluded that today's organisms can be sustained with just 250 genes, and that the earliest life forms required a mere 128 genes. The other researcher mapped genes in a simple parasite and estimated that for this organism, 800 genes are plenty to do the job—but that anything short of 100 wouldn't be enough.

Although the numbers don't match precisely, those predictions "are not all that far apart," especially in comparison to the 75,000 genes in the human genome, notes Siv Andersson of Umeå University in Sweden. He arrived at the 800 number. But coming up with a consensus answer may be more than just a matter of numbers alone, particularly as more and more genomes are completely mapped and sequenced. "It may be a way of organizing any newly sequenced genome," explains Arcady Mushegian, a computational molecular biologist at the National Center for Biotechnology Information (NCBI) in Bethesda, Maryland. Comparing an

“Genome Mapping and Sequencing, Cold Spring Harbor, New York, May 8 to 12.”

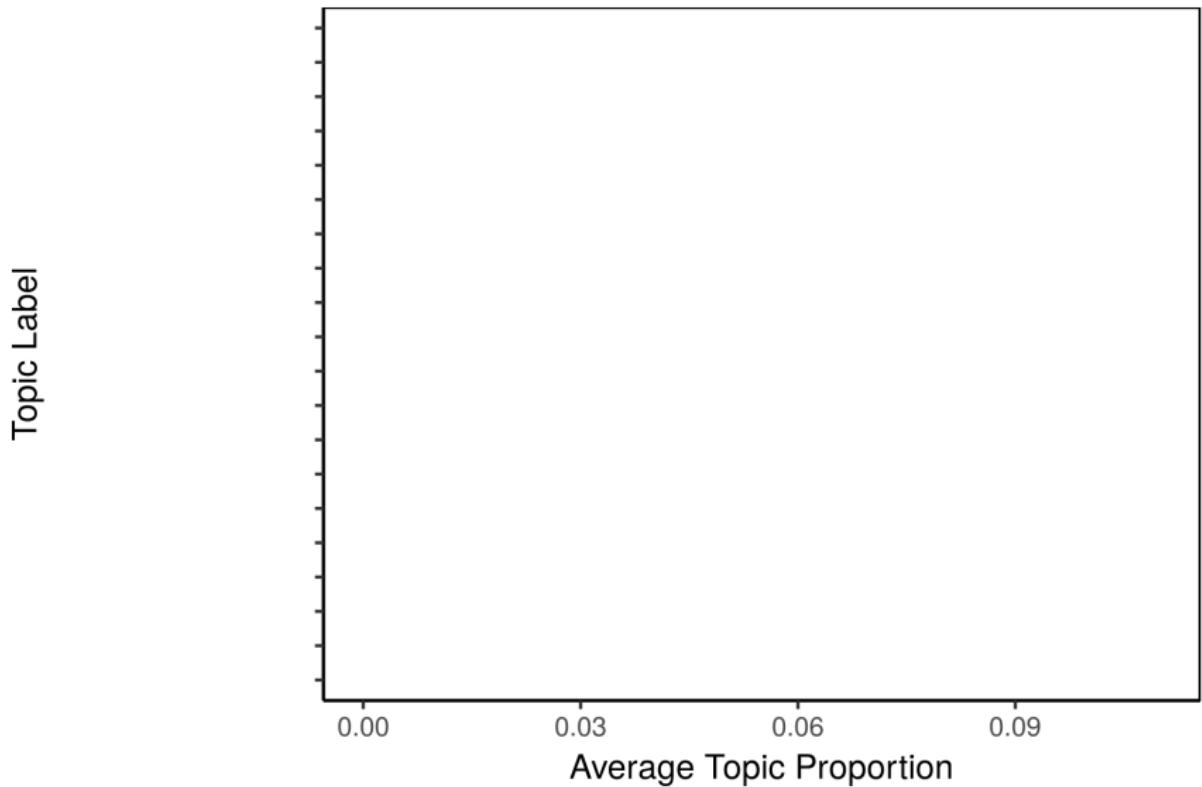
Diagram illustrating the process of extracting topics from text using Latent Dirichlet Allocation (LDA). The process starts with documents, which are represented by colored circles (pink, yellow, blue, green) corresponding to the four topics defined on the left. Each document has a bar chart showing its topic proportions. The diagram shows arrows pointing from each document circle to its respective topic circles. Below this, a flowchart details the "Stripping down" process: starting with the *Hemaphilus genome* (1703 genes), removing *Genes unique to bacteria* (233 genes) leaves 1469 genes. Then, removing *Redundant and parasite-specific genes* (4 genes) leaves 1465 genes. Finally, removing *Modern genes* (>122 genes) and *Ancient gene set* (128 genes) leaves the *Minimal gene set* (250 genes).

```
graph LR; subgraph Topics [Topics]; T1["gene<br/>dna<br/>genetic"]; T2["life<br/>evolve<br/>organism"]; T3["brain<br/>neuron<br/>nerve"]; T4["data<br/>number<br/>computer"]; end; subgraph Documents [Documents]; D1["pink circle"]; D2["yellow circle"]; D3["blue circle"]; D4["green circle"]; end; subgraph TopicProportions [Topic proportions and assignments]; DP1["bar chart"]; DP2["bar chart"]; DP3["bar chart"]; DP4["bar chart"]; end; T1 --> D1; T1 --> D2; T1 --> D3; T1 --> D4; T2 --> D1; T2 --> D2; T2 --> D3; T2 --> D4; T3 --> D1; T3 --> D2; T3 --> D3; T3 --> D4; T4 --> D1; T4 --> D2; T4 --> D3; T4 --> D4; subgraph Hemaphilus [Hemaphilus genome<br/>1703 genes]; H1["Genes unique to bacteria<br/>233 genes"]; H2["1469 genes"]; end; subgraph Mycoplasma [Mycoplasma genome<br/>409 genes]; M1["Genes unique to bacteria<br/>423 genes"]; M2["266 genes"]; end; subgraph Stripping [Stripping down]; S1["1469 genes"]; S2["1465 genes"]; S3["122 genes"]; S4["128 genes"]; S5["250 genes"]; end; subgraph Adapted [ADAPTED FROM NCBI]; A1["Modern genes<br/>>122 genes"]; A2["Ancient gene set<br/>128 genes"]; end;
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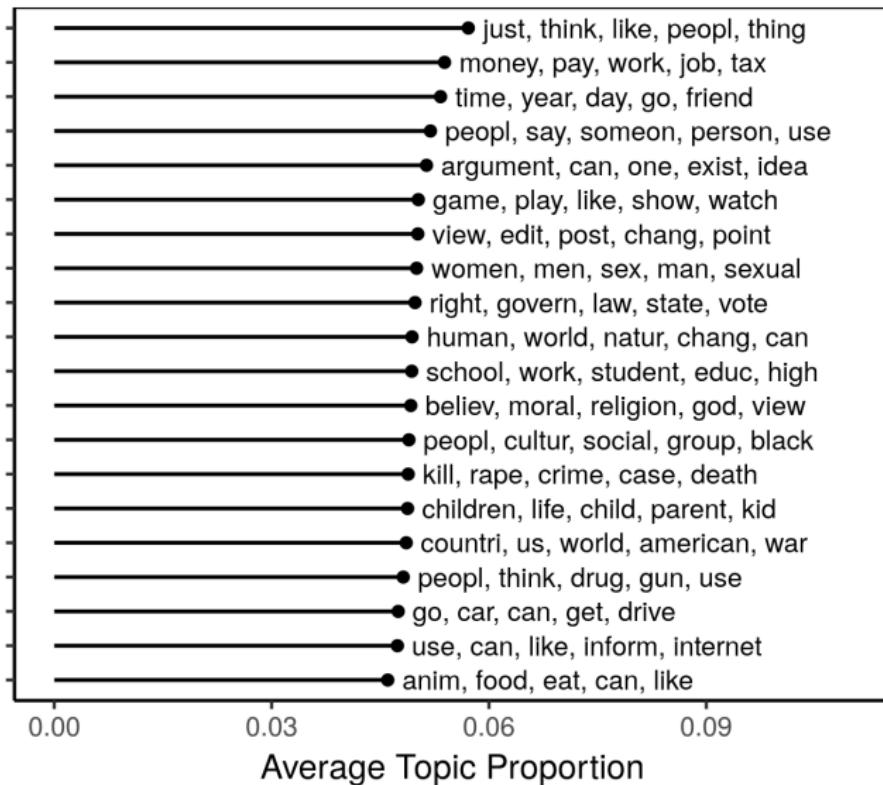
Source: Blei (2012)

## Discussion Topics on /r/ChangeMyView

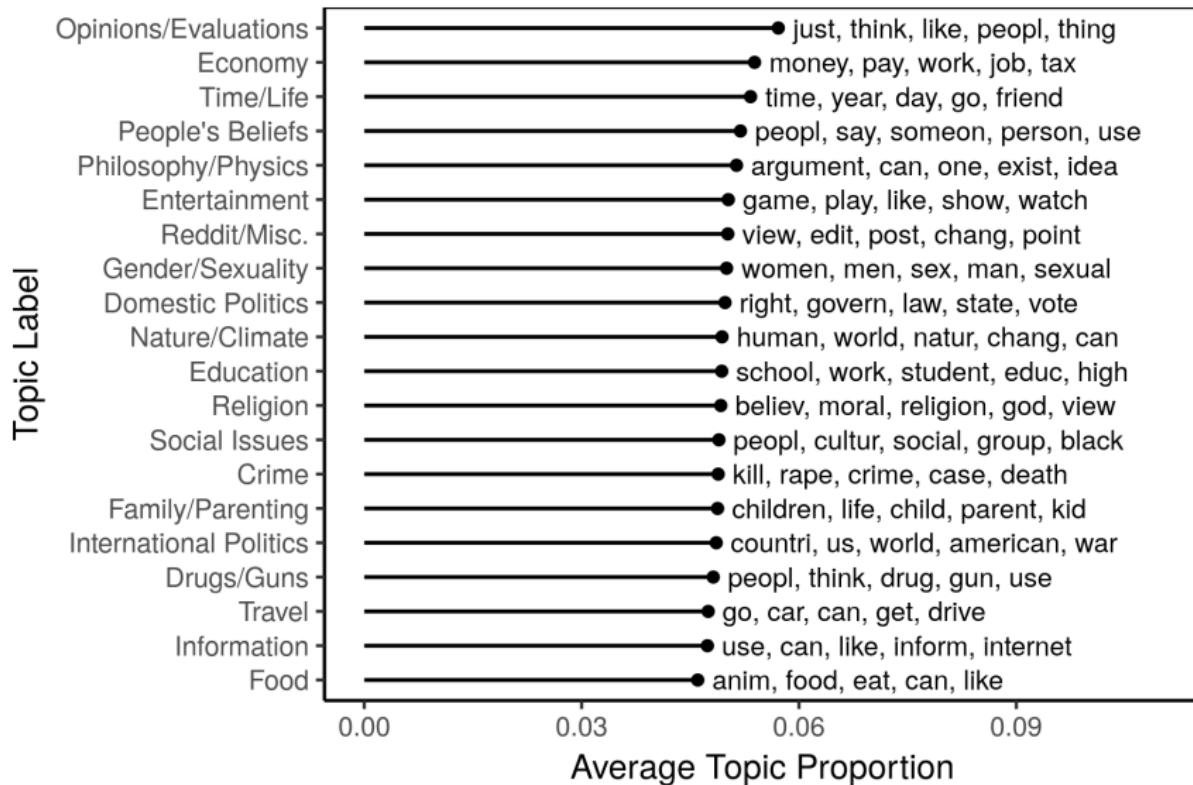


# Discussion Topics on /r/ChangeMyView

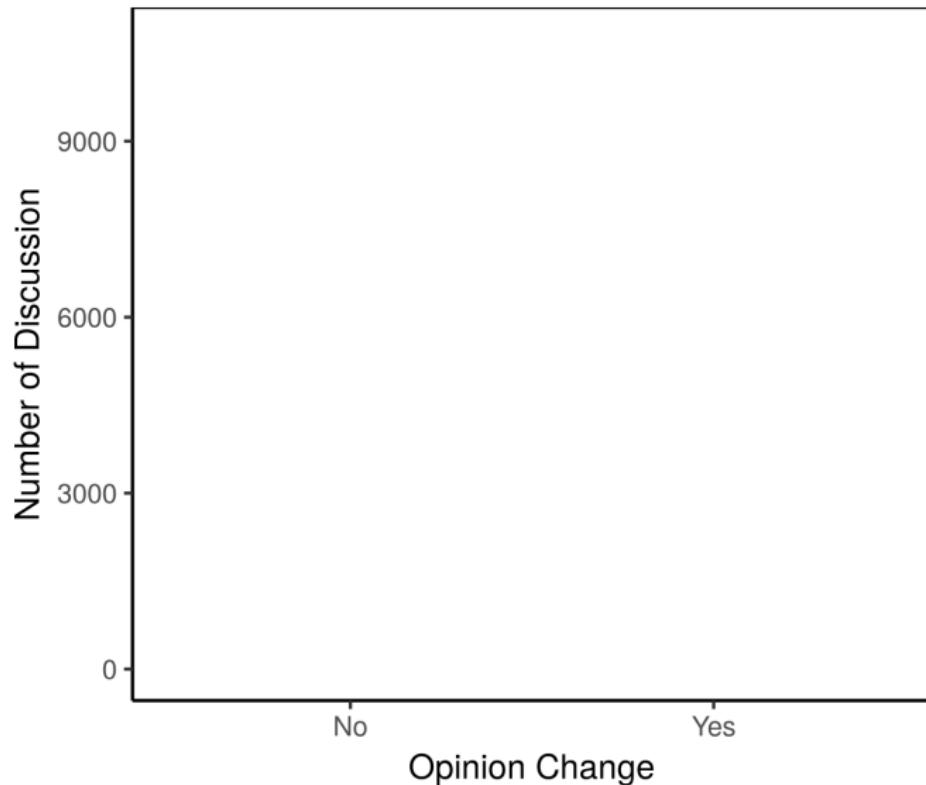
Topic Label



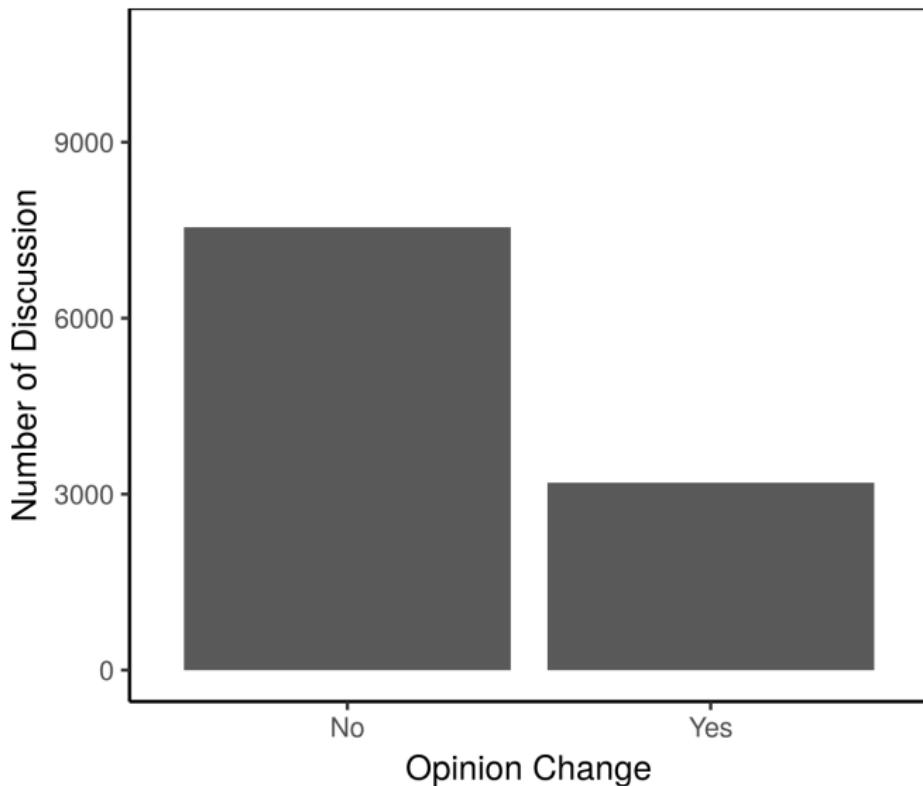
# Discussion Topics on /r/ChangeMyView



## Awarding $\Delta$ s on /r/ChangeMyView



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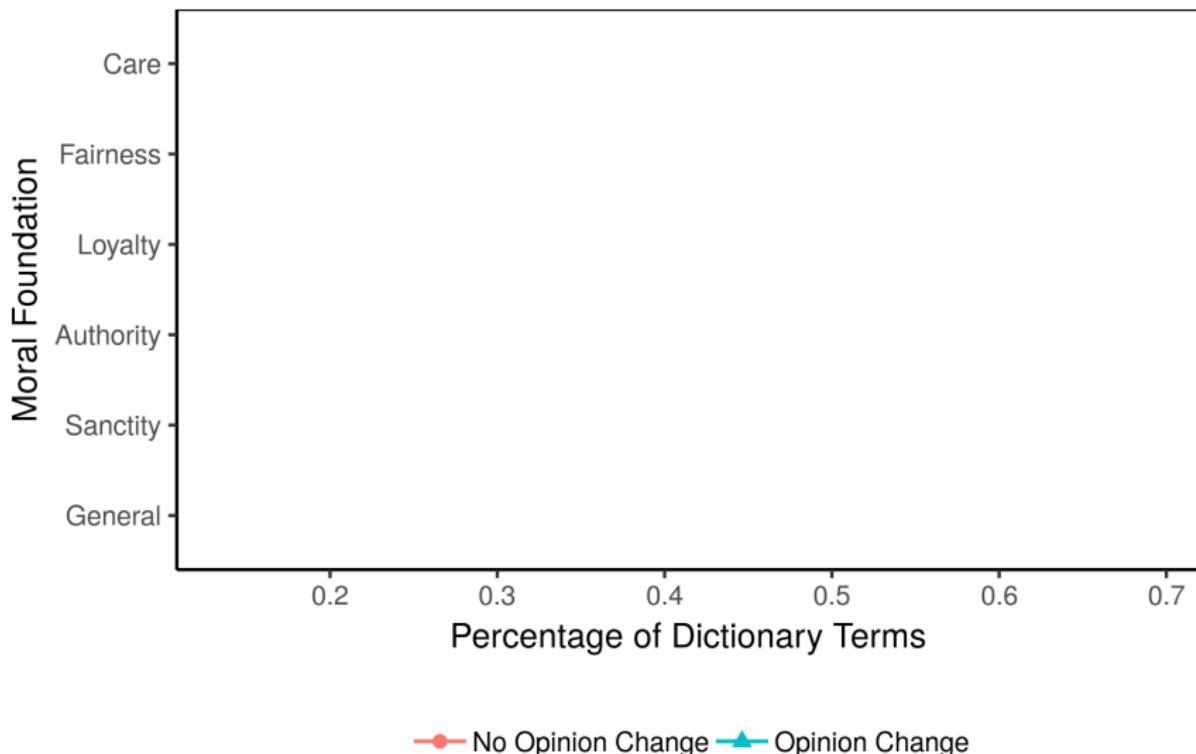
# Measuring Morality in Text

## Moral Foundations Dictionary:

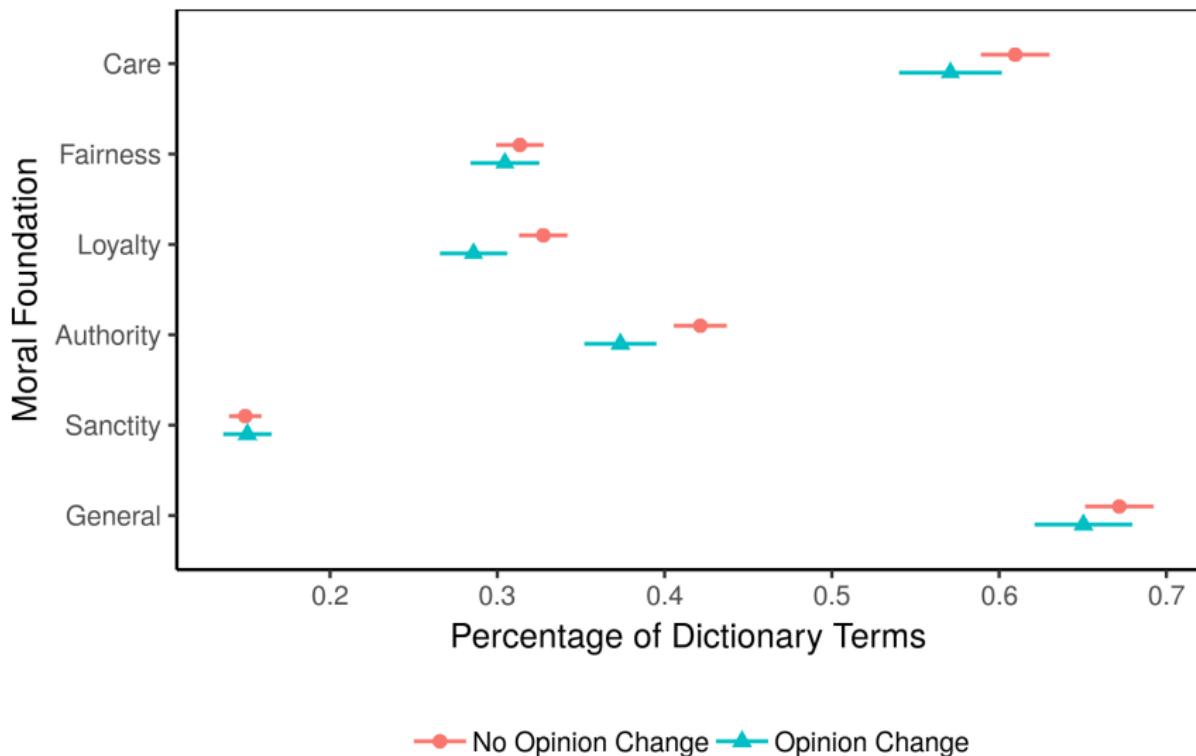
(c.f., Graham, Haidt, and Nosek 2009 and <http://www.moralfoundations.org/>)

- ▶ **Care**: caring, compassion\*, empath\*, preserve, protect\*, ...
- ▶ **Fairness**: equal\*, honest\*, impartial\*, justice, favoritism, ...
- ▶ **Loyalty**: collectiv\*, communal, family, homeland\*, unite\*, ...
- ▶ **Authority**: command, comply, duty, hierarch\*, honor\*, ...
- ▶ **Sanctity**: abstention, clean\*, decen\*, holy, innocent, ...
- ▶ **General Morality**: character, commendable, decen\*, ethic\*, moral\*, ...

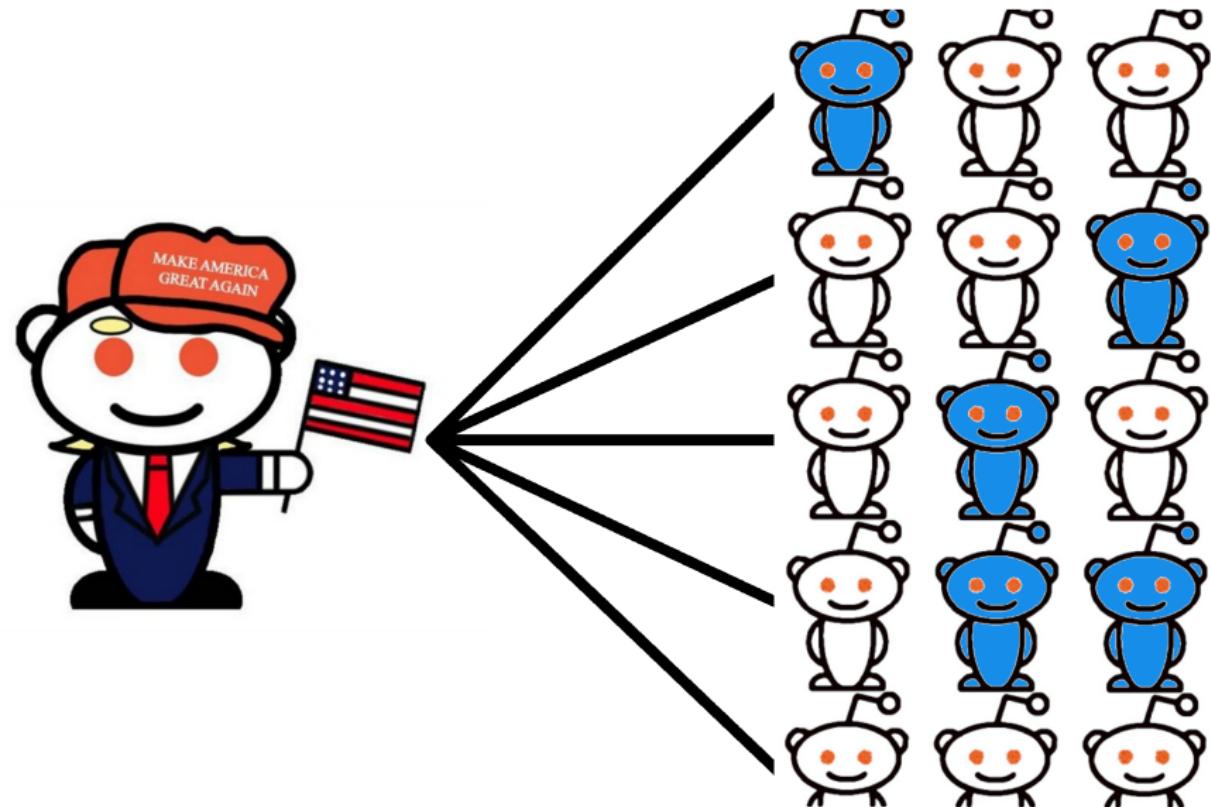
# Moral Foundations and Persuadability



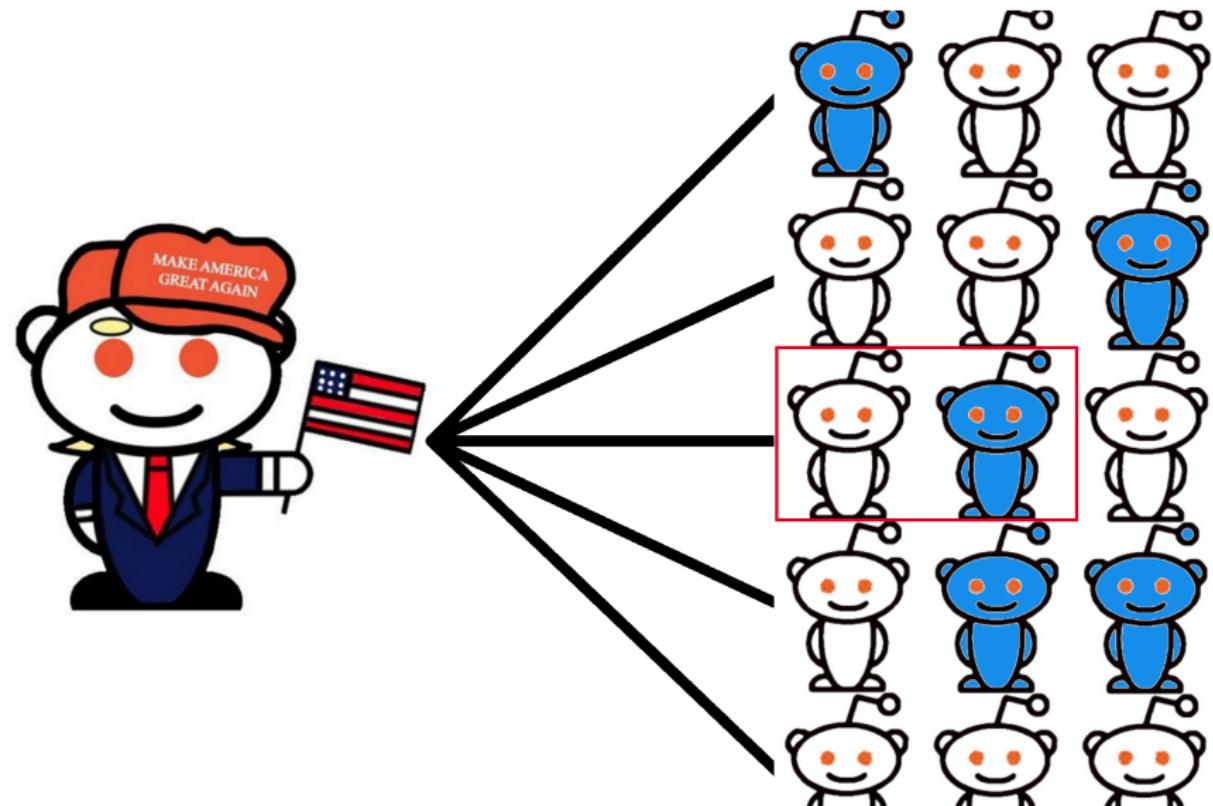
# Moral Foundations and Persuadability



# Exploring the Persuasiveness of Counterarguments



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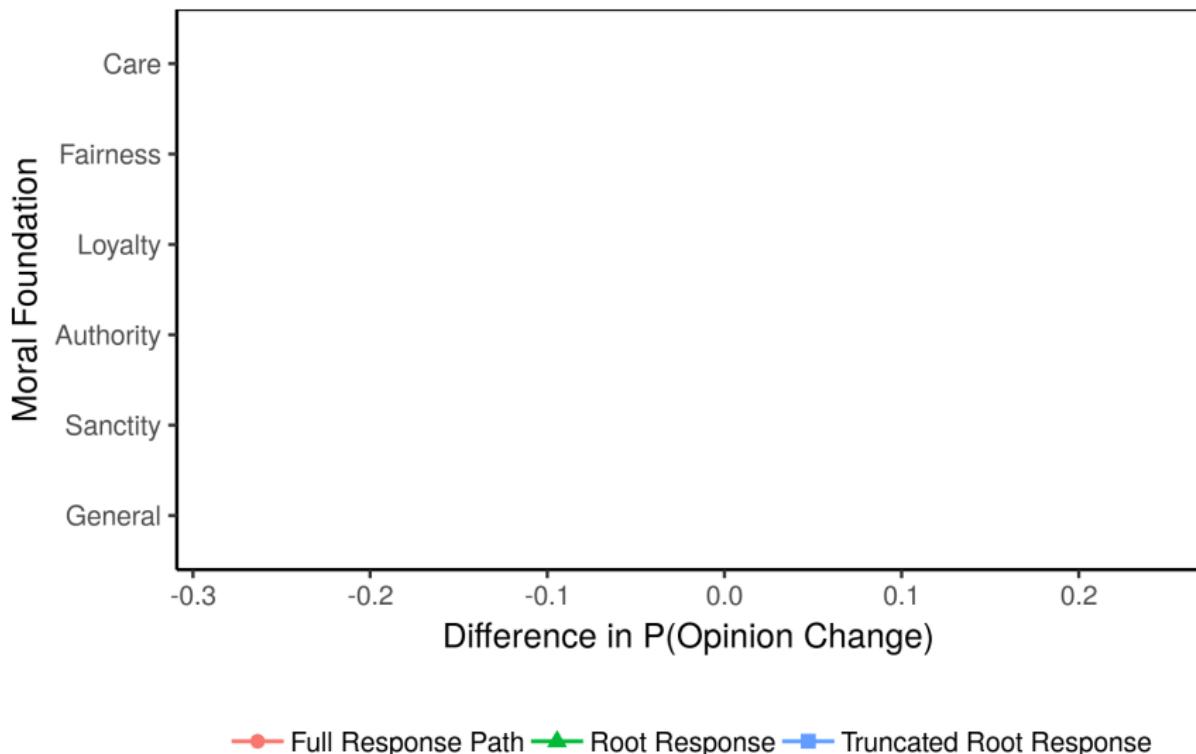
## Matching Similar Arguments

$$\text{Jaccard}(B_\Delta, B_{\neg\Delta}) = \frac{|B_\Delta \cap B_{\neg\Delta}|}{|B_\Delta \cup B_{\neg\Delta}|}$$

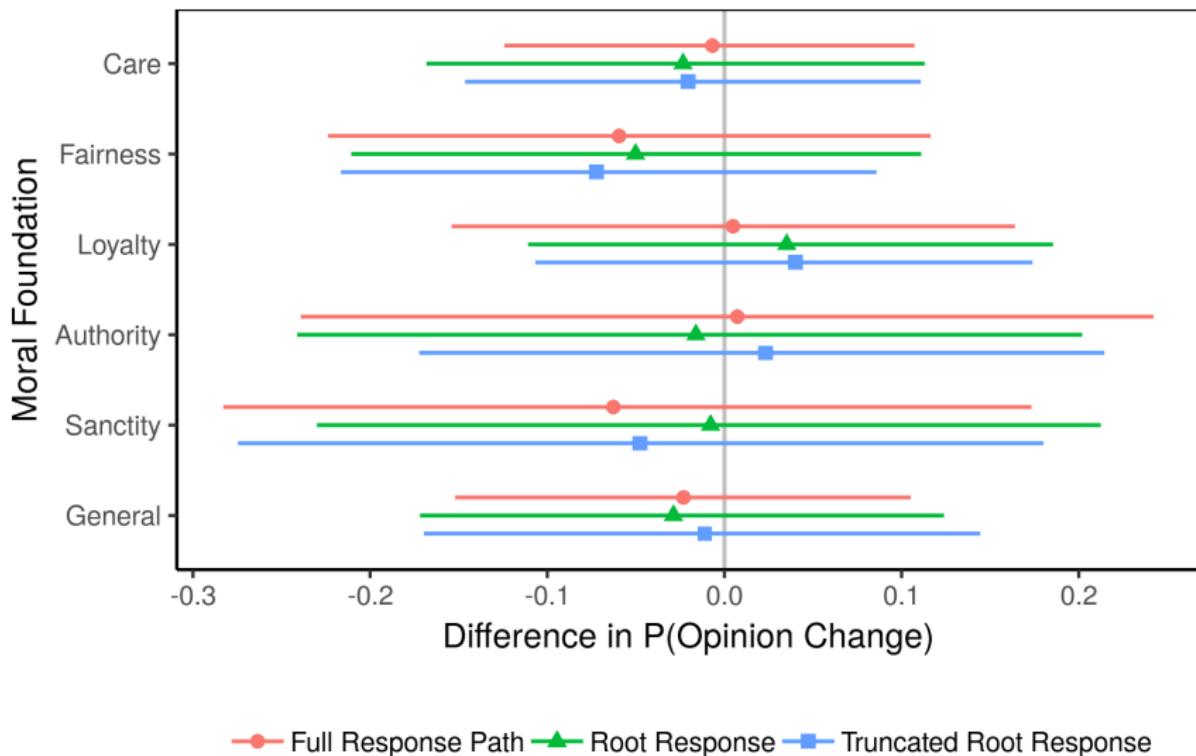
Question:

Which of two lexically similar arguments is the successful one?

# Moral foundations and Persuasiveness



# Moral foundations and Persuasiveness



# Measuring Moral Congruence

$$\text{MFT Congruence} = \frac{\vec{a} \cdot \vec{b}}{||\vec{a}|| ||\vec{b}||}$$

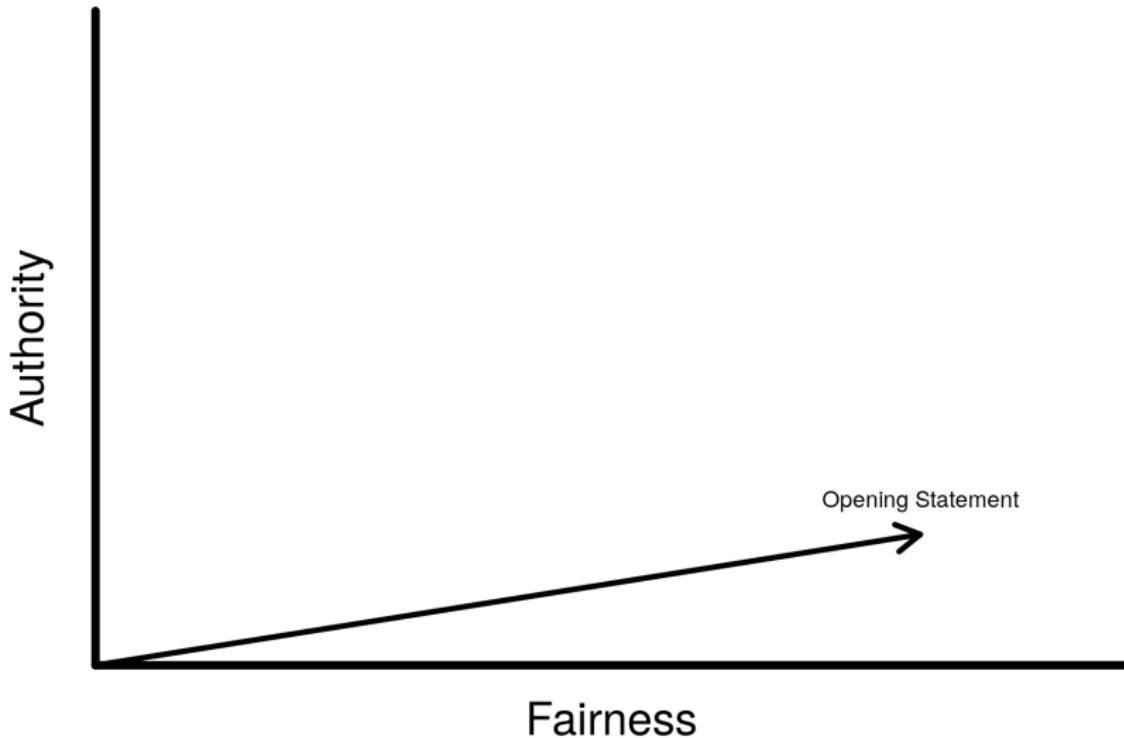
## Basic Approach:

Measure the cosine similarity in dictionary counts between opening statements and counterarguments

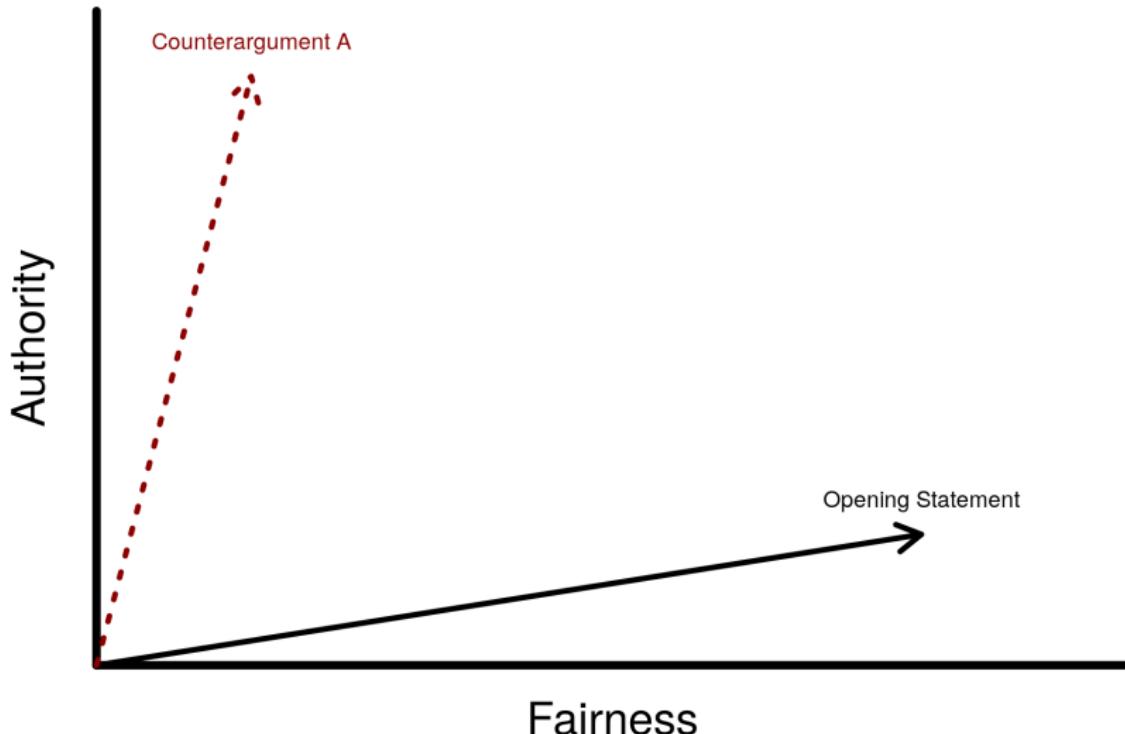
# Measuring Moral Congruence



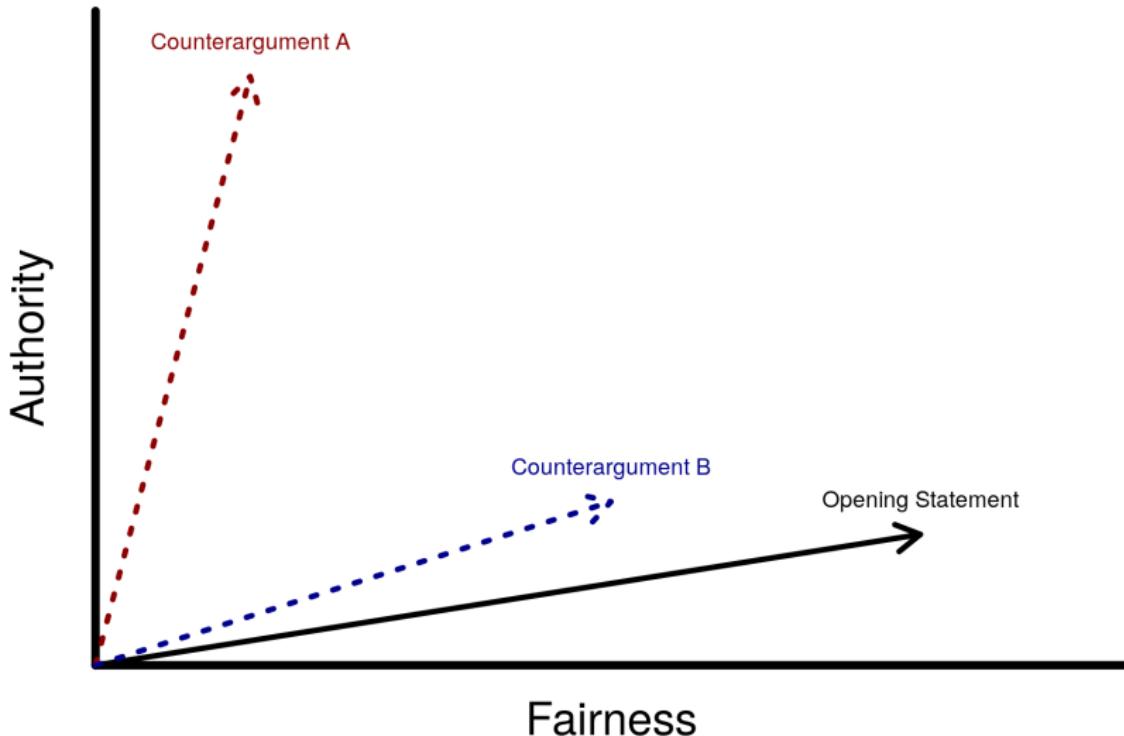
# Measuring Moral Congruence



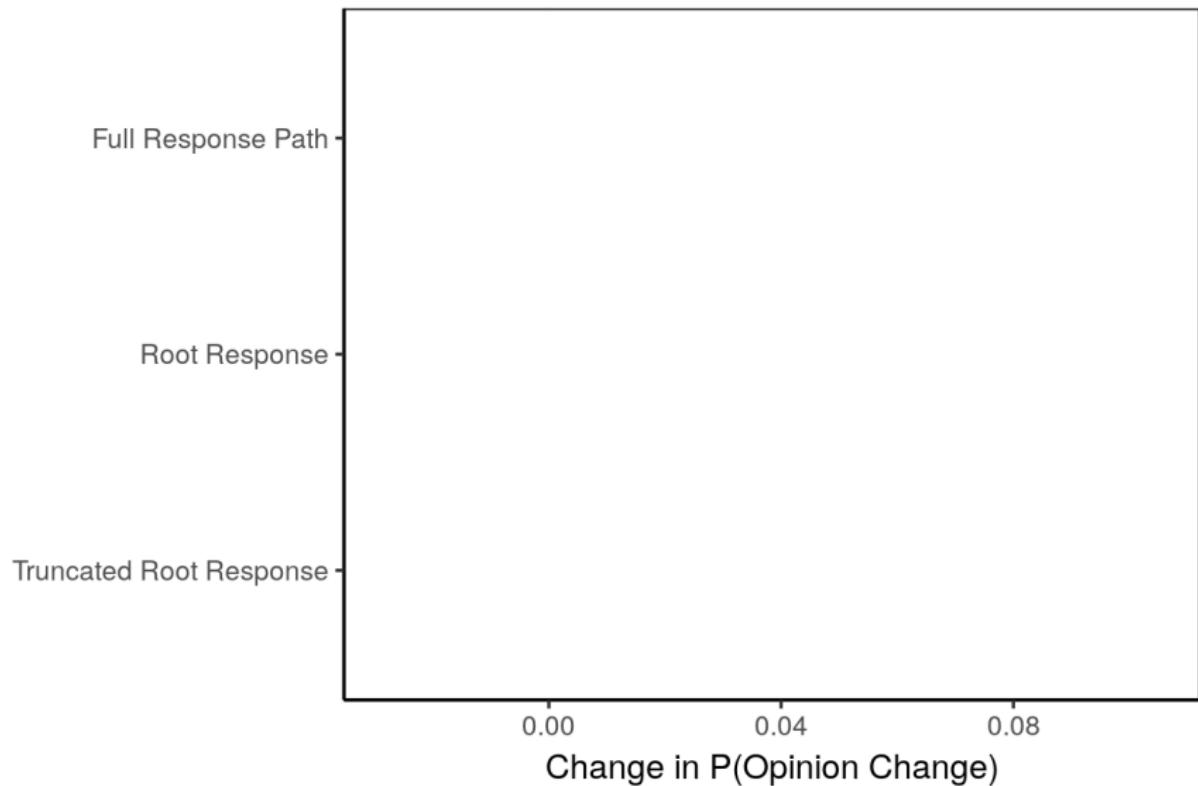
# Measuring Moral Congruence



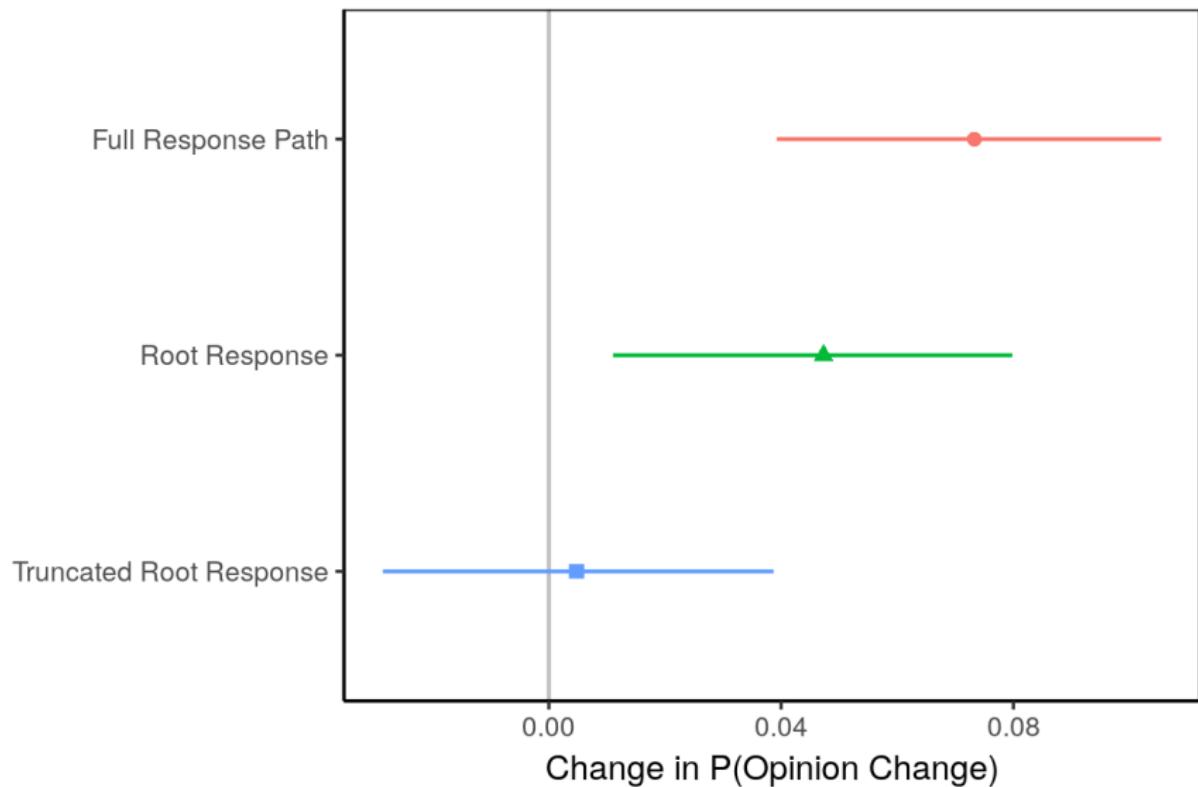
# Measuring Moral Congruence



# Moral Congruence and Persuasiveness



# Moral Congruence and Persuasiveness



# Conclusion – Discussions, Disagreement, and Morality

Two opposing hypotheses:

Moral Conviction: Arguments that involve moral appeals will be less persuasive than arguments that do not involve moral appeals.

Moral Foundations: Arguments that involve moral appeals will be more persuasive than arguments that do not involve moral appeals, but only if they are congruent with the opening statement's moral framework.

# Conclusion – Discussions, Disagreement, and Morality

Two opposing hypotheses:

Moral Conviction: Arguments that involve moral appeals will be less persuasive than arguments that do not involve moral appeals.

Moral Foundations: Arguments that involve **moral appeals** will be **more persuasive** than arguments that do not involve moral appeals, but only if they are **congruent** with the opening statement's moral framework.

⇒ Moral appeals are futile unless we're speaking the same moral language

## Future Directions

- ▶ Collect new data, extract additional information about individual users (other subreddits etc.)
- ▶ Survey users on /r/ChangeMyView
- ▶ Experimental manipulation of opening statements
- ▶ Discussions in the lab
- ▶ ...

Thank you for your attention!

Manuscript and code available at:  
<https://github.com/pwkraft/cmv>

Comments, questions?

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🌐 [pkraft.github.io](https://pkraft.github.io)  
🐦 [@patrickwkraft](https://twitter.com/patrickwkraft)

WHAT ARE YOU DOING?

I JUST THOUGHT OF A BAD  
OPINION SOMEONE COULD HAVE,  
AND NOW I'M SEARCHING TO  
SEE IF ANYONE DOES SO  
I CAN BE MAD AT THEM.

SOUNDS LIKE YOU HAVE  
A HEALTHY RELATIONSHIP  
WITH THE INTERNET.

HEY, AT LEAST I'M NOT  
THIS GUY I JUST FOUND!



# Content

Introduction

Theory

Online Discussions and Description of Dataset

The Subreddit /r/ChangeMyView

Data Overview

Empirical Results

Opening Statements and Persuadability

Counterarguments and Persuasiveness

Conclusion

# Appendix Content

Topic Differences and Persuadability

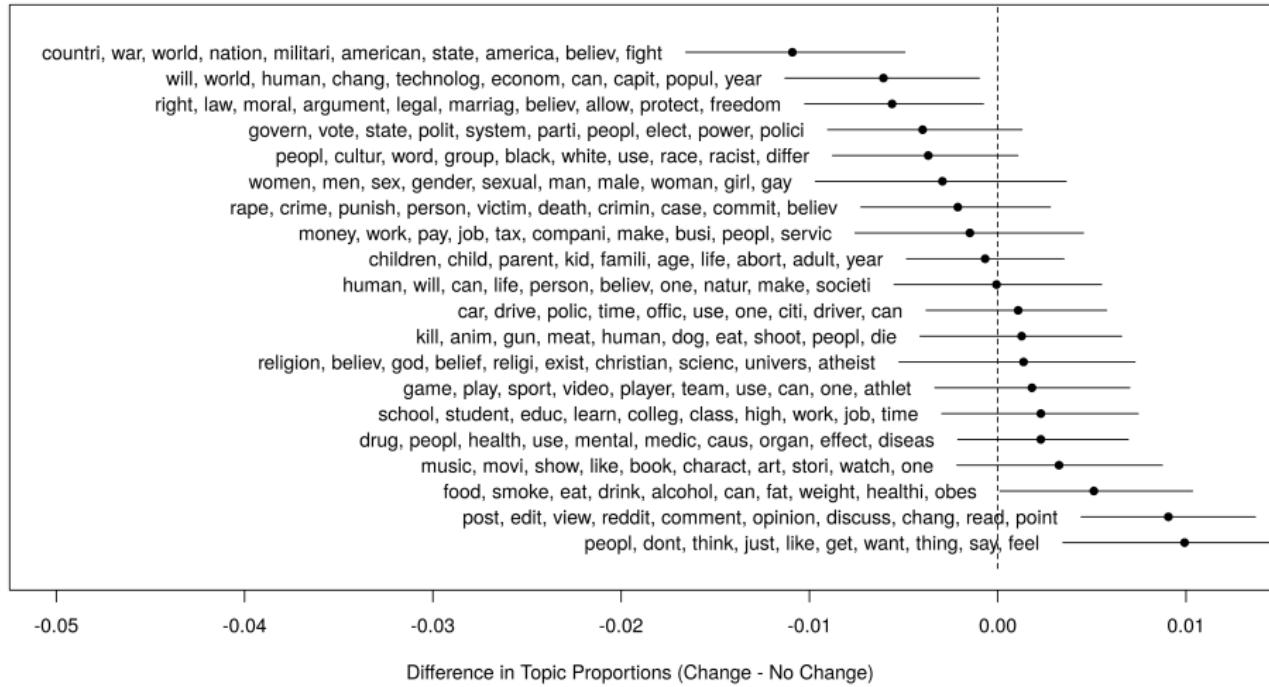
Overall Moral Language in Opening Statements that Awarded a  $\Delta$

Individual Moral Foundations in Opening Statements that Awarded a  $\Delta$

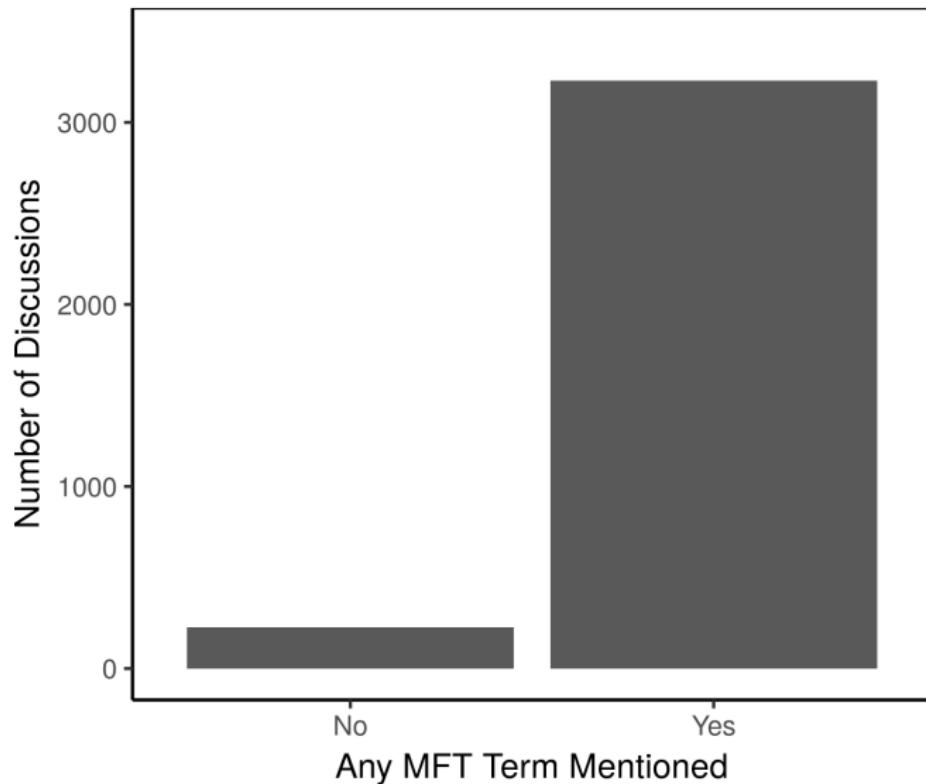
Argument Length and Persuasiveness

References

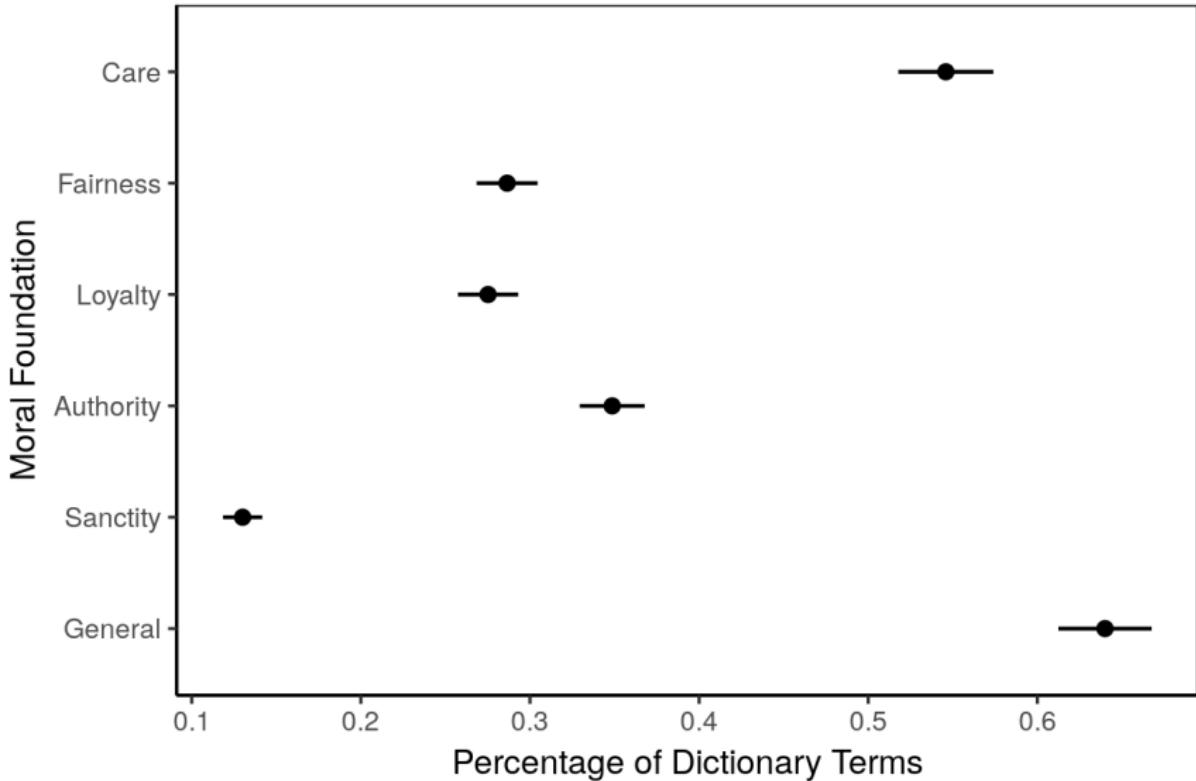
# Topic Differences and Persuadability



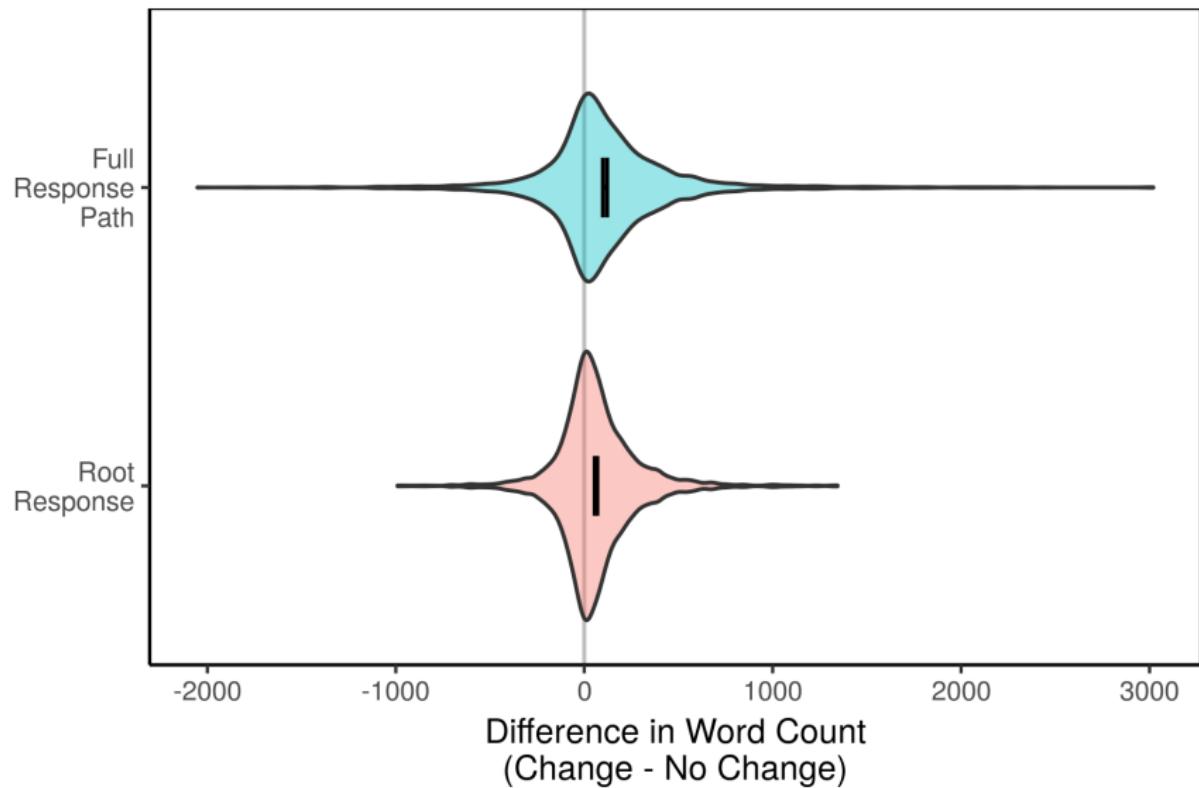
## Overall Moral Language in Opening Statements that Awarded a $\Delta$



# Individual Moral Foundations in Opening Statements that Awarded a Δ



# Argument Length and Persuasiveness



## References

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