Can Activating Objectivity Goals Reduce Argument Congruency Bias?

Dominique Lockett

Department of Political Science
Washington University in St. Louis

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Summary

- Introduction

- Background

- Research Questions and Hypothesis

- Research Design

- Results

- Conclusion

Introduction

Motivation

- Scholars argue for a well-informed populace Delli Carpini, 2000; Milner, 2002

- Rise in the study of misinformation Berinsky, 2015; Corr et al., 2019

Motivation

- Focus on misleading factual claims
  - Erroneous arguments
  - Even when facts are agreed upon, confusing or deceptive arguments can be constructed

Strong Arguments

- The conclusion is probable given the premises
  - Often uses supportive evidence
    - According to several studies, on average, smokers die ten years sooner than non-smokers. Therefore, smoking is bad for your health .
    - All observed emeralds have been found to be green. Therefore, the next observed emerald will be green.

Weak Arguments

- Logical fallacies
    - Unwarranted generalizations
    - Slippery slope
    - False Dichotomies

Why Do We Care?

- Are people capable of identifying a fallacious argument?

Slippery Slope:

"This week it's Robert E. Lee. I notice that Stonewall Jackson's (statue is) coming down. I wonder is it George Washington next week, and is it Thomas Jefferson the week after?" Trump 2017

- Do individuals who are againts removal of confederate statues recognize these arguments as weak?

Argument Congruency Bias

- How do people evaluate arguments of varying quality?

Argument Congruency Bias

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- **Argument Congruency Bias:** Individuals consider arguments that are consistent with their beliefs as stronger than arguments that are inconsistent with their beliefs, regardless of the quality of the argument.

Argument Congruency Bias
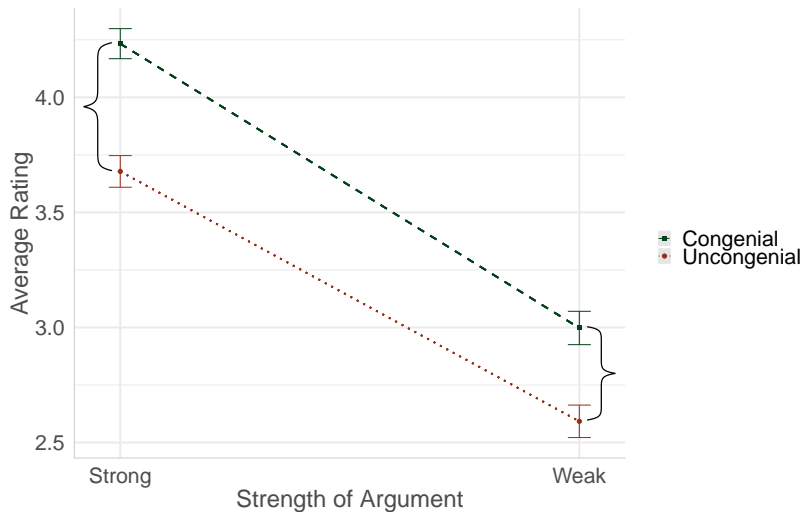
Research Question

- To what extent are individuals willing to rationalize support for weak arguments?

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- To what extent are individuals willing to rationalize support for weak arguments?

- Can the tendency to biasedly evaluate arguments be reduced?

Background

Accuracy vs. Directional Motivations

- Two types of goals individuals pursue when confronted with new information
  - Accuracy goals
  - Directional goals

Accuracy vs. Directional Motivations

- Two types of goals individuals pursue when confronted with new information
    - Accuracy goals
    - Directional goals
- Objectivity goals

Previous Work

- Taber and Lodge conducted experiments confirming that argument congruency bias is an observable phenomenon
- Current project builds on their work in two important ways:

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- Taber and Lodge conducted experiments confirming that argument congruency bias is an observable phenomenon
- Current project builds on their work in two important ways:
    - Test the **extent to which** argument congruency bias can be reduced
    - Include weak arguments in analysis

Research Questions and Hypothesis

Strong and Weak Arguments

- Are individuals capable of distinguishing between strong and weak arguments?

- To what extent are individuals willing to rationalize support for weak arguments?

Automatic Goal Pursuit

- Exposing individuals to an idea can lead to goal pursuit even in the absence of conscious goal setting Marien et al., 2012

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- Exposing individuals to an idea can lead to goal pursuit even in the absence of conscious goal setting Marien et al., 2012
- Word unscrambling task Gollwitzer and Bargh, 2005
    - Memorization vs. evaluation
    - Prior exposure to memorization words led to better recall in later task

Hypothesis 1

- Participants exposed to the objectivity treatment will show less evidence of argument congruency bias than those in the control

Research Design

# Design
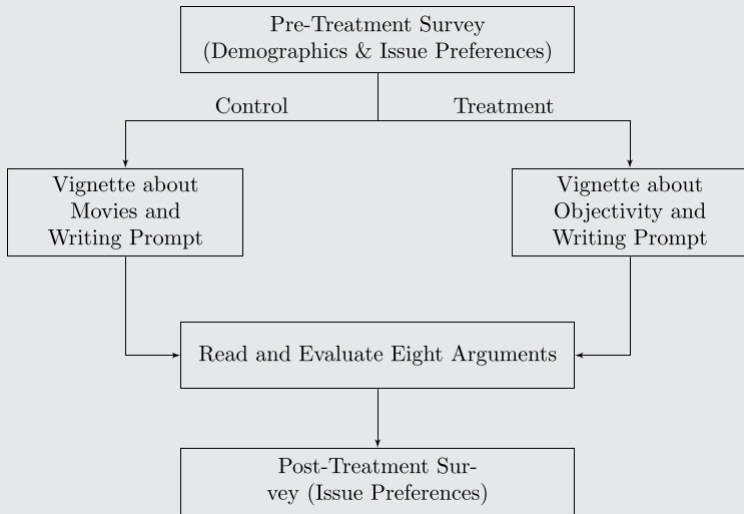
Treatment Groups

Objectivity Treatment:

Objectivity is the ability to make judgments without relying on personal feelings or personal opinions. Being objective means applying the rules fairly and treating everyone the same rather than showing favoritism. Objectivity requires you to consider perspectives other than your own to achieve less biased

Control Treatment:

Movies can be fun, but don't underestimate how much they can provide to our society. Movies encourage ideas and social commentary within communities. They have the power to express a culture's ideals and shape them. Movies are important because they give us the ability to form lasting human connections by letting us share our experiences with each other.

Design
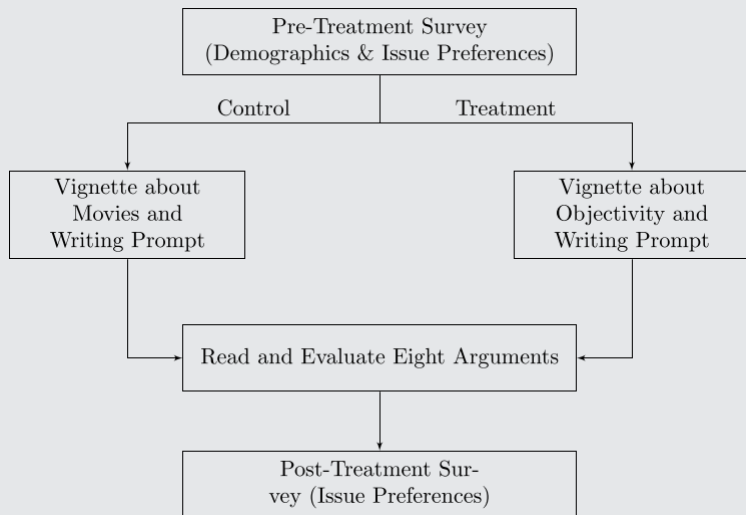
Strong Arguments

Anti-Gun Control

A main reason why our murder rate is so high is that most crime victims do not resist. A study by prominent organization found that victims were twice as likely to be injured compared to those who defend themselves. Carrying a gun is thus one's ultimate protection against violent crime. Thus we do not need stricter gun control.

Pro-Gun Control:

A study in a prominent medical journal found that you or a member of your family are 43 times more likely to be killed by your own gun than by an intruder's. Guns aren't the protection many.people think they are. We need stricter gun control.

Weak Arguments

Anti-Gun Control

Americans love guns and no true American could possible support stricter gun control. Therefore, gun control legislation should not be implemented.

Pro-Gun Control:

America's obsession with guns is disturbing. The country needs more gun control.

Control Argument Evaluation

A study found that you or a member of your family are 43 times more likely to be killed by your own gun than by an intruder's; guns present more risk than protection. Therefore, we need more gun control legislation.

Is this argument weak or strong?

Very weak	○
Moderately weak	○
Slightly weak	○
Slightly strong	○
Moderately strong	○
Very Strong	○

Treatment Argument Evaluation

The brief paragraph you wrote:
Being objective in important because its a way of taking a step back and first thinking if the issue is affecting others even more than myself or my community and/or doing research about the issue to gain knowledge of all aspects on all sides before forming a opinion

Argument:
A study found that you or a member of your family are 43 times more likely to be killed by your own gun than by an intruder's; guns present more risk than protection. Therefore, we need more gun control legislation.

Is this argument weak or strong?

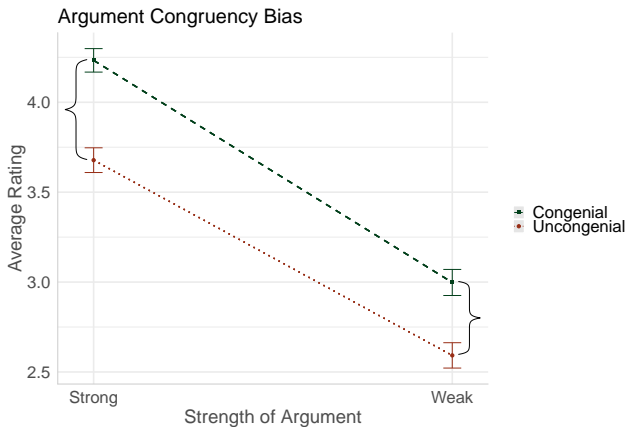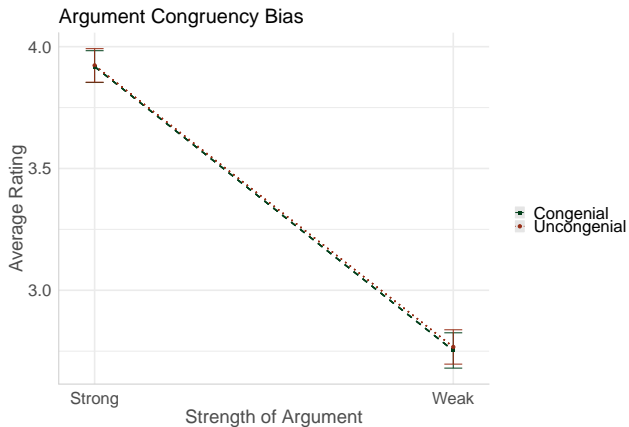|	
Very weak	○
Moderately weak	○
Slightly weak	○
Slightly strong	○
Moderately strong	○
Very Strong	○

Dependent Variable

- Difference in rating of congenial and uncongenial arguments

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Argument Congruency Bias

Independent Variables

- Demographic variables
- Strength $\times$ Treatment

Independent Variables

- Demographic variables
- **Strength** × Treatment

    - 4 observations per
      participant

ID	Position on Gun Control	Strength	Rating Congeniality
Participant A	Pro- Gun Control	Strong	Strong Pro-Gun Control - Strong Anti-Gun Control
Participant A	Pro- Gun Control	Weak	Weak Pro-Gun Control - Weak Anti-Gun Control
. . .			
Participant B	Anti- Gun Control	Strong	Strong Anti-Gun Control - Strong Pro-Gun Control
Participant B	Anti- Gun Control	Weak	Weak Anti-Gun Control - Weak Pro-Gun Control

Results

Strong and Weak Arguments
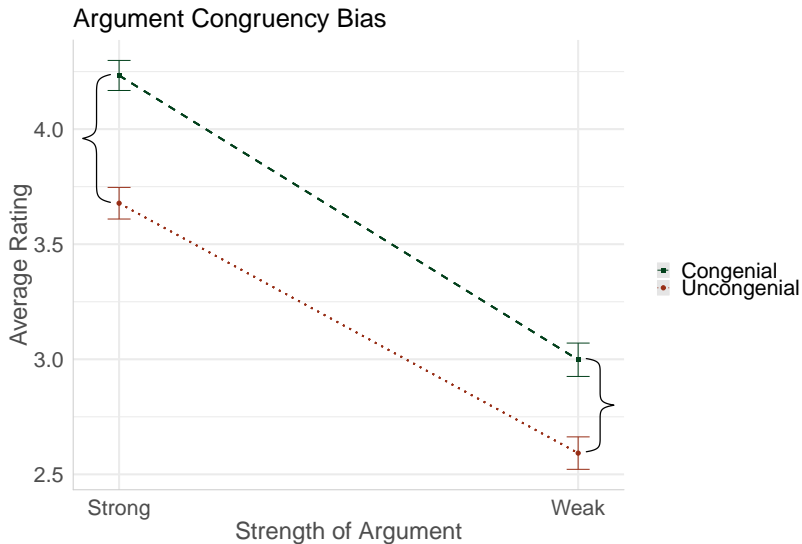
Effect of Objectivity Treatment
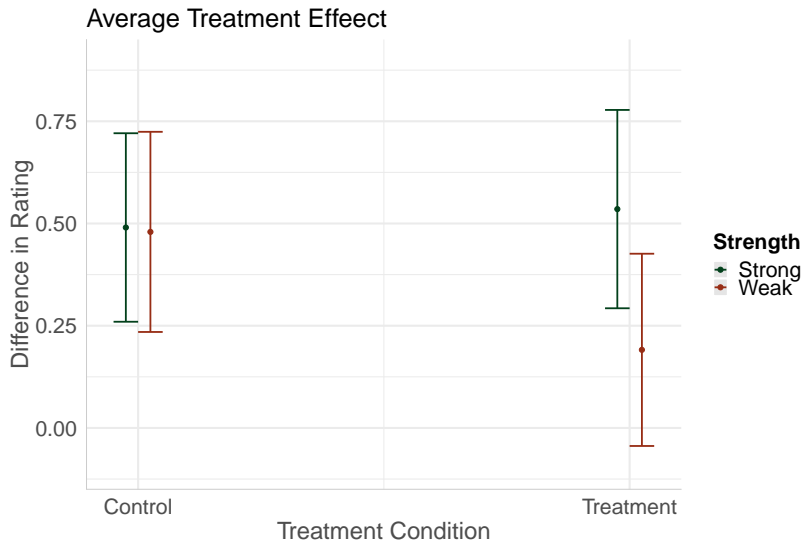
Effect of Objectivity Treatment
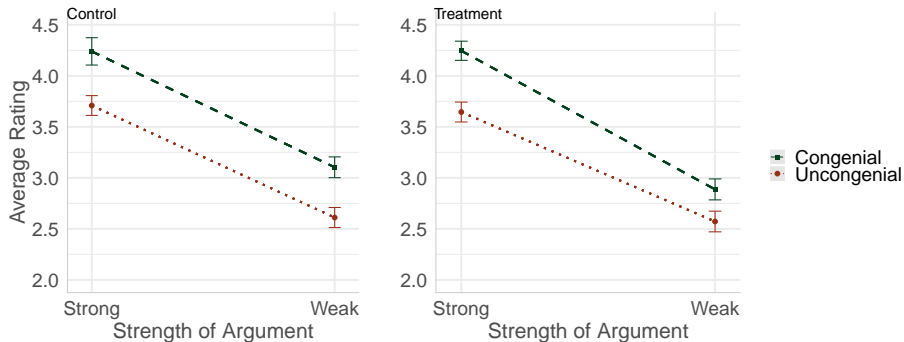
- A breakdown of the objectivity treatment effect

Conclusion

Main Takeaway

- Folks are capable of distinguishing between strong and weak arguments

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- Folks are capable of distinguishing between strong and weak arguments
- Argument congruency bias can be reduced
    - Effect is concentrated in how weak congenial arguments are evaluated

Future Work

- Forthcoming reproduction
    - Removes non-political element
        - Immigration

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- Forthcoming reproduction
  - Removes non-political element
    - Immigration
- Consider alternative mechanisms
  - Social desirability bias

Thank you

Summary

- Summary Statistics

- Pineapple Arguments

- Issue Position

- Regression Analyses

- Results by Topic

Balance Check

	Control	Treatment
% Female	.50	.55
Age	39	39
Income	50,000	50,000
Attention Check	.91	.92
Political Knowledge	.75	.75
% Support Gun Control	.82	.85
% Enjoy Pineapples on Pizza	.72	.67

Strong Arguments

Anti-Pineapple

According to a study by a prominent market research company, 24% of pizza eating Americans say that pineapple is one of their least favorite toppings.Therefore, pineapples do don't belong on pizza.

Pro-Pineapple:

According to a study by a prominent market research company, nearly one-fifth (17%) of people who live in the western US say pineapple is one of their favorite pizza toppings. Therefore, pineapples are a good topping for pizza.

Weak Arguments

Anti-Pineapple

I think pineapples are a disgusting on pizza. Therefore, pineapples are a bad topping for pizza.

Pro-Pineapple:

I love the taste of pineapples on pizza. Therefore, pineapples are a good topping for pizza.

Average Issue Position Pre- and Post- Treatment

Topic:	Treatment Condition	Pre-Treatment	Post-treatment
Gun Control	Treatment Group:	3.72	3.73
	Control Group:	3.73	3.75
Pineapple on Pizza	Treatment Group:	3.42	3.49
	Control Group:	3.26	3.28

Main Analysis

	Model 1
Constant	0.37
	(0.34)
Treatment	−0.29*
	(0.12)
Strength of argument	0.01
	(0.09)
Treatment×Strength of argument	0.33*
	(0.16)
R^2	0.02
Num. obs.	2201

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$. Effect of exposure to objectivity treatment on difference in rating of strong and weak arguments. Both topics are included. Control variables include gender, college education, race, ideology, party ID, age, attention to politics, need to evaluate, need for cognition, political knowledge and strength of partisanship.

Main Analysis Without Those in Attention Check

	Model 1
Constant	0.50
	(0.33)
Treatment	-0.28^*
	(0.12)
Strength of argument	-0.01
	(0.11)
Treatment×Strength of argument	0.36^*
	(0.15)
R^2	0.02
Num. obs.	2383

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$.

OLS models with robust standard errors. Outcome measure is the difference in rating of strong and weak arguments including both topics. Results estimated among those who did not have indifferent issue positions and includes those that failed the attention check.

Secondary Analysis

|	Model 1
Constant	2.03^{***}
	(0.22)
Treatment	0.02
	(0.10)
Strength of argument	1.11^{***}
	(0.09)
Congeniality	0.55^{***}
	(0.09)
Congeniality:Strength	0.02
	(0.11)
Treatment $\times$ Strength	-0.12
	(0.13)
Treatment $\times$ Congeniality	-0.31^{*}
	(0.12)
Treatment $\times$ Congeniality $\times$ Strength	0.37^{*}
	(0.16)
R^2	0.17
N	4382

$^{***}<0.05;^{**}p<0.01;$ $^{***}p<0.05$

Demographic variables included education, race, how much attention one pays to politics, ideology and party ID. Standard errors were adjusted to account for the fact that each respondent has 8 rows in the dataframe.
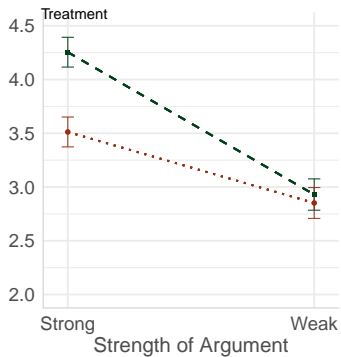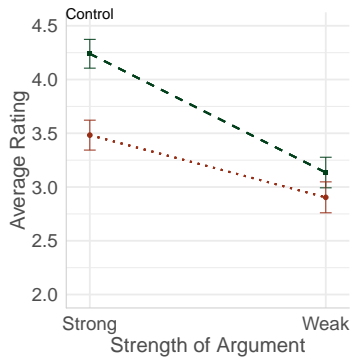
Primary Analysis Gun Control Only

Average Treatment Effect of Gun Control Only
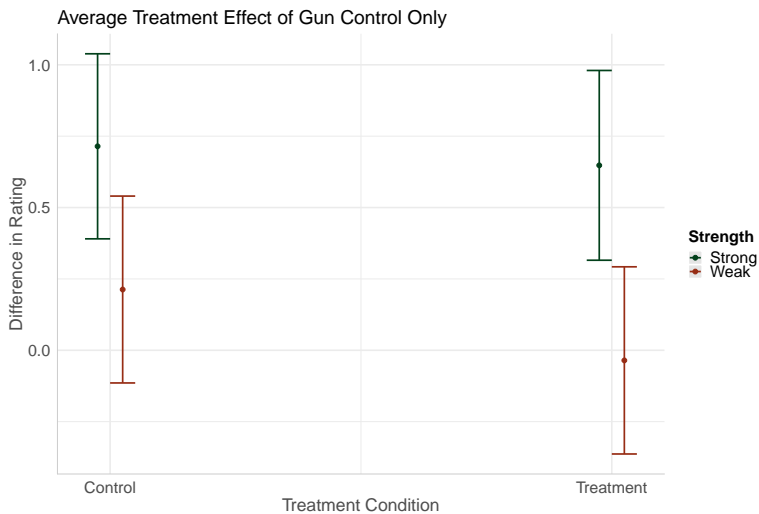
Primary Analysis Pineapples on Pizza Only

Average Treatment Effect of Pineapples on Pizza Only
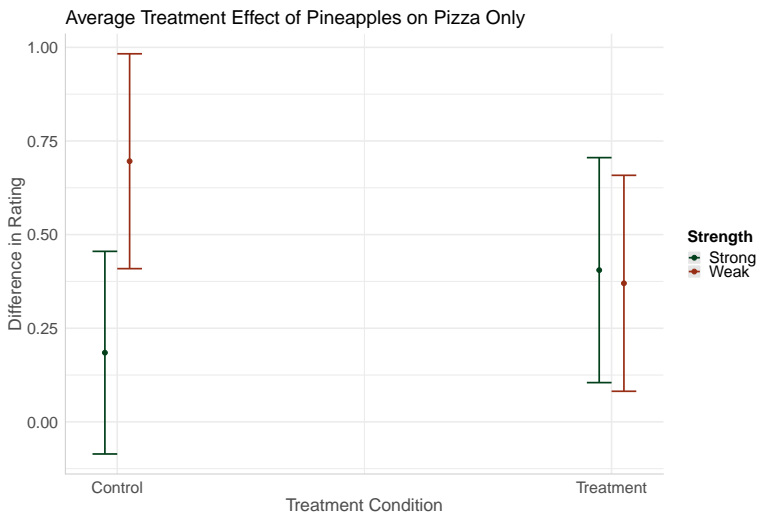
Mean Comparison of Gun Control Only

Mean Comparison of Pineapples on Pizza Only