

Targeting Domestic Public Opinion With the Military: A Gun Control Survey Experiment

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Introduction

This document outlines a pre-analysis plan for analyzing data from a survey experiment to be administered through Lucid. This plan has been written with the help of two pilot surveys administered through Amazon's Mechanical Turk. This design has been reviewed and granted exemption by the IRB at Yale University.¹

Experimental Design and Procedures

Overview

In several areas within the past two years, the military has been present in salient domestic political debates. In addition to its presence near the gun control debate, respect and admiration for fallen service members became a key counterargument to those opposing the protests of police brutality before NFL football games. While the military image is used to sell products and substantiate arguments, the question remains: can it cause a change in domestic attitudes? A survey experiment is the most effective methodological tool to make to determine the plausibility of this causality claim.

To access these deep-set feelings, I introduce the use of a survey experiment. Survey questions are a way to access in-depth feelings in place of detailed interviews. Use of survey questions to capture deeply embedded moral feelings where qualitative interviews fail, respondents employ their “practical consciousness” to select an answer that “feels right” (Vaisey 2009, 1689).

Research Question

This project seeks to answer the following question:

Can a military member's political views leverage the broad public support for the military and impact domestic policy initiatives?

More specifically, this project will evaluate existing attitudes towards gun control policies and if members of the military are able to alter them as compared to statements made by civilians.

Subjects

Through Lucid, this project will obtain a nationally representative sample, balanced on partisan affiliation of approximately 2,500 respondents. The previous pilot surveys included 500 and 600 respondents respectively on Amazon's Mechanical Turk.

Experimental Sequence

Figure 1 below depicts the experimental sequence of the five-armed survey experiment below.

¹Approved by the Yale Institutional Review Board request number 2000024194.

Experimental Sequence

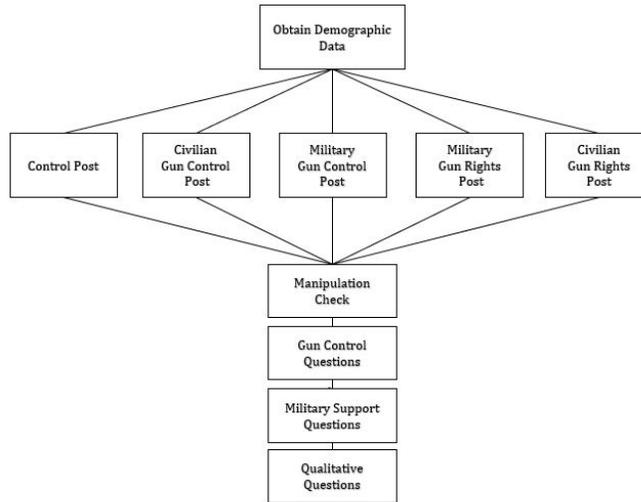


Figure 1: Figure 1: Experimental Sequence

There are two treatments in this experiment: content and identity which create a 2 x 2 factorial design.

The first treatment is the written content of the social media:

$Z_{proGC} = 1$ with a "pro-gun control message"

$Z_{proGC} = 0$ with a "anti-gun control message"

The second treatment is the identity of the author of the social media post.

$Z_{military} = 1$ with a member of the "military" making the social media post

$Z_{military} = 0$ with a "civilian" making the social media post

"anti-gun control message"

Table 1 below shows the 2x2 factorial design. The notation found within the table will be used for the duration of the paper.

		Content	
		0	1
Identity	0	Civilian, Pro- Gun Control	Civilian, Anti- Gun Control
	1	Military, Pro- Gun Control	Military, Anti-Gun Control

Table 1- 2x2 Factorial Experimental Design

Figure 2: Table 1: 2x2 Factorial Experimental Design

Treatment

Each treatment will consist of three social media posts. The text of each of the posts is pasted below. For the military treatment conditions, the avatar will feature an individual in uniform, with rank a part of his display name, and the post will explicitly state military service. Text for each of the treatment posts are below. The number of likes and shares are held constant for each of the posts.

After each post, respondents will be asked to assign an argument strength rating on a 1-5 scale.

Each of the social media posts were created with three theoretical mechanisms of persuasion from the military: *technical knowledge*, *manager of violence*, and *honest and ethical professional*.

1. *Technical knowledge*- Members of the military have a technical knowledge and baseline level of exposure. The United States Army, for example, must qualify on their primary weapon at least twice a year. This mechanism focuses specifically on factual knowledge of the weapon (e.g. its maximum effective range, rate of fire, and components).

2. *Manager of violence*- Members of the military do not only have *technical knowledge* of a weapons system, they also apply this knowledge in combat. This mechanism specifically describes actions in combat and exposure to lethal force.

3. *Honest and ethical professional*- This mechanism focuses on the military institutions standing among the population. Since Gallup began its polling, the military has remained the most trusted institution in the country. It focuses of the military's ethical and selfless behavior separate from any expert knowledge of guns that they may have.



Figure 3: Example of CIV, Pro GC and MIL, Anti GC Social Media Posts

Control

1. I have been really happy with the results of my new weight training program and changes to my diet. I have lost 5 pounds and 2 inches off of my waist in the first four days. I am on pace to hit my goal for this month. You all should implement three days of heavy weight training if you want to see the same results.
2. I am on my way to the local animal shelter to adopt my first rescue dog. Rescues are the kindest, most loyal additions to any family. If you are thinking of getting a new dog, please consider adopting. You may rescue the dog initially, but they will rescue you too.
3. I made a delicious salad with the vegetables I grew in my garden. Homegrown vegetables taste so fresh and crisp. You should start gardening too and avoid the long lines and stress of the grocery store.

Civilian, Pro Gun Control

1. As a citizen of the United States, a weapon is never far away. Before you fire the weapon, you should learn everything about it. You memorize its effective range, rate of fire, and muzzle velocity. Not everyone knows how to use a gun and even those who are trained are still at risk of violence from others. Training and experience is NOT enough. I support stronger gun control.
2. I have witnessed the violence that assault style weapons can produce; I had to make life and death decisions surrounded by gun violence. These weapons helped me protect myself and fight back. A good

guy with a gun saved my life. He helped me defeat a bad guy with a gun. Yet, there is no need for military-styled weapons, regardless of owner qualification, in my neighborhood.

3. I have dedicated my entire professional life to honest work, helping people, and putting others first. The level of gun violence within our society makes it difficult to truly help others when I fear for their safety. To save lives, I support more gun control.

Civilian, Anti Gun Control

1. As a citizen of the United States, a weapon is never far away. Before you fire the weapon, you should learn everything about it. You memorize its effective range, rate of fire, and muzzle velocity. Stronger gun laws will NOT keep me safe. Only the applied training and knowledge of weapons from gun owners will. I support more gun rights.
2. I have witnessed the violence that assault style weapons can produce; I had to make life and death decisions surrounded by gun violence. These weapons helped me protect myself and fight back. A good guy with a gun saved my life. He helped me defeat a bad guy with a gun. Access to military-styled weapons saves lives and protects our own.
3. I have dedicated my entire professional life to honest work, helping people, and putting others first. The level of gun violence within our society makes it difficult to truly help others when I fear for their safety. To save lives, I own a gun. I am able to help others by putting their safety and protection first.

Military, Pro Gun Control

1. As an American Soldier, a weapon is never far away. Before you fire the weapon, you should learn everything about it. You memorize its effective range, rate of fire, and muzzle velocity. Not everyone knows how to use a gun and even those who are trained are still at risk of violence from others. Training and experience is NOT enough. I support stronger gun control.
2. I have witnessed the violence that assault style weapons can produce; I had to make life and death decisions surrounded by gun violence. These weapons helped me protect myself and fight back. A good guy with a gun saved my life. He helped me defeat a bad guy with a gun while I served in the Army. Yet, there is no need for military-styled weapons, regardless of owner qualification, in my neighborhood.
3. I have dedicated my entire professional life to honest work, helping people, and putting others first in the military. The level of gun violence within our society makes it difficult to truly help others when I fear for their safety. To save lives, I support more gun control.

Military, Anti Gun Control

1. As an American Soldier, a weapon is never far away. Before you fire the weapon, you should learn everything about it. You memorize its effective range, rate of fire, and muzzle velocity. Applied training is NOT enough to keep me safe. Only the applied training and knowledge of weapons from gun owners will. I support more gun rights.
2. I have witnessed the violence that assault style weapons can produce; I had to make life and death decisions surrounded by gun violence. These weapons helped me protect myself and fight back. A good guy with a gun saved my life. He helped me defeat a bad guy with a gun while I served in the Army. Access to military weapons saves lives and protects our own.
3. I have dedicated my entire professional life to honest work, helping people, and putting others first in the military. The level of gun violence within our society makes it difficult to truly help others when I fear for their safety. To save lives, I own a gun. I am able to help others by putting their safety and protection first.

Outcome Measures

The experiment will focus on two substantive areas. The first are attitudes towards gun control. The second area is changing support for members of the military.

Gun Control Questions- Policy

The following questions are meant to question both diffuse support for gun control as well as three specific policies. The order of these four questions will be randomized.

1. Please indicate your level of agreement with the following statement: The federal government should make it more difficult for people to buy a gun than it is now. [7-point scale, 1: Strongly disagree to 7: Strongly agree]
2. Please indicate your level of agreement with the following statement: There should be a background check for all gun sales, including at gun shows and sales over the internet. [7-point scale, 1: Strongly disagree to 7: Strongly agree]
3. Do you agree with a ban on the sale of assault rifles to civilians? [7-point scale, 1: Strongly disagree to 7: Strongly agree]
4. Do you agree with a ban on the sale of handguns to civilians? [7-point scale, 1: Strongly disagree to 7: Strongly agree]

The following questions are meant to capture different levels of diffuse and specific support for gun control. These four questions will be combined together through principal components analysis with a “varimax” rotation to create a scaled measure of gun control support.

Gun Control Questions- Gun Attitudes

The following questions are intended to question respondents feelings to guns more generally including the relationship between guns, safety, and violence.

1. If more people in your community began to carry guns would you feel more or less safe? [7-point scale, 1: Significantly less safe to 7: Significantly more safe]
2. How do you believe stronger gun control legislation would affect the level of violence within the country? [7-point scale, 1: Significantly increases the level of violence to 7: Significantly decreases the level of violence]

Gun Control Questions- Behavioral Measure

I will ask respondents one question regarding a charitable contribution and have them vote on which group should receive it.

1. The research team will make a charitable contribution to a non-profit organization listed below receiving the most votes. Please vote for one of the following organizations below. [3 choices, 1: Second Amendment Foundation, 2: Everytown for Gun Safety, 3: American Red Cross]

Military Support

Trust and Confidence in the Institution

For determining the level of support for the military, I will ask the following two questions, both of these questions have a standard 5-point scale:

1. Please indicate your level of agreement with the following statement:“I would support my child/grandchild serving in the United States Military.” [5-point scale, 1: Strongly disagree to 5: Strongly agree]
2. Please list your level of confidence in the following list of institutions in American society: The Catholic Church, Labor Unions, Congress, Large Corporations, and the Military. [5-point scale, 1: None to 5: Great Deal]

Finally, the survey will conclude with two questions that explore how respondents view the military in relation to society. The order of the two questions below will be randomized.

1. Do you think that members of the military are more like members of the Democratic Party or the Republican Party? [3 answer choices, 1: Democratic Party, 2: Republican Party, 3: Don't Know]
2. Do you think that members of the military are like you? [3 answer choices, 1: Yes, 2: No, 3: Don't Know]

Qualitative Questions

I will include two qualitative questions regarding the relationship of the military and domestic politics. My intent with these questions is to additional descriptive data. I will code the responses according to a four point measure [4 point measure: 1: Positive or Yes, 2: Negative or No, 3: Don't know, 4: Unintelligible response].

1. Do you find it convincing when members of the military discuss domestic policy issues? Why or Why not?
2. Should the members of the military remain non-partisan as an institution?

Analysis

I will analyze the experiment as a five-arm trial comparing each of the averages (and their standard errors) of the scaled gun control measure of the four treatment groups to the control group.

I will estimate the average treatment effects for the experiment with Ordinary Least Squares (OLS) regression utilizing the `lm_robust` function from the *estimatr* package in R (Coppock et al. 2019). I will include dummy variables for gender, education, region, age, and rural respondents. This regression will include a dummy variable for the identity treatment, $Z_{military}$, and the message content, Z_{proGC} , as well as an interaction term of the two treatments.

Hypotheses

H_1 : I hypothesize that the military posts will generate greater attitudinal change on the topic of gun control than the civilian posts on comparable message content.

H_2 : I hypothesize that military members will have a limited ability to persuade. Put more simply, the military image will not be strong enough to overcome partisan and tribal factors in a respondent's decision making (i.e. Democrats will not favor gun rights and Republicans will not support gun control).

H_3 : Statements made by military members will strengthen previously held views (i.e. those who support gun control will strengthen their support after reading something they agree with, see Kunda 1990; Druckman, Peterson and Slothuus 2013 for more on motivated reasoning).

H_4 : The largest persuasion effects will be found by independents and moderates with the most malleable attitudes, not strong partisans.

	Military Model	Pro GC Model	Mil and Pro	Mil*Pro
Intercept	-0.060 (0.055)	-0.002 (0.053)	-0.053 (0.062)	-0.044 (0.068)
Military Treatment	0.145 (0.081)		0.147 (0.082)	0.121 (0.106)
Pro GC Treatment		0.004 (0.084)	-0.019 (0.084)	-0.046 (0.117)
Mil*Pro GC				0.062 (0.168)
R ²	0.005	0.000	0.005	0.005
Adj. R ²	0.003	-0.002	0.002	0.000
Num. obs.	602	602	602	602
RMSE	1.001	1.004	1.002	1.003

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Table 1: Individual Treatment Analysis With Interaction Terms

Regression Analysis

Table 2 below shows a an estimation of the average treatment effect for both treatments on the scaled gun control measure (Note: the pilot survey only included three questions and did not include the question on attitudes towards banning handguns).

Heterogenous Treatment Effects

Partisanship

Consistent with the results from both pilot surveys and existing research suggesting a polarized response to gun control stimuli (see Barney and Shaffner 2018), I will evaluate heterogeneous treatment effects by party.

Figure 2 below shows the results from the pilot survey depicting the results by party. As is evident in the figure, there is significant gun control attitude variation by partisanship.

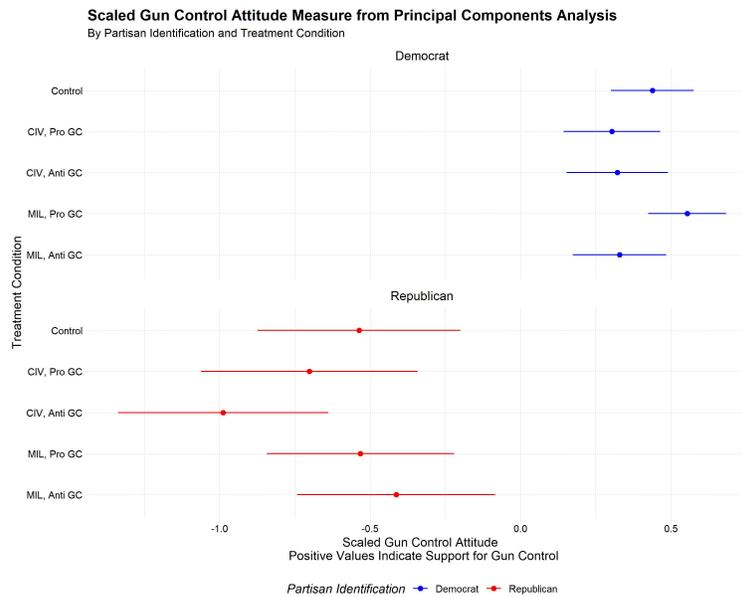


Figure 4: Example of CIV, Pro GC and MIL, Anti GC Social Media Posts

Power Analysis

Using the results from a pilot study, I conducted a power analysis for the experiment. Figure 3 below depicts a graph of the resulting power analysis based upon a treatment effect size of 0.145 and a standard error of 0.081. With a study of ~2500 respondents, the experiment will be adequately powered for the military identity treatment.²

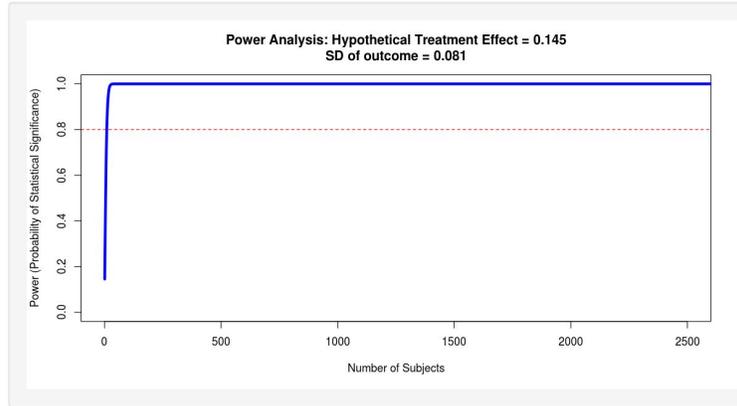


Figure 5: Figure 3: Military Treatment-Power Analysis

Conclusion

Several recent studies on gun attitudes have concluded that critical events like mass shootings, regardless of proximity, do not significantly shape attitudes towards gun control (see Rogowski and Tucker 2018; Barney and Shaffner 2018). The military, as the most trusted institution in the country, may be able shape attitudes based upon their technical knowledge, managing of violence, and status as honest and ethical professionals. This experiment seeks to empirically demonstrate one example of the military's influence on domestic policy. It will also study whether or not costs in support the military pays when its members make political statements via social media.

²Power analysis conducted with Alex Coppock's power calculator at https://egap.shinyapps.io/Power_Calculator/