

Introduction to Email Audit Studies

Charles Crabtree (UM)
November 28, 2017



Overview

- ① Introduce email audit studies.
- ② Provide an example of a finished study.

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1. Audit Experiments

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Audit Studies

- Audit studies have been used to assess biases in political interactions (Butler, 2014; Broockman, 2013; Butler and Broockman, 2011), housing transactions (Gaddis and Ghoshal, 2015; Turner et al., 2002; Hogan and Berry, 2011; Oh and Yinger, 2015), economic exchanges (Riach and Rich, 2002), employment decisions (Neumark, Bank and Van Nort, 1995; Bertrand and Mullainathan, 2004), and in many other spheres (Pager and Shepherd, 2008).

Email Audit Studies

- **Increasing number of audit studies being conducted over email** (Gaddis, 2014; Gaddis and Ghoshal, 2015; Sharman, 2010; Radicati and Hoang, 2011; Oh and Yinger, 2015; Milkman, Akinola and Chugh, 2015; Lahey and Beasley, 2009; Hogan and Berry, 2011; Giulietti, Tonin and Vlassopoulos, 2015; Findley, Nielson and Sharman, 2015; Bushman and Bonacci, 2004; Butler, 2014).

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2. Example

Question

- To what extent do K-12 public school principals exhibit biases against students based on their *religion*?

Experimental Design

- Posing as the parent of a potential student, we emailed a sample of K-12 public school principals with an appointment request.
- We randomly varied several characteristics of the putative student. We used an incomplete factorial design with 4 factors and 52 total treatment arms ($(2 \times 2 \times 4 \times 3) + (2 \times 2 \times 1)$).

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Email

Subject: Appointment request

Dear principal,

My family and I will be moving into the area sometime this spring. Right now, we are deciding where exactly to move and are looking at schools for our <son/daughter>, «name». Before we pick a place to live, we would like to meet with you or a member of your staff and chat a bit about your school. Would that be possible? <level of religiosity cue>

Sincerely,

<name> <religious quote>

Family Religion Treatments

- ① “Catholicism teaches that life is precious and beautiful. We should live our lives to the fullest, to the end of our days.” - Pope Benedict

Family Religion Treatments

- ② “Christianity teaches that life is precious and beautiful. We should live our lives to the fullest, to the end of our days.” – Rev. Billy Graham

Family Religion Treatments

- ③ “Islam teaches that life is precious and beautiful. We should live our lives to the fullest, to the end of our days.” – The Prophet Muhammad

Family Religion Treatments

- ④ “Atheism teaches that life is precious and beautiful. We should live our lives to the fullest, to the end of our days.” – Richard Dawkins

Family Religion Treatments

- 5 <none>

Level of Religiosity Treatments

- ① One of the reasons we would like to meet with you is that we are raising <name of child> to be a good [X] and want to make sure that this would be possible at your school.
 - ② One of the reasons we would like to meet with you is that we are raising <name of child> to be a good [X] and want to protect <him/her> from anything that runs counter to our beliefs. We want to make sure that this would be possible at your school.
- X denotes “a good Catholic,” “a good Christian,” “a good Muslim,” or “a good Atheist Humanist,” depending on the religious quote included in the email.

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Participants

- Our experimental sample consists of 45,710 K-12 public school principals.
 - Sample comprises principals from 33 states that provide public contact directories for principals.

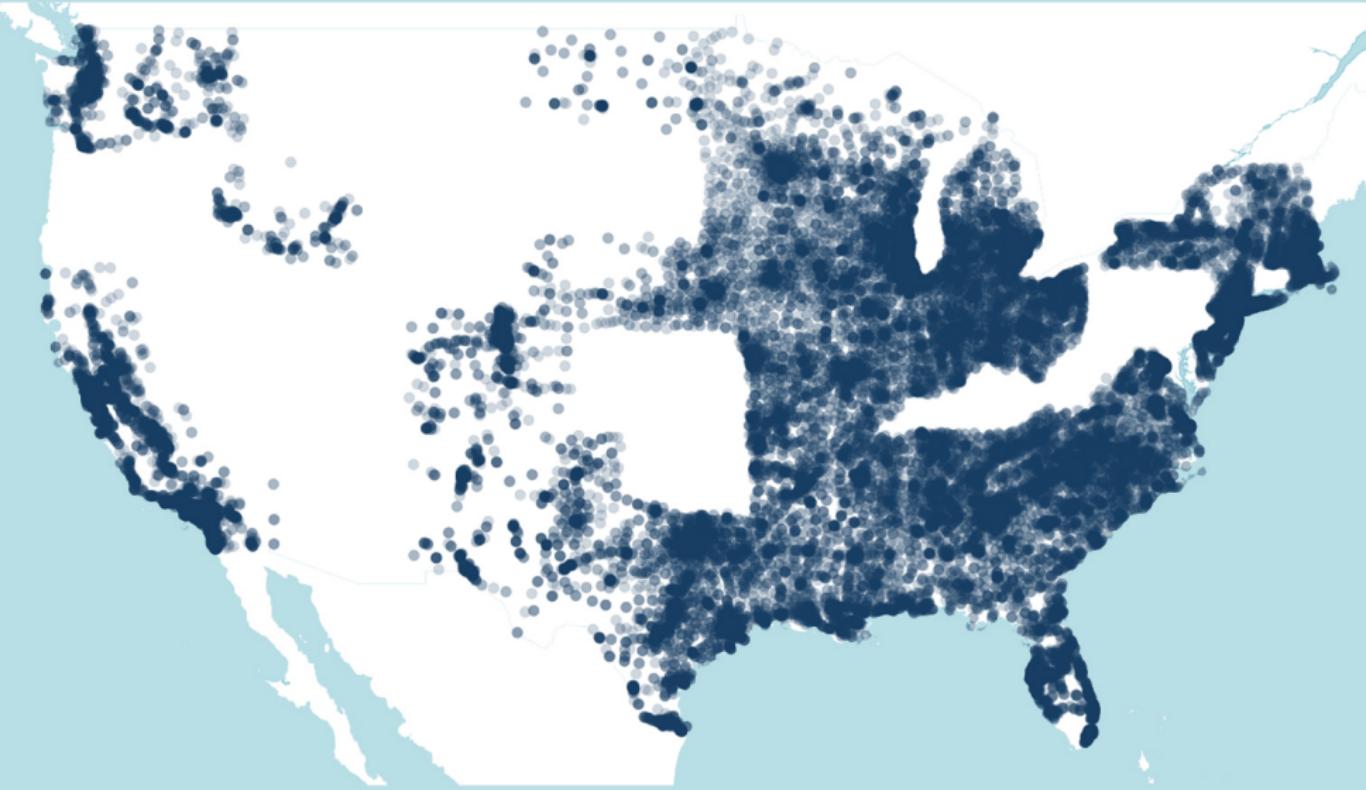
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Map of Participants



Randomized Block Design

- Blocked on 10 covariates

- State dummies
- School level: % Asian students, % Hispanic students, % Black students, % White students, % free or reduced lunch, % male students, school size, pupil/teacher ratio.
- County level: median household income, % adults holding BA degrees, % residents in poverty, % Republican vote share, Black Protestant per 1000, evangelical Protestant per 1000, mainline Protestant per 1000, Catholic per 1000, Muslim per 1000, religious adherents per 1000.

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Outcome

Outcome	Measurement
Email response	Yes / No

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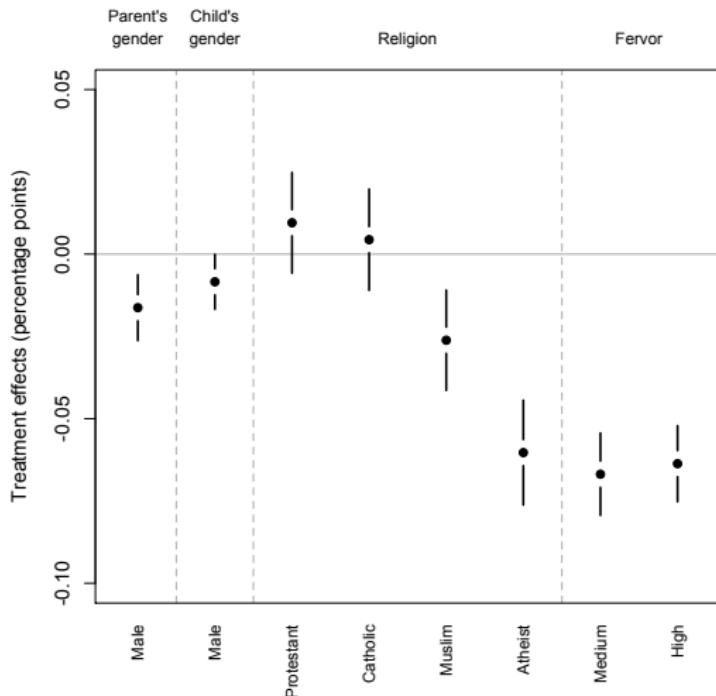
Estimation

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- Randomization inference.

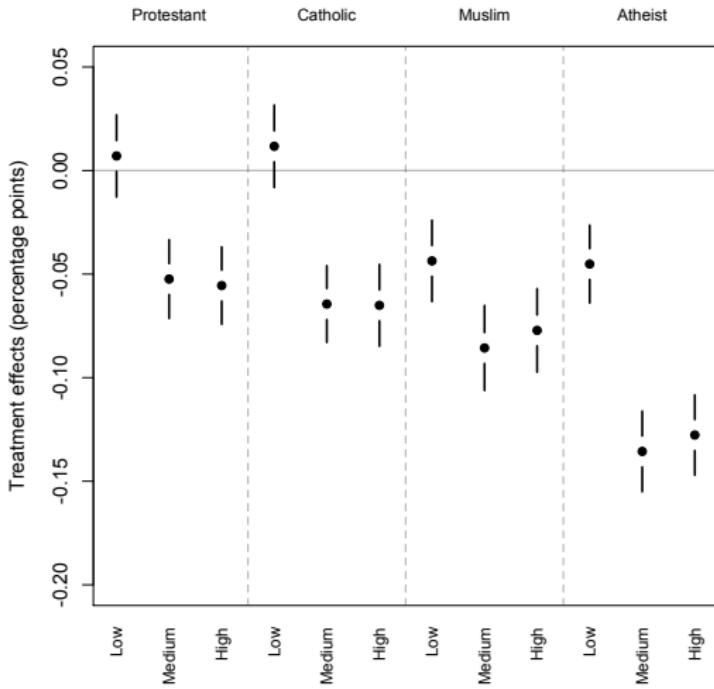
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Impact Estimates for Religious Treatments



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3. Step-by-step Guide

Step-by-step Guide Outline

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Elected Officials



Data from 233 countries

But we're still missing 12. [Can you help?](#)



everypolitician.org

Elected Officials



SUNLIGHT
FOUNDATION

To search, type and hit enter.

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Making government & politics more accountable & transparent

sunlightfoundation.com

See also goo.gl/tpj6l5.

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- Create email delivery script.
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Outcome Collection

Outcome	Measurement
Email response	Nominal
Email helpfulness	Ordinal
Time to reply	Interval
Length of reply	Interval
Sentiment of replies	Interval

What are some other possible outcomes?

Outcome Collection

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Outcome Collection

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Thank you.

Questions? Comments? Please email me at ccrabtr@umich.edu.