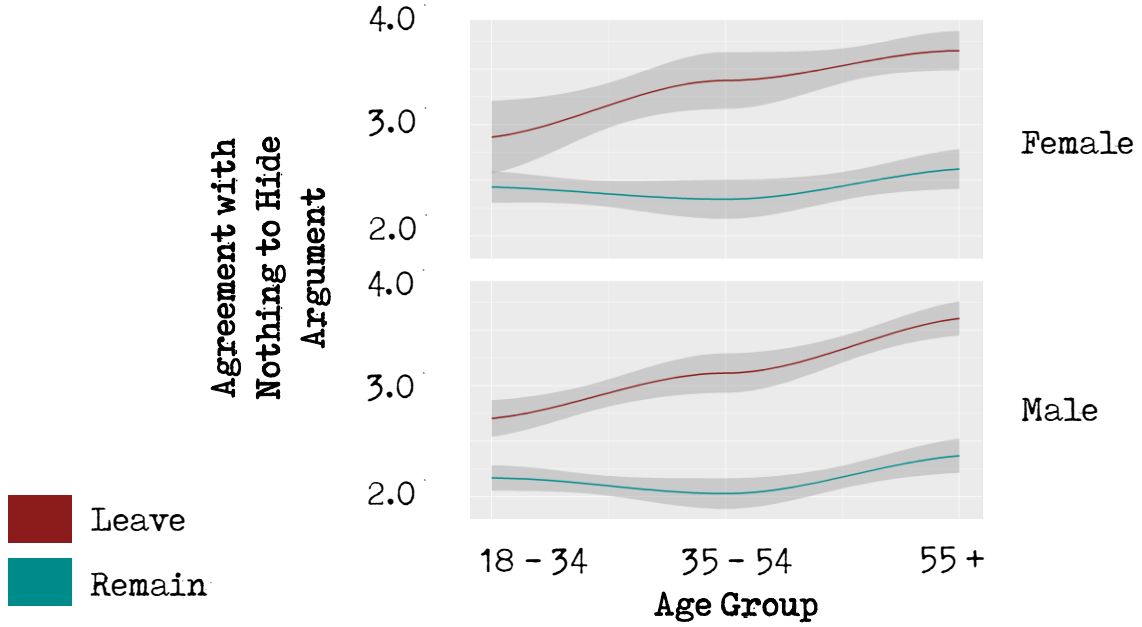
rage against the
WEAPONIZED
A.I.
PROPAGANDA
machine
Suggy (AKA Chris Sumner), Online Privacy Foundation, DEF CON 25

2016

"if you've got nothing to hide, you've got nothing to fear"



The Rise of the Weaponized AI Propaganda Machine

BERIT ANDERSON AND BRETT HORVATH
ILLUSTRATION BY CODY FITZGERALD

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MAR 5, 2017 @ 06:55 AM 2,621 VIEWS EDITOR'S PICK

Does Trump's 'Weaponized AI Propaganda Machine' Hold Water?

Jason Bloomberg, CONTRIBUTOR

I write and consult on digital transformation in the enterprise. FULL BIO

Opinions expressed by Forbes Contributors are their own.

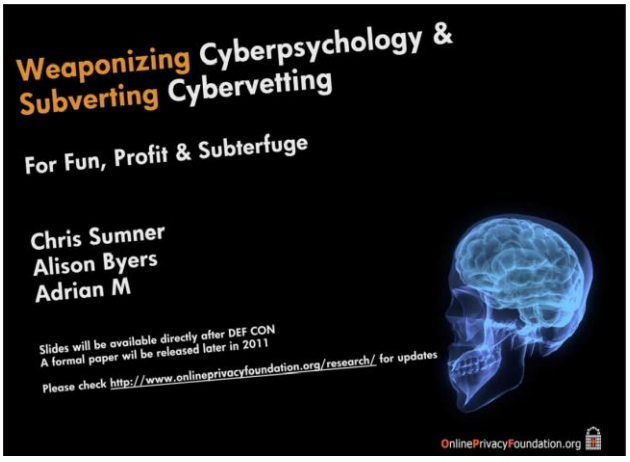
2013

Predicting Susceptibility to Social Bots on Twitter

Chris Sumner & Dr. Randall Wald

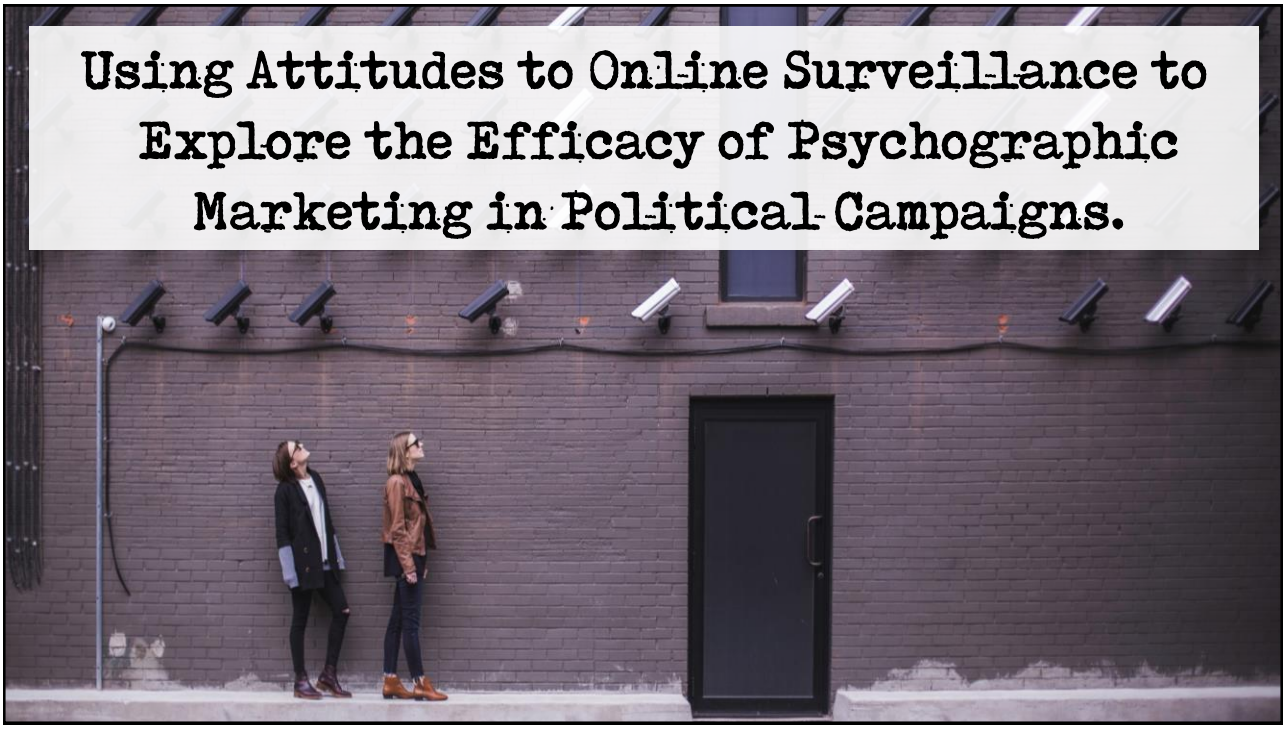
The Online Privacy Foundation
Discover • Discuss • Decide

2011


Weaponizing Cyberpsychology &
Subverting Cybervetting
For Fun, Profit & Subterfuge
Chris Sumner
Alison Byers
Adrian M
Slides will be available directly after DEF CON
A formal paper wil be released later in 2011
Please check http://www.onlineprivacyfoundation.org/research/ for updates
OnlinePrivacyFoundation.org

2012

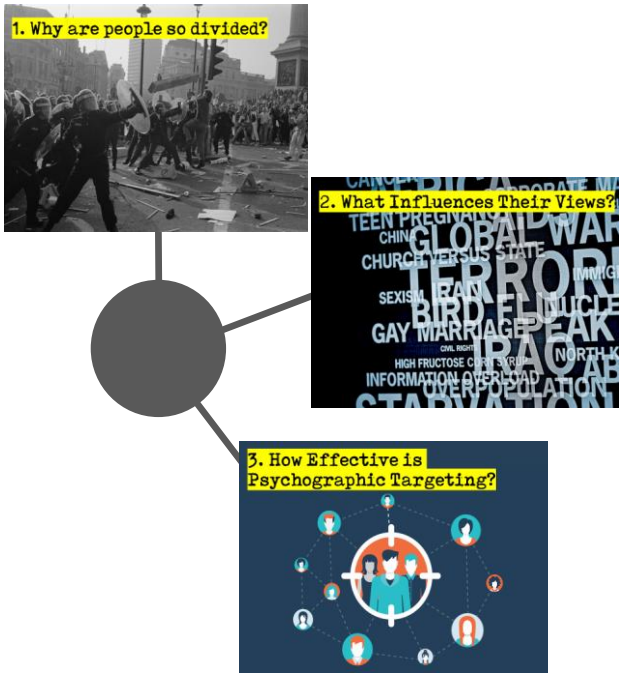
Can Twitter
really help
expose
psychopath
killers'
traits?

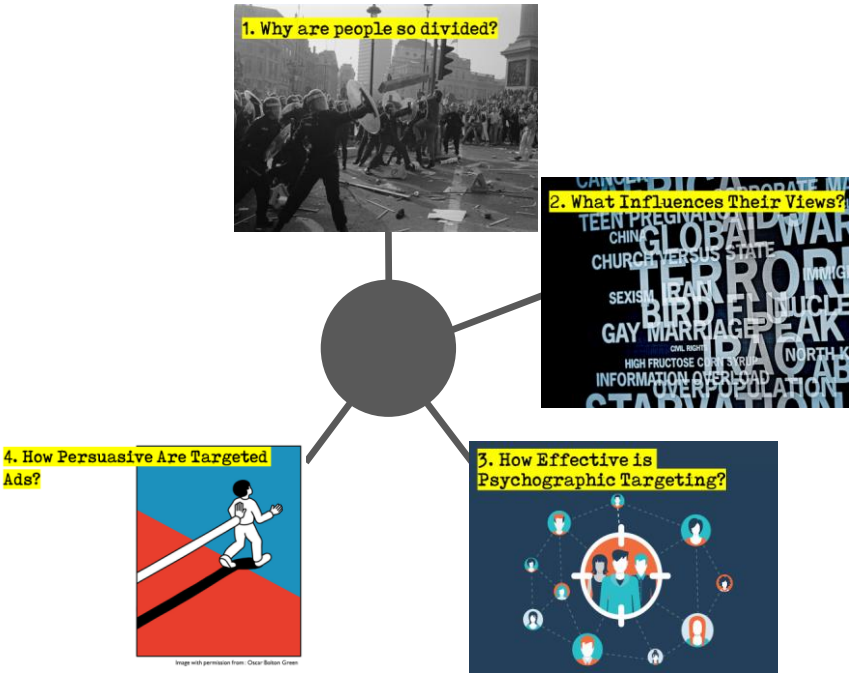

Using Attitudes to Online Surveillance to Explore the Efficacy of Psychographic Marketing in Political Campaigns.

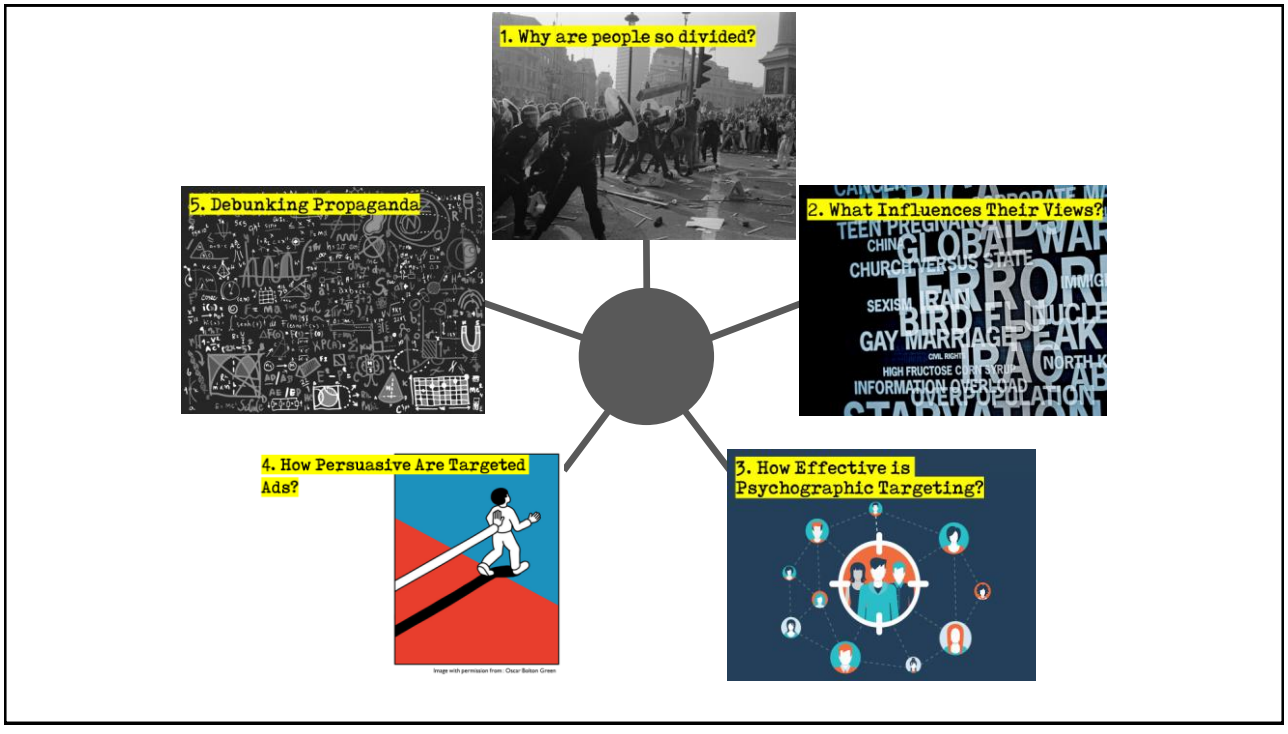
1. Why are people so divided?

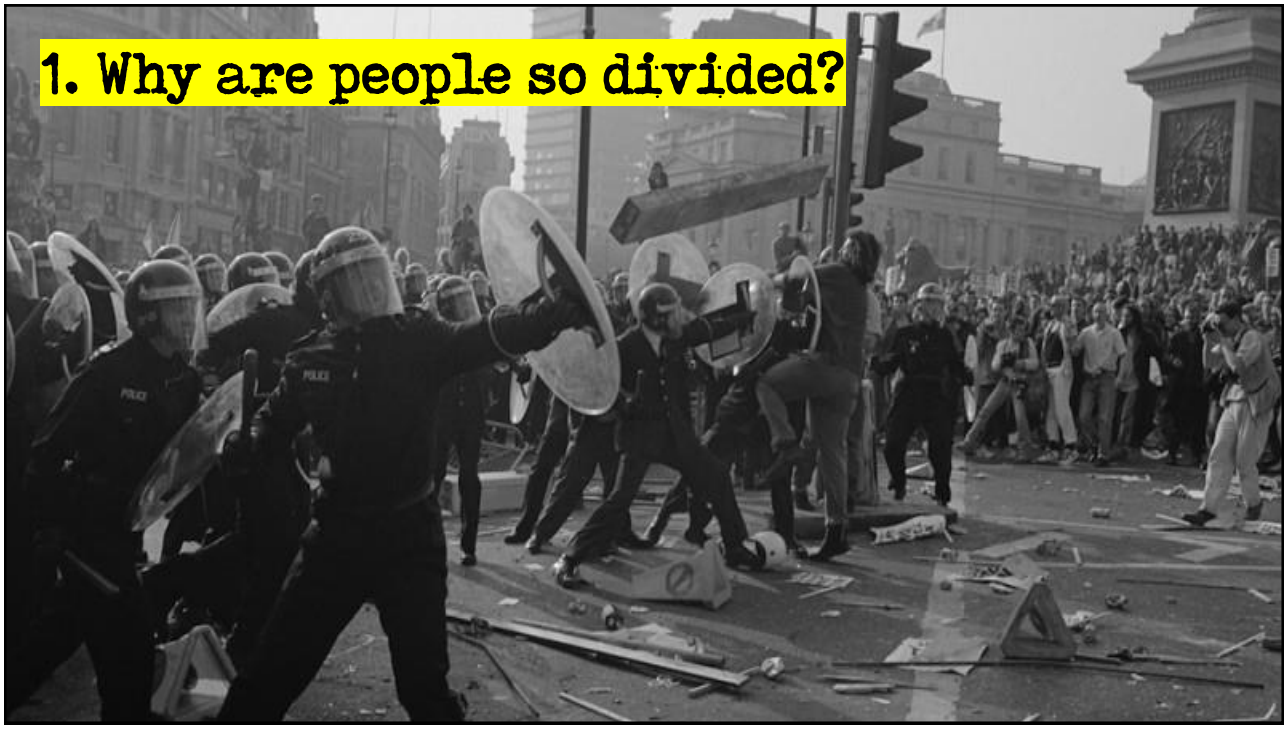
1. Why are people so divided?

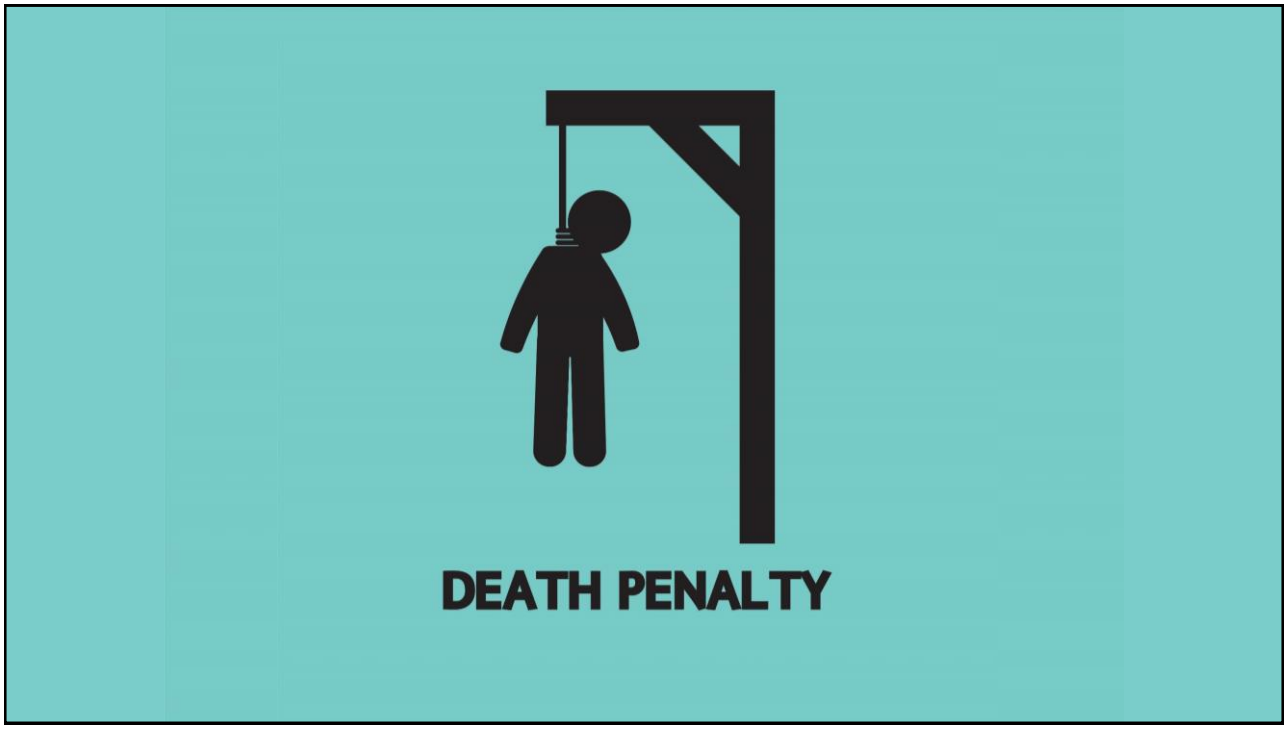
2. What Influences Their Views?
TEEN
CHIN
GLOBAL
CHURCH VERSUS STATE
TERROR
SEXISM
BIRD
GAY MARRIAGE
HIGH FRUCTOSE
INFORMATION OVERLOAD


1. Why are people so divided?
2. What Influences Their Views?
3. How Effective is Psychographic Targeting?

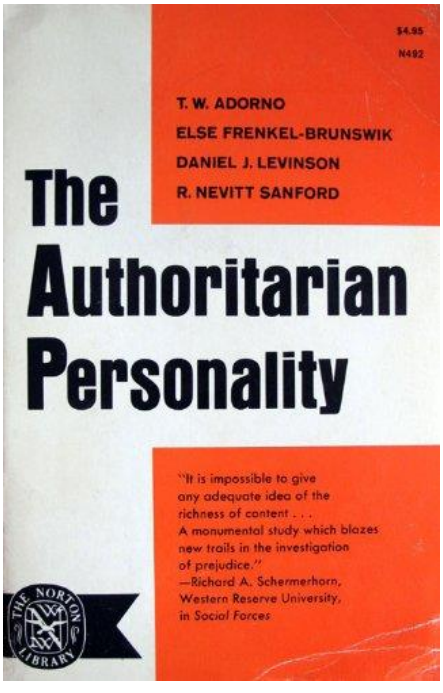

1. Why are people so divided?
2. What Influences Their Views?
4. How Persuasive Are Targeted Ads?
3. How Effective is Psychographic Targeting?

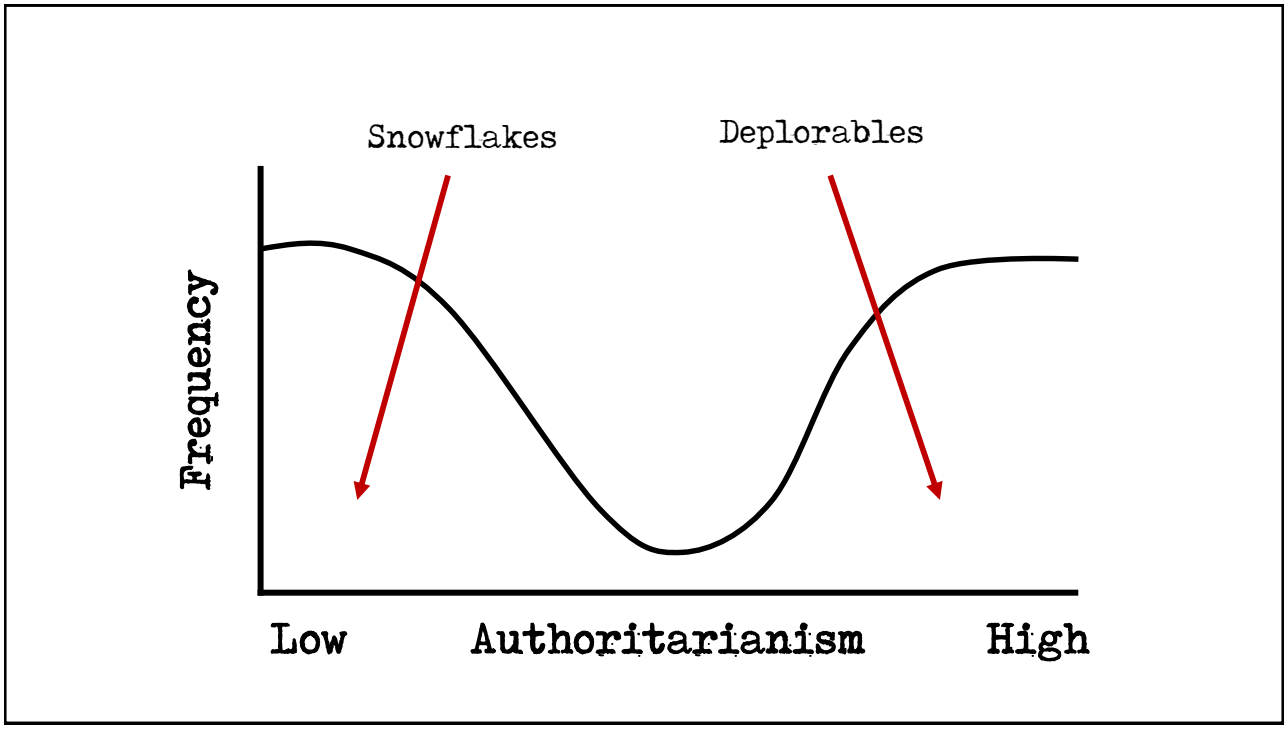

1. Why are people so divided?
2. What Influences Their Views?
3. How Effective is Psychographic Targeting?
4. How Persuasive Are Targeted Ads?
5. Debunking Propaganda

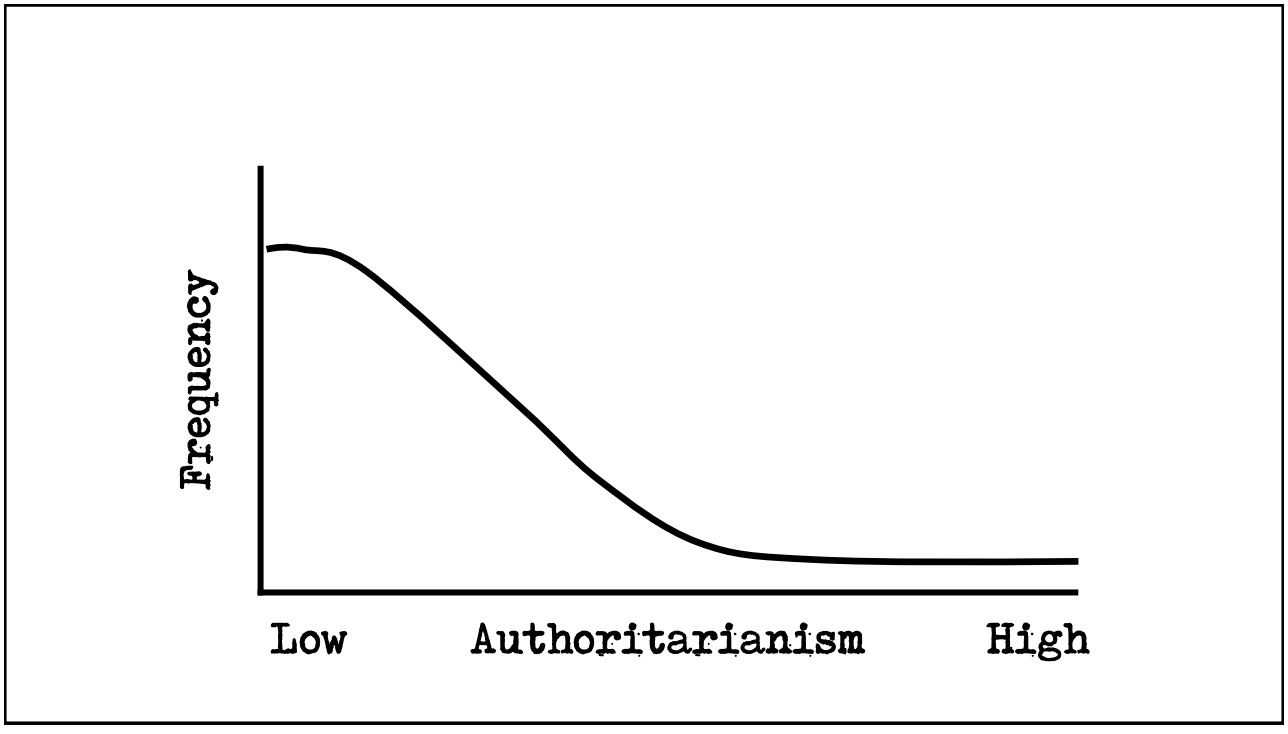

1. Why are people so divided?


DEATH PENALTY

BREAKING POINT
The EU has failed us all
We must break free of the EU and take back control of our borders.
Leave the European Union
ON 23RD JUNE
votetoleavetheeu.co.uk


$4.95
N492
T. W. ADORNO
ELSE FRENKEL-BRUNSWIK
DANIEL J. LEVINSON
R. NEVITT SANFORD
The Authoritarian Personality
"It is impossible to give any adequate idea of the richness of content . . . A monumental study which blazes new trails in the investigation of prejudice."
—Richard A. Schermerhorn, Western Reserve University, in Social Forces
THE NORTON LIBRARY

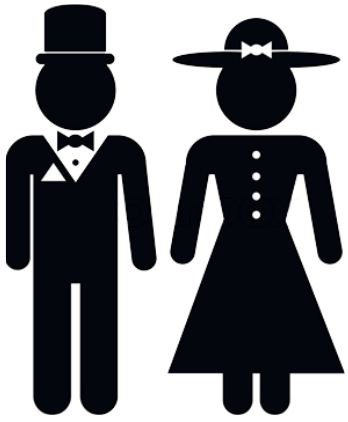

Snowflakes
Deplorables
Frequency
Low
Authoritarianism
High

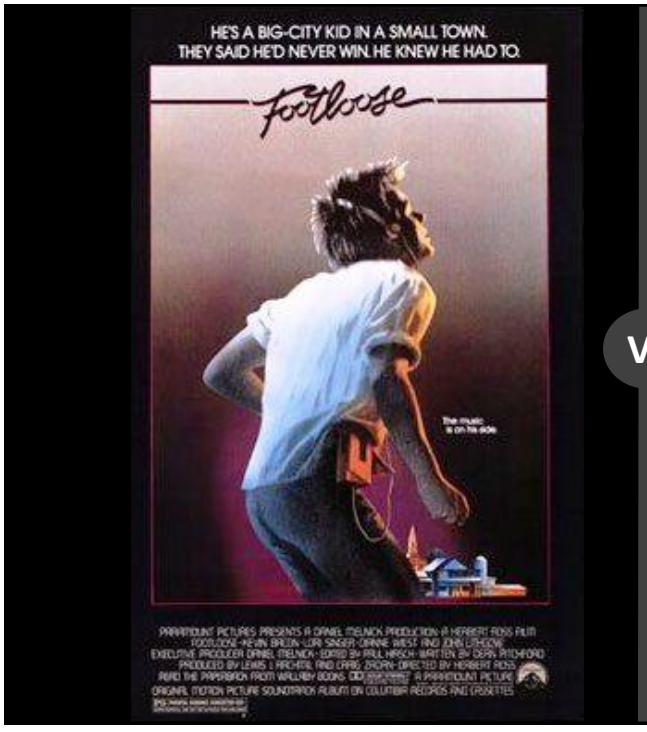

Frequency
Low
Authoritarianism
High

BLACK & WHITE

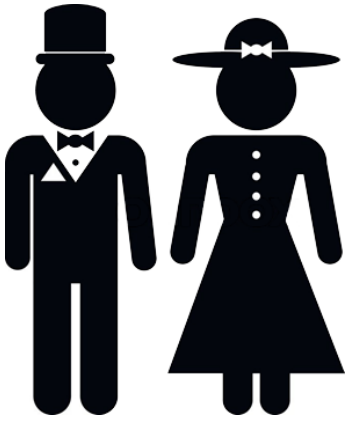
Vs

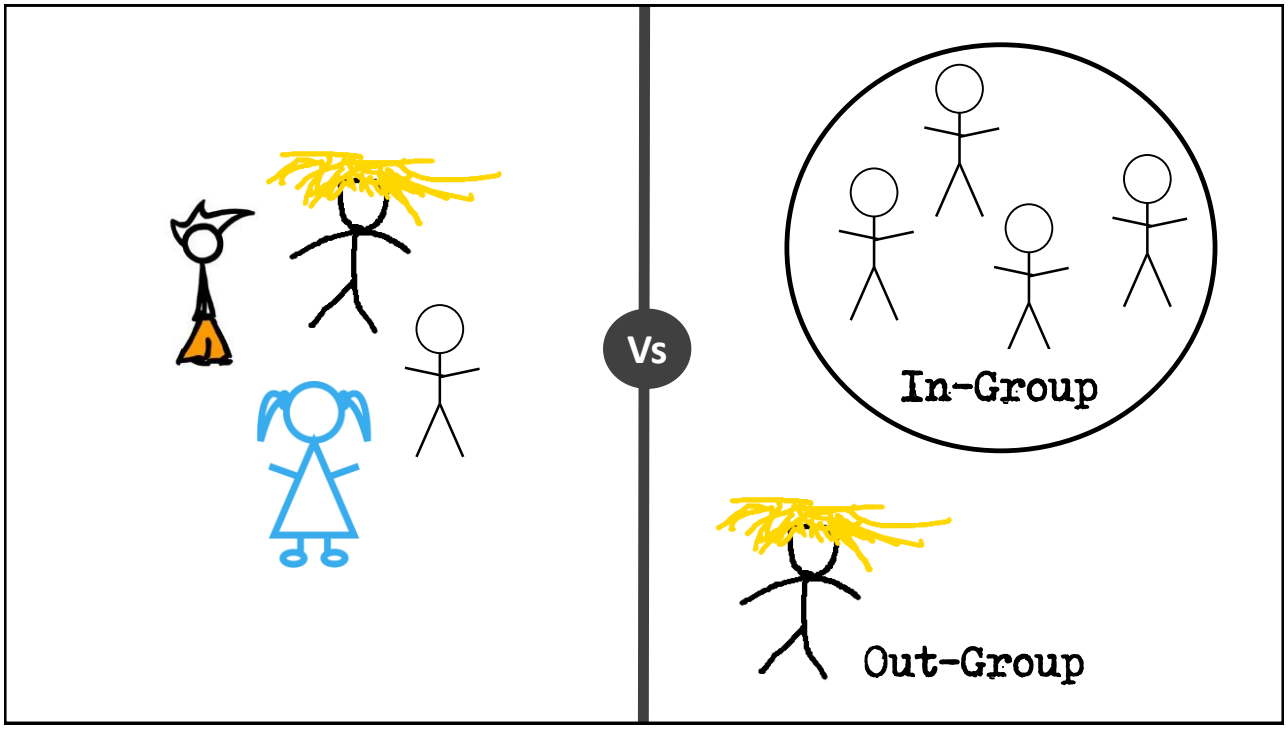
BLACK & WHITE




HE'S A BIG-CITY KID IN A SMALL TOWN.
THEY SAID HE'D NEVER WIN. HE KNEW HE HAD TO.
Footloose

Vs

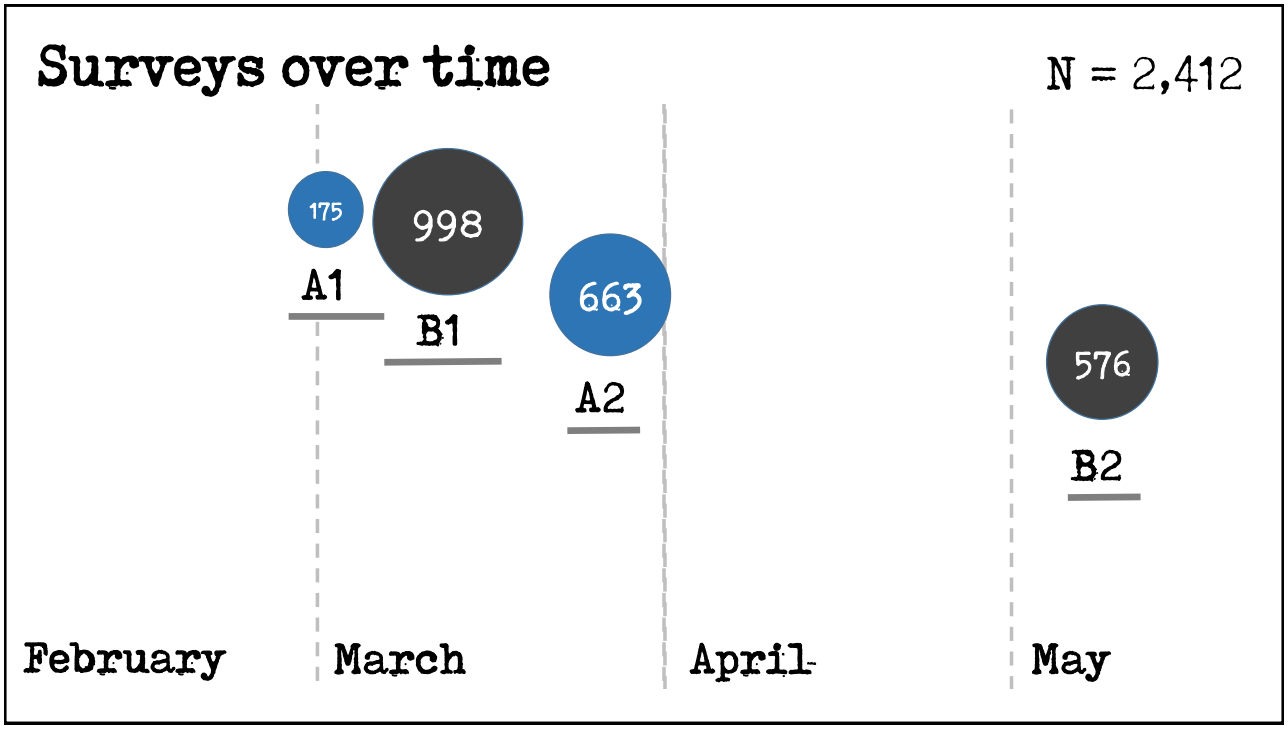




Feldman & Stenner, 1997
Child Rearing Questions

Most important for a child to have?

self-reliance	Vs	obedience
curiosity	Vs	good manners
independence	Vs	respect for elders
to be considerate	Vs	to be well-behaved



"You have
nothing to fear,
if you have
nothing to hide"

A1 B1 A2 B2

A1 B1 A2 B2

“It is acceptable that immigrants and visitors from potentially dangerous countries should have to reveal their social media account passwords to UK border agents.”

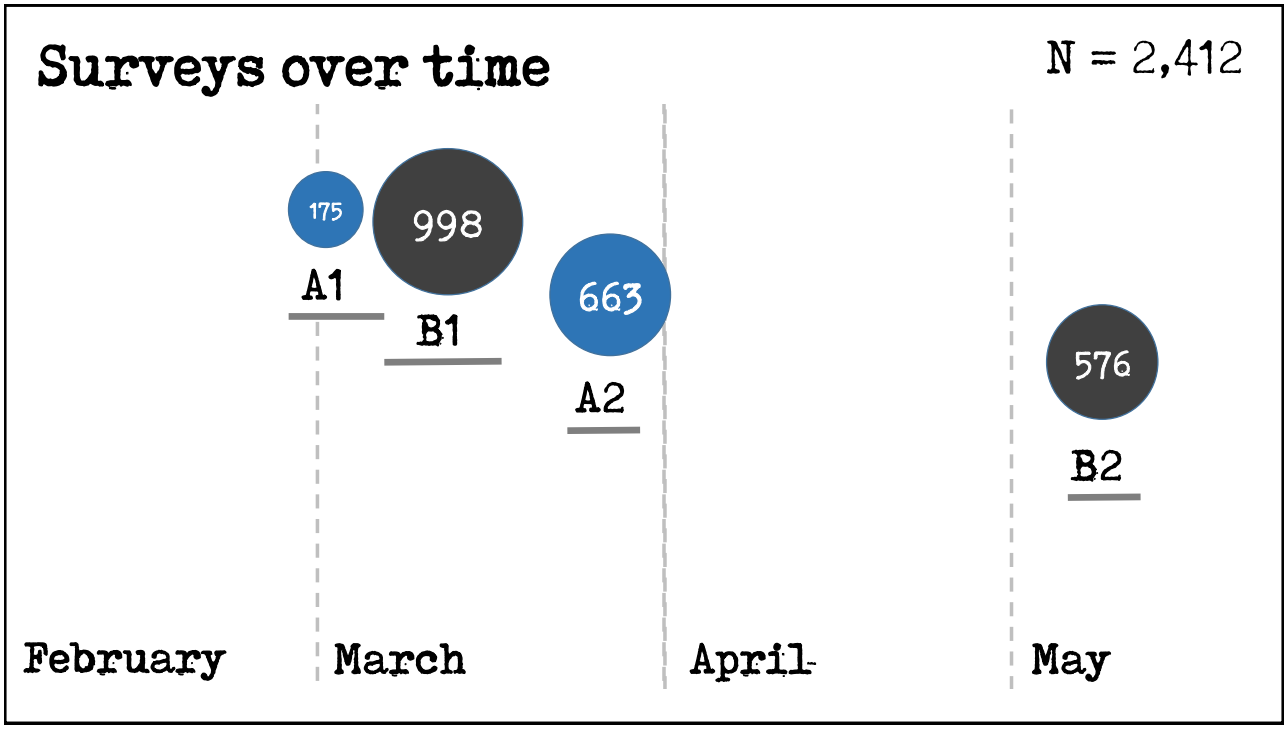
A1 B1 A2 B2

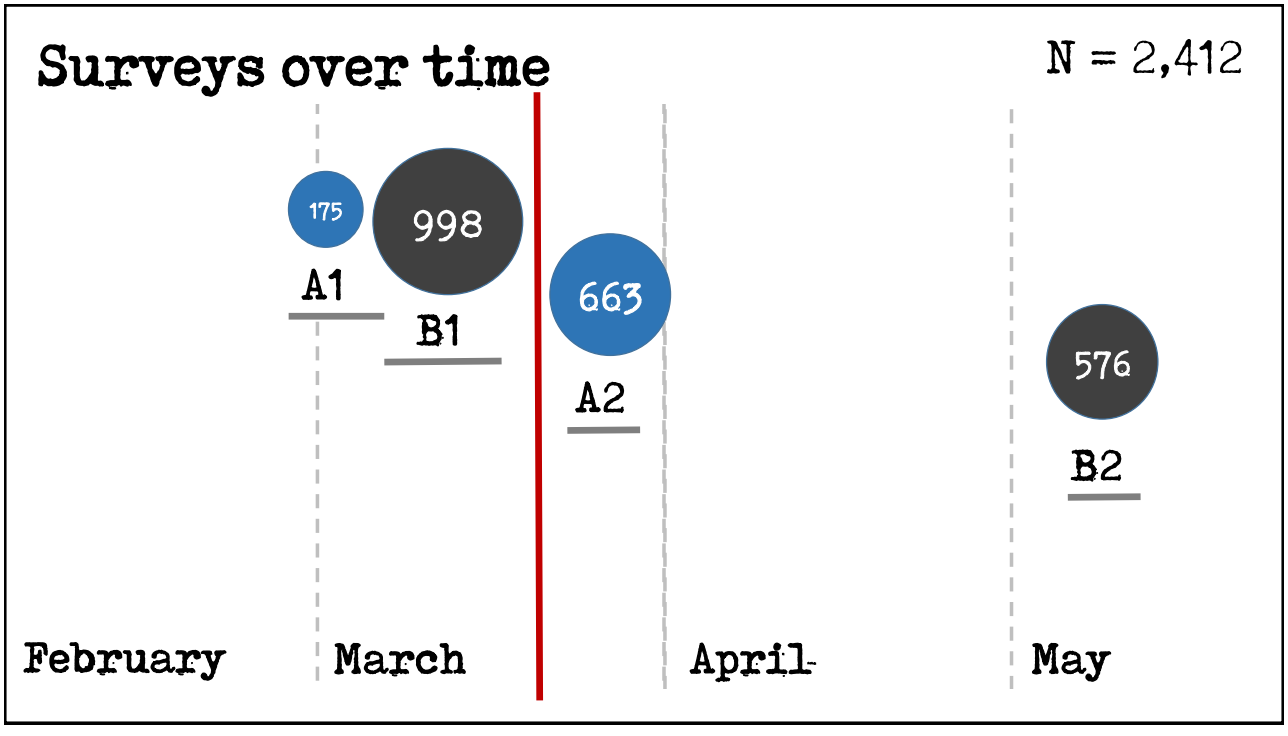
“The dark net should be shut down”

A1 B1 ~~A2~~ ~~B2~~

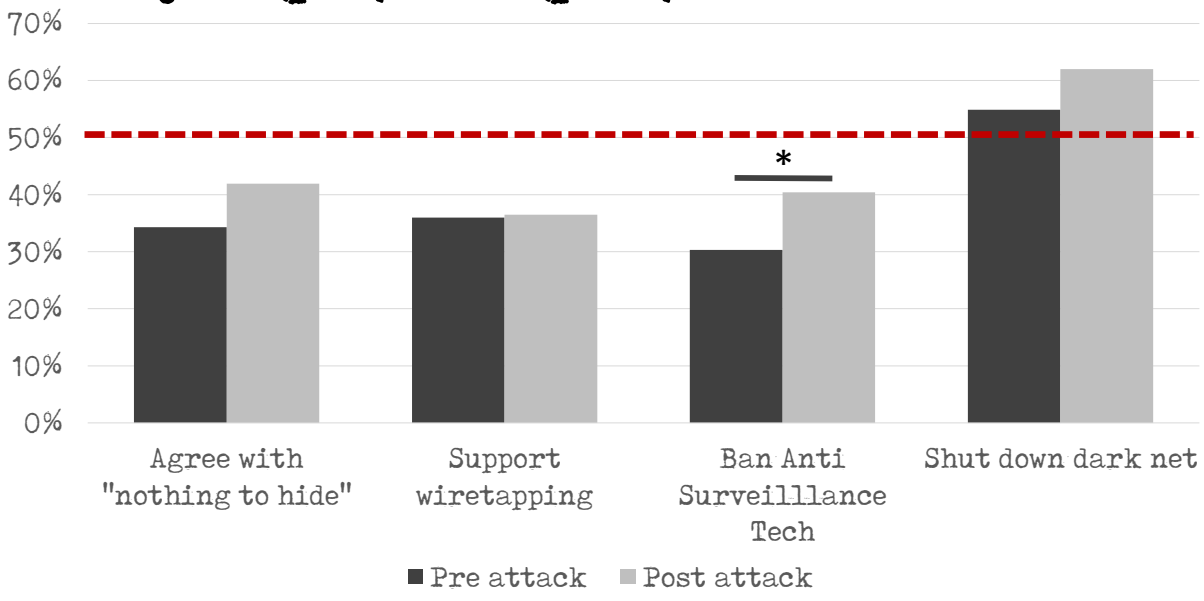
“Companies should be not be allowed to develop technologies that prevent law enforcement from accessing your online conversations.”

A1 B1 ~~A2~~ ~~B2~~


Surveys over time
N = 2,412
175
A1
998
B1
663
A2
576
B2
February
March
April
May

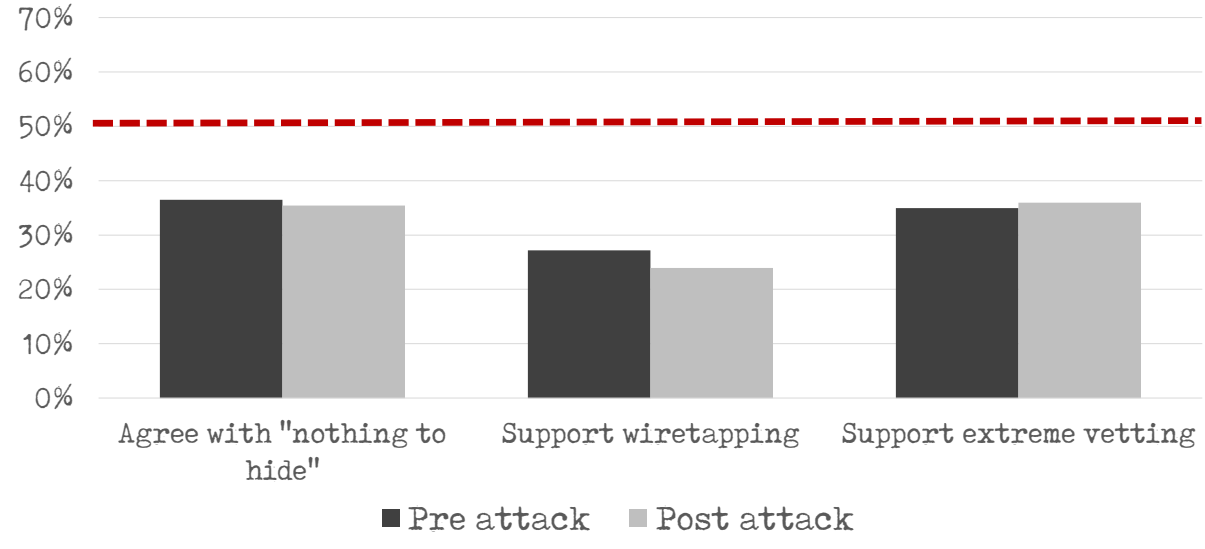

Surveys over time
N = 2,412
175
A1
998
B1
663
A2
576
B2
February
March
April
May

Survey A1 (pre) v A2 (post)

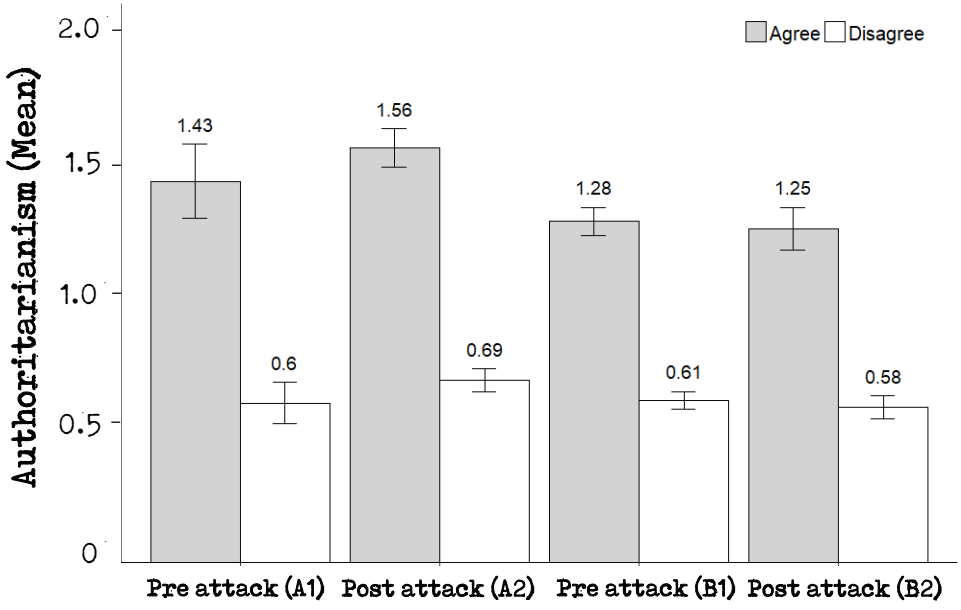


Survey B1 (pre) v B2 (post)

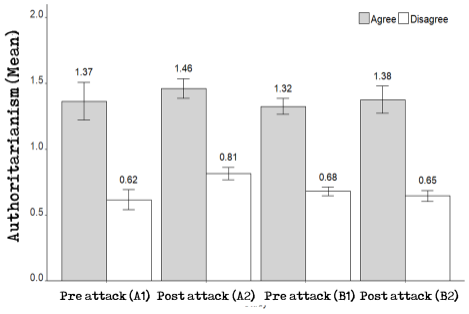
(B2 conducted 41 days after attack)



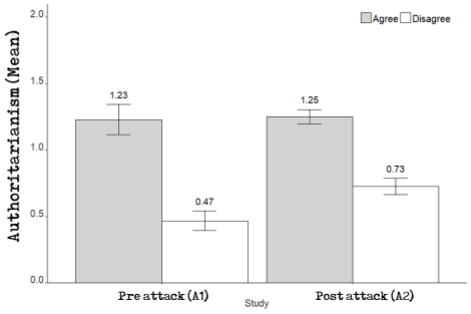
Nothing to Hide, Nothing to Fear.



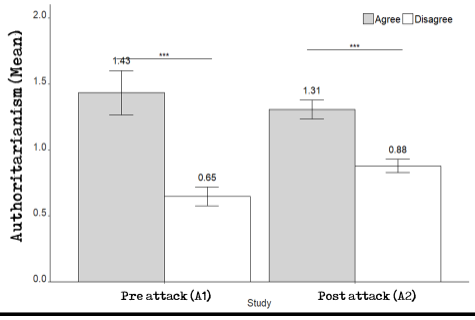
Wiretapping



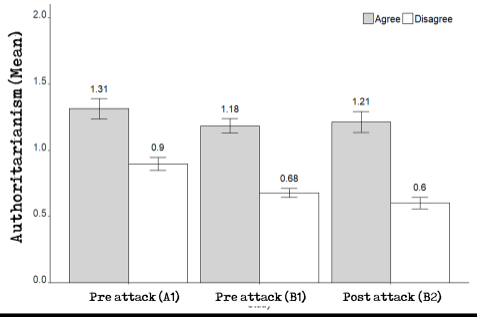
Shut Down the Dark Net



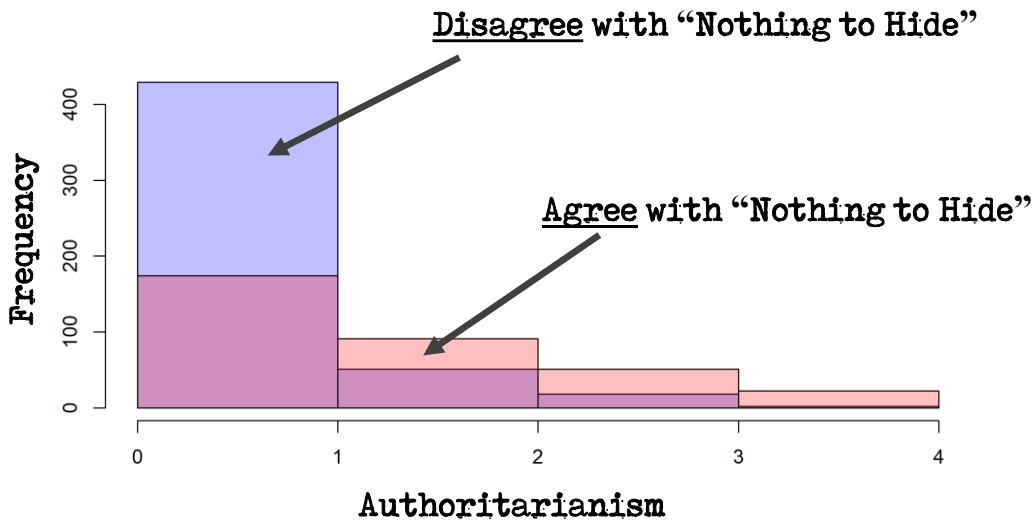
Ban Anti-Surveillance Tech



Extreme Vetting

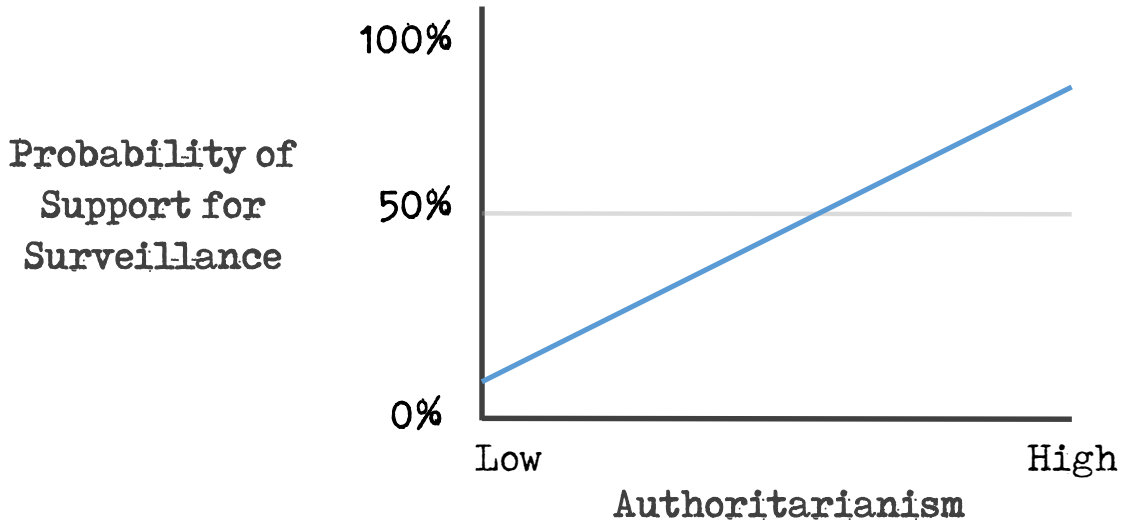


Overlapping Distributions

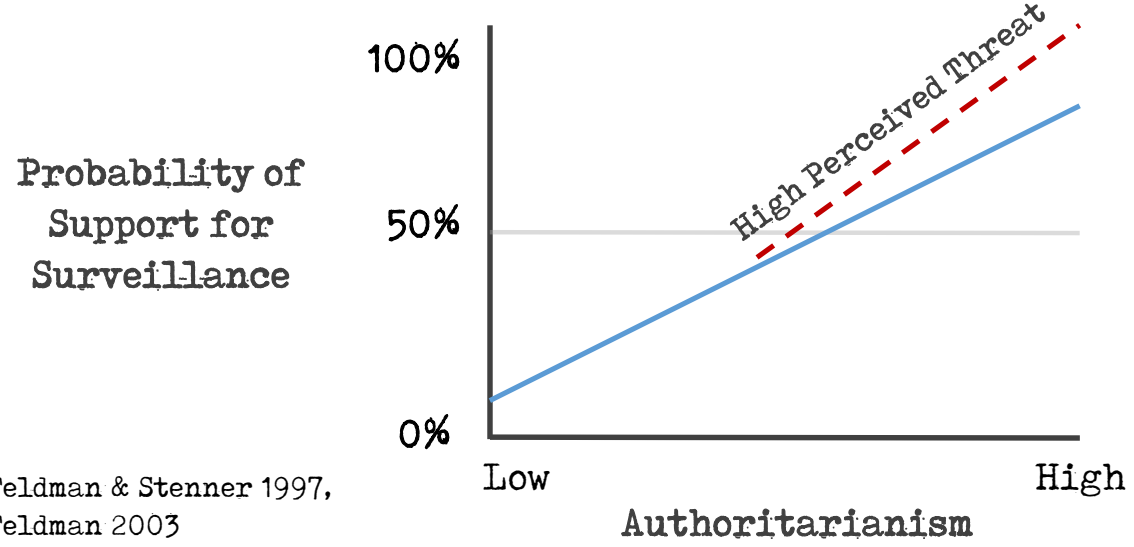


2. What Influences Their Views?

Baseline Support

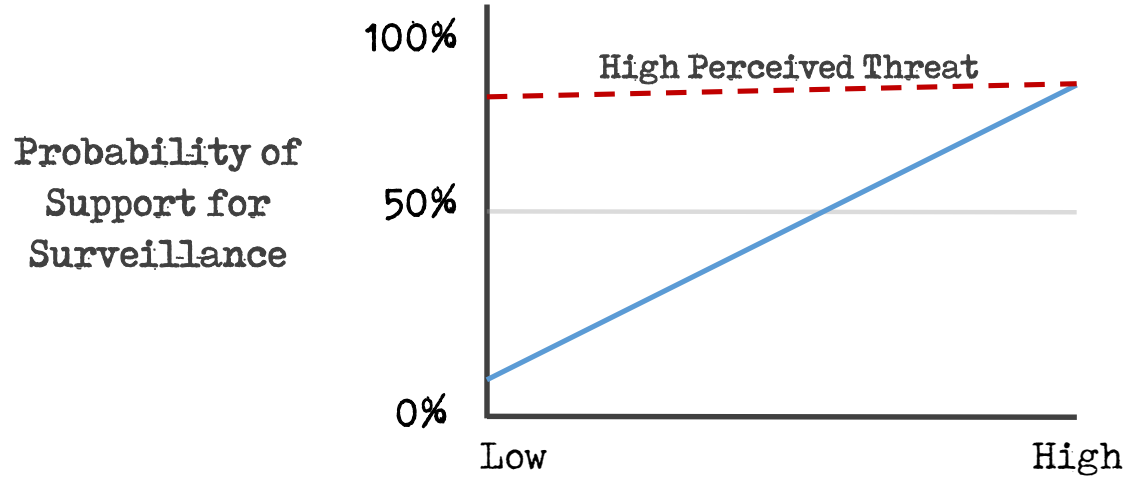


threat increases [support] among those HIGHER in authoritarianism

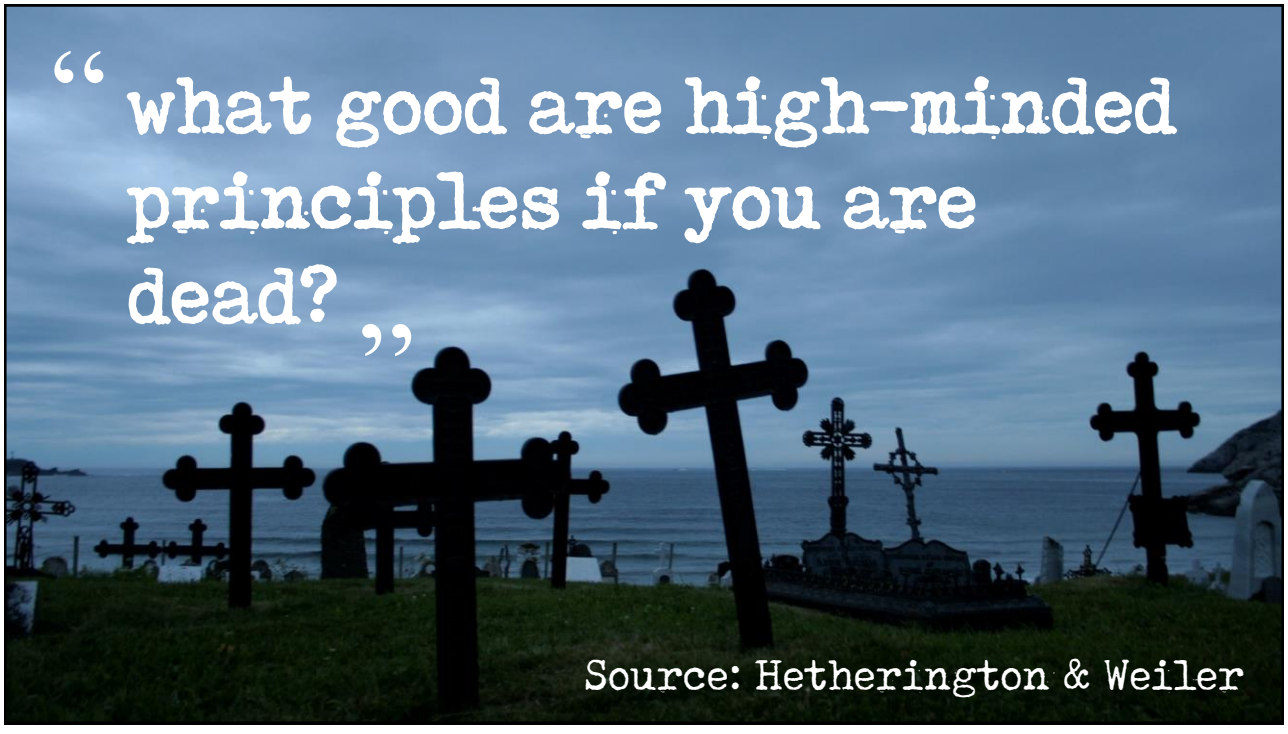


Feldman & Stenner 1997, Feldman 2003

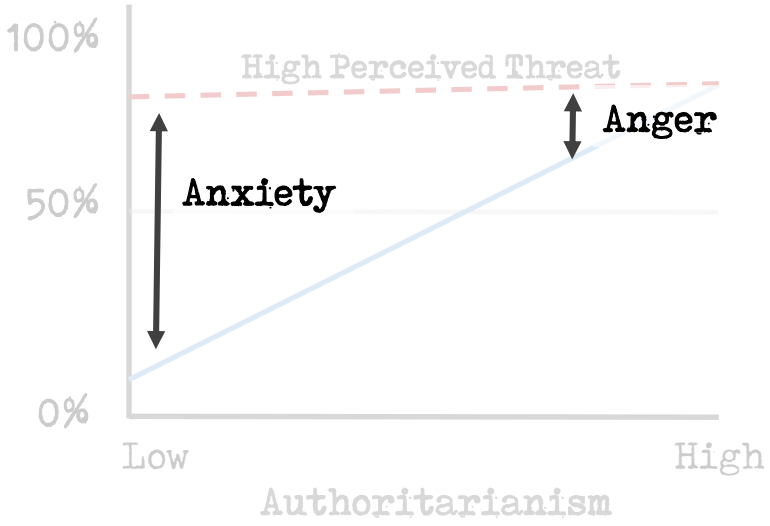
threat increases [support] among those LOWER in authoritarianism



Hetherington & Suhay 2011



"Both are partly right"

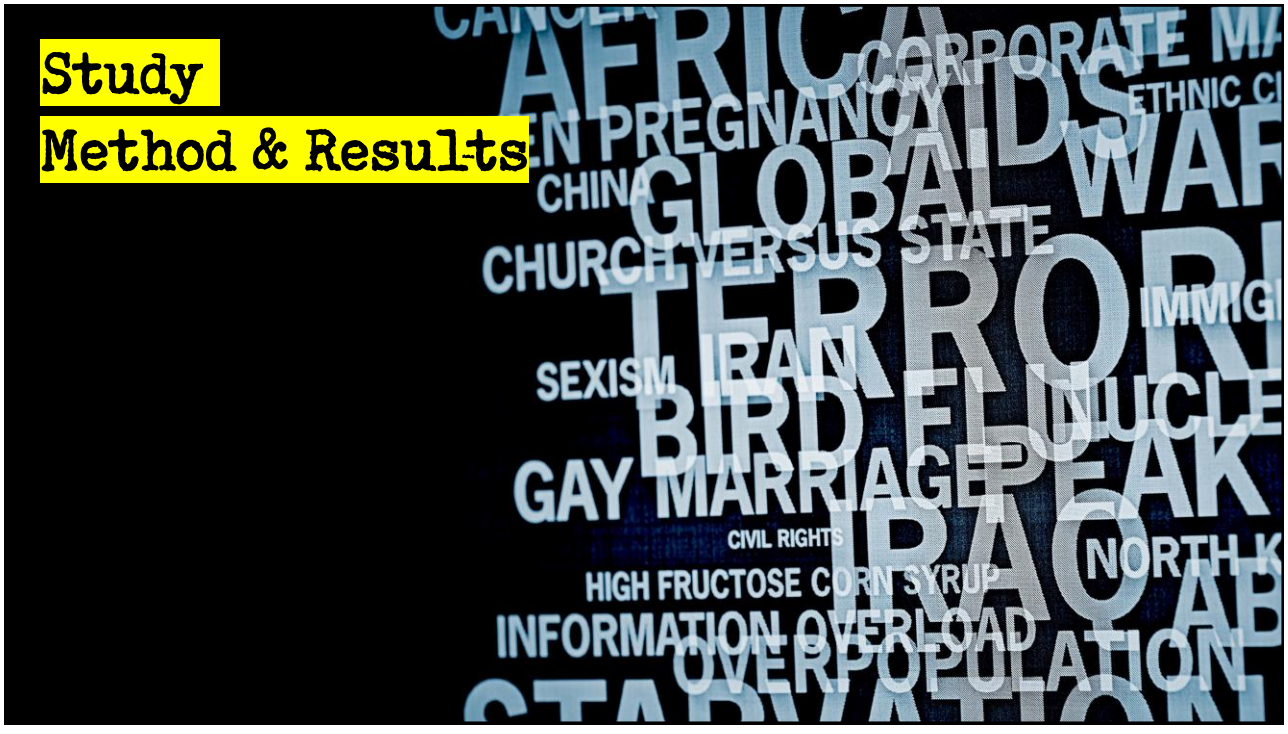


Probability of Support for Surveillance

Vasilopoulos, Pavlos, Marcus, & Foucault. 2011

Study

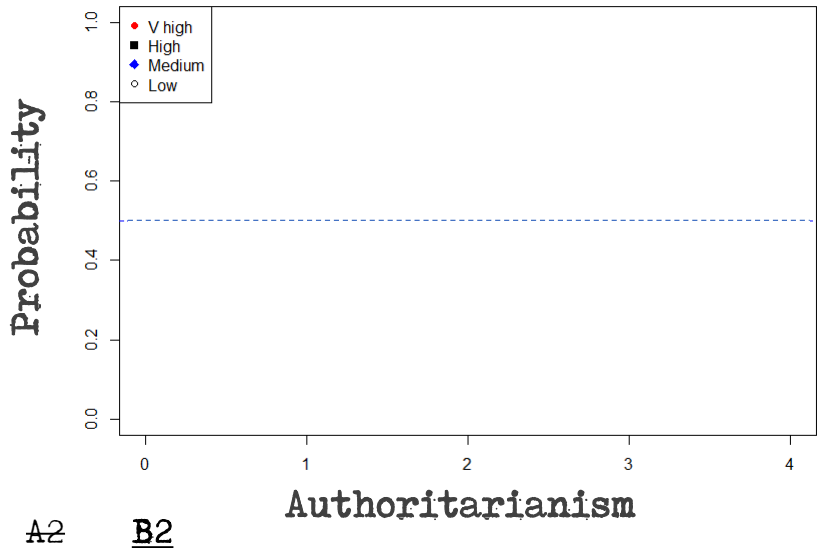
Method & Results



Study
Method & Results

How worried are you that you personally might become a victim of a terrorist attack?

Logistic Regression



~~A1~~ B1 ~~A2~~ B2

Hetherington & Suhay (2011)

Image source: Hetherington, Marc J., and Jonathan D. Weiler. Authoritarianism and polarization in American politics. Cambridge University Press, 2009.

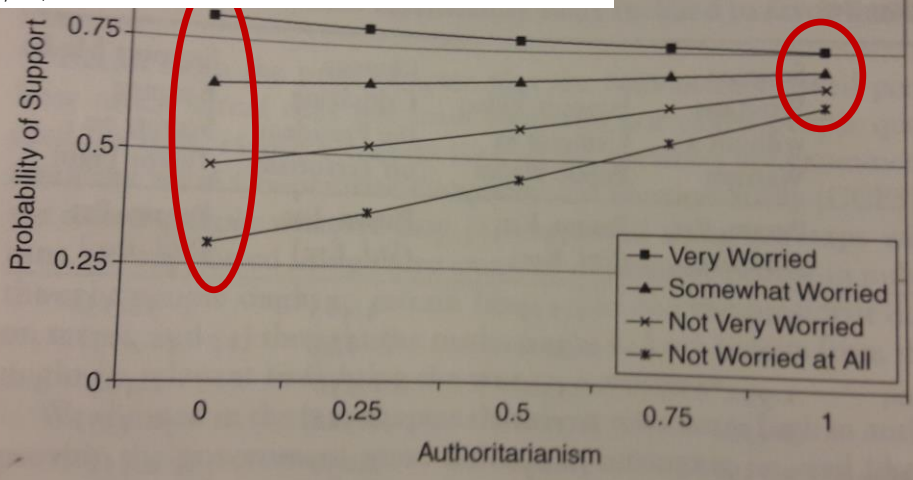
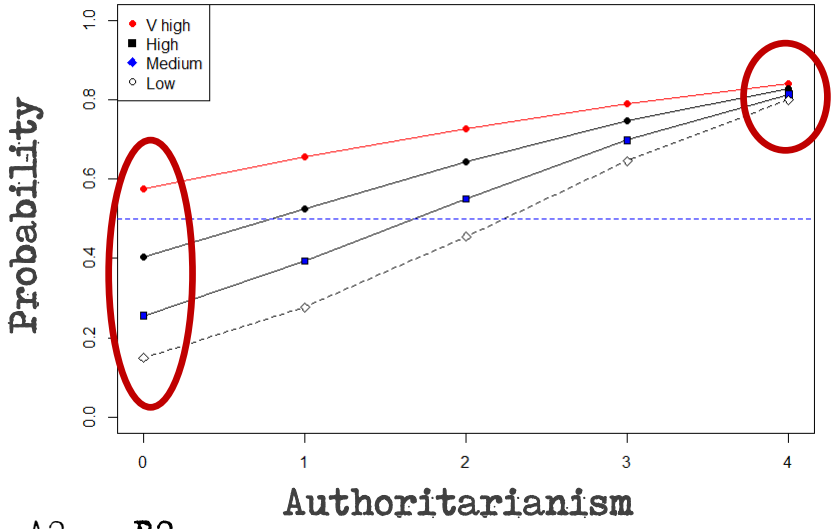


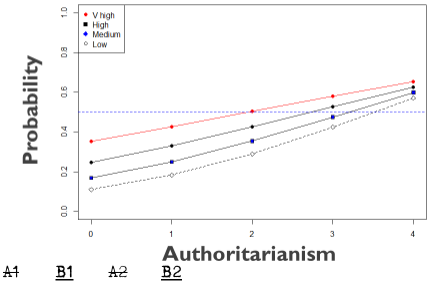
FIGURE 6.3. The Effect of Authoritarianism on Support for Wiretapping without Warrants at Various Levels of Perceived Threat, 2004

Nothing to hide, nothing to fear.



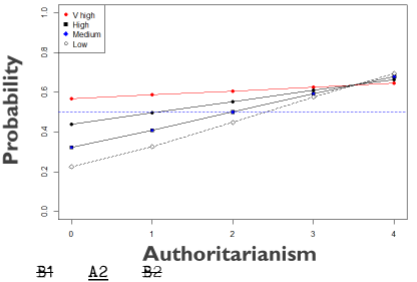
~~A1~~ **B1** ~~A2~~ **B2**

Wiretapping



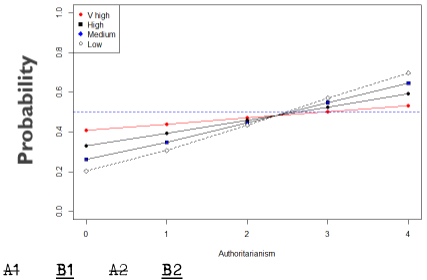
A1 B1 A2 B2

Ban Anti-Surveillance Tech



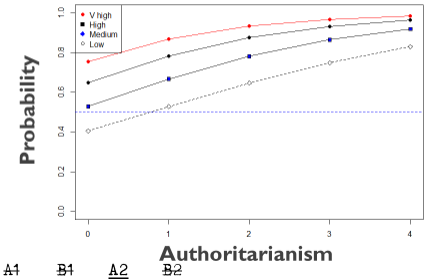
A1 B1 A2 B2

Extreme Vetting



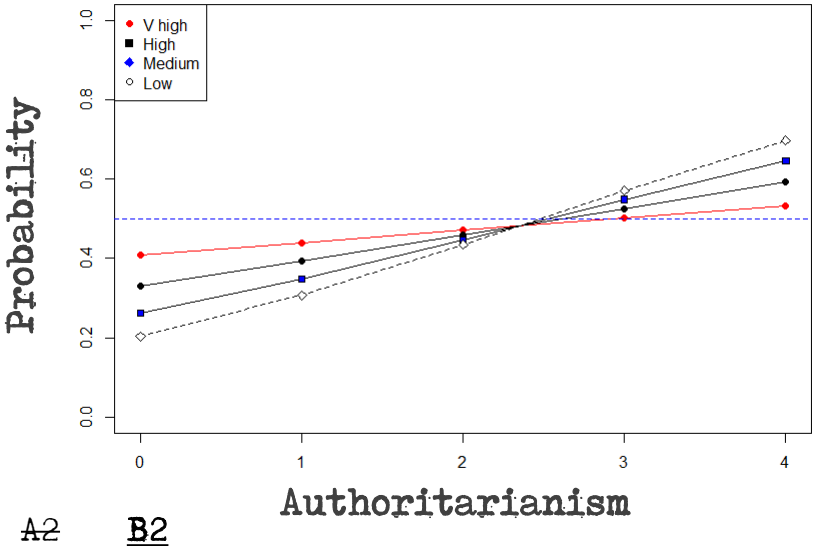
A1 B1 A2 B2

Shut Down the Dark Net



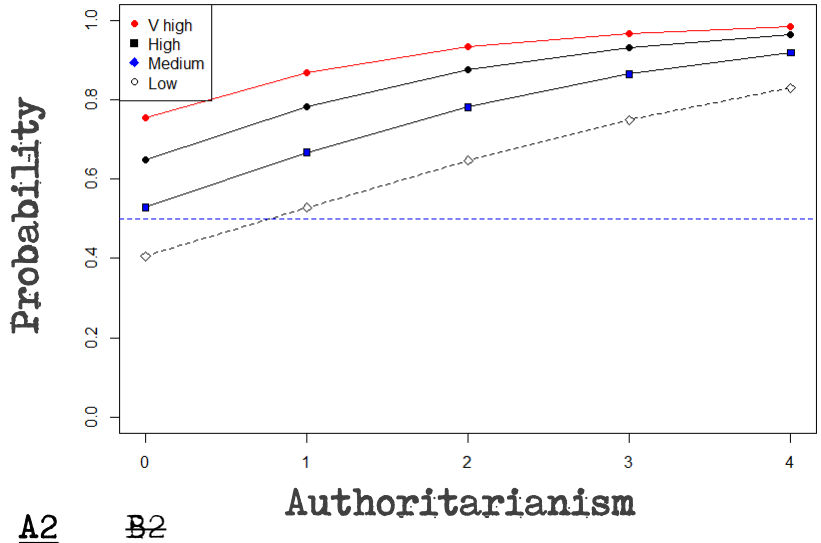
A1 B1 A2 B2

Extreme Vetting



A1 B1 A2 B2

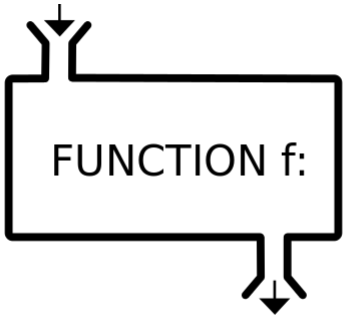
Shut Down the Dark Net (Agree / Disagree)



~~A1~~ ~~B1~~ A2 ~~B2~~

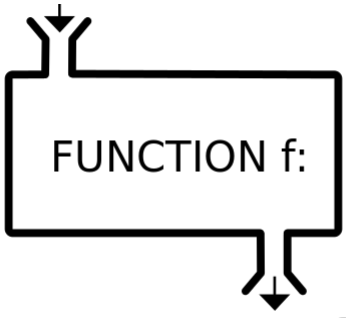
3. How Effective is Psychographic Targeting?

Age, Sex, Geography, FB Interests



Personality

Personality



Age, Sex, Geography, FB Interests

Low Authoritarian

FUNCTION f:

Age / Sex, Geography, FB Interests

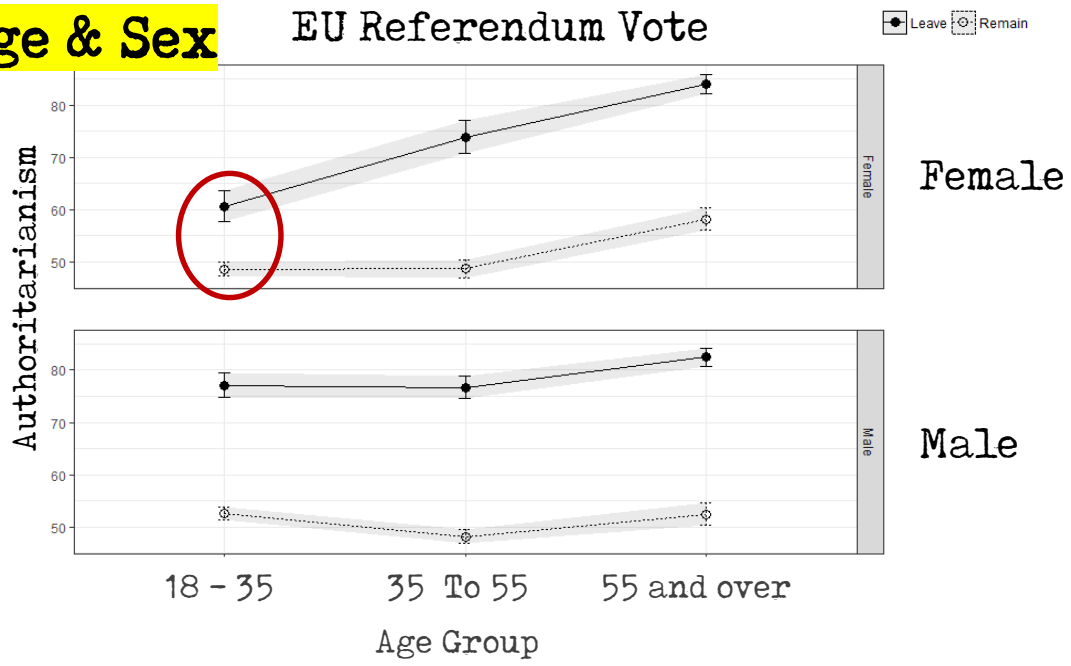
High Authoritarian

FUNCTION f:

Age / Sex, Geography, FB Interests

Study Method & Results

Age & Sex



Female

Male

Low Authoritarian

Males of any age
Females under 35

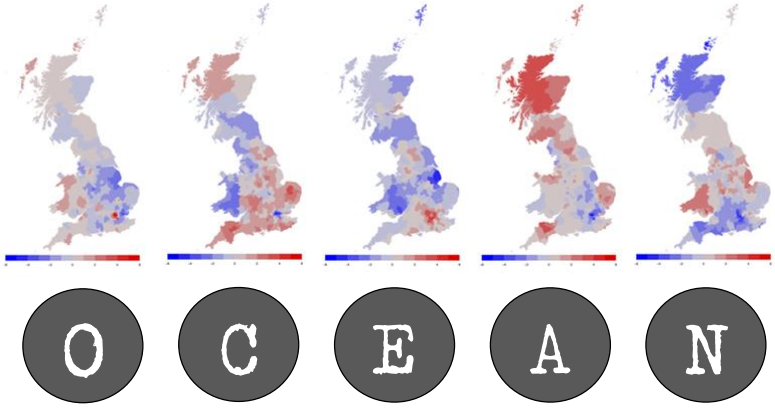
High Authoritarian

Males of any age
Females 35 and over

Geography

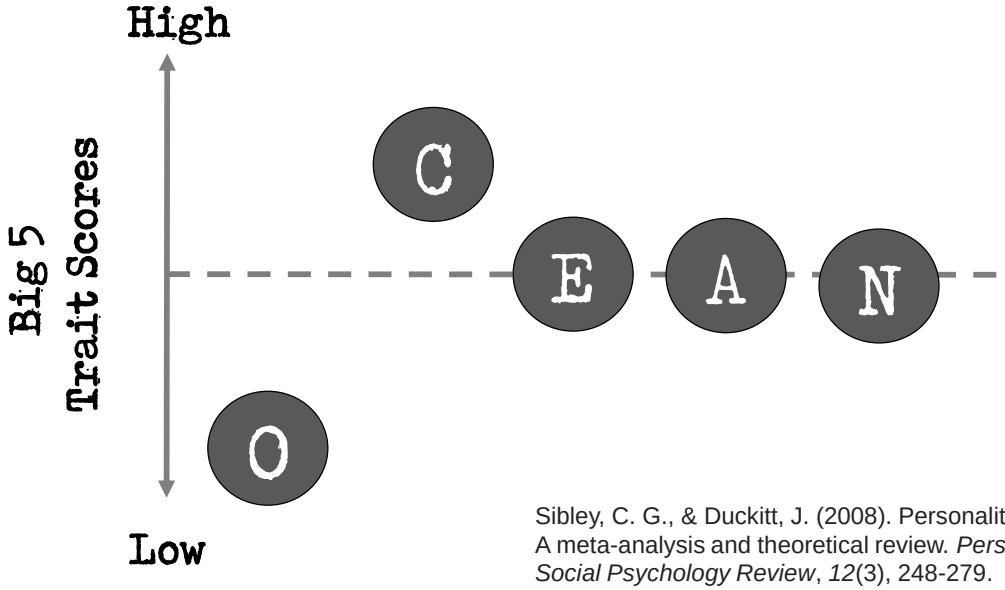
Geography

Rentfrow, Jokela, Lamb 2015

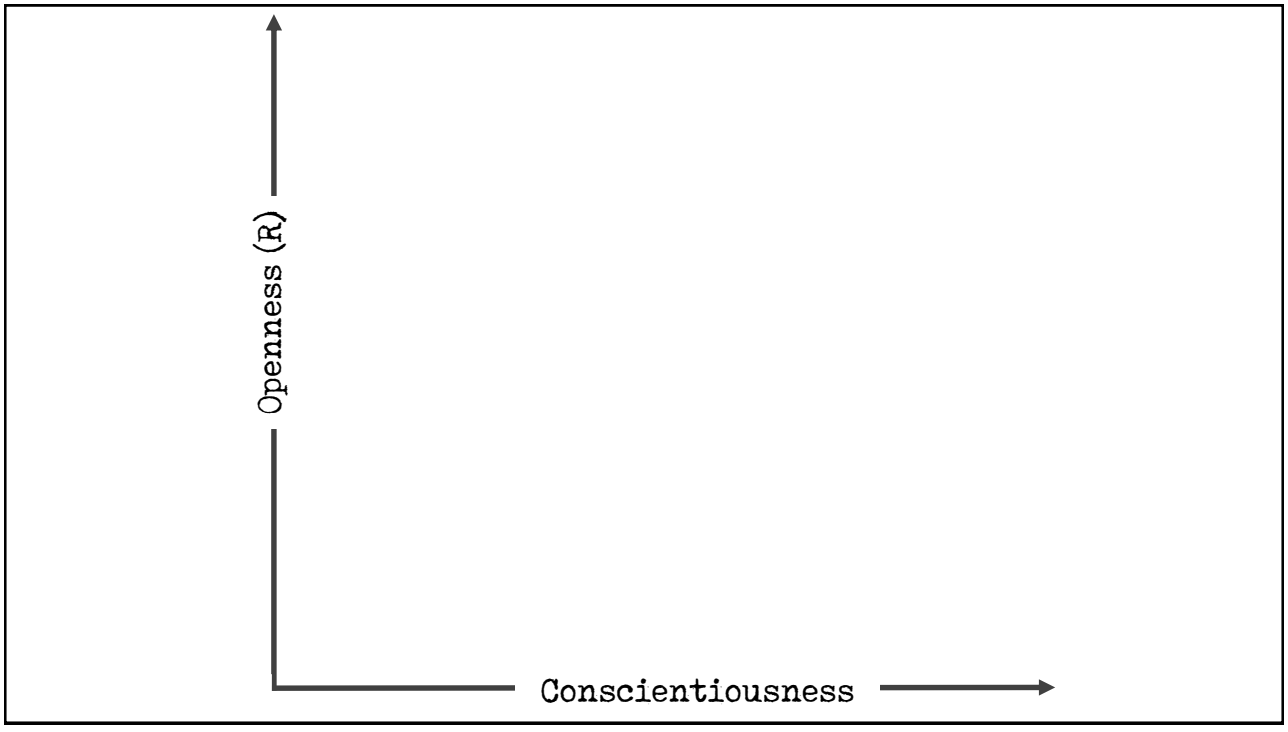


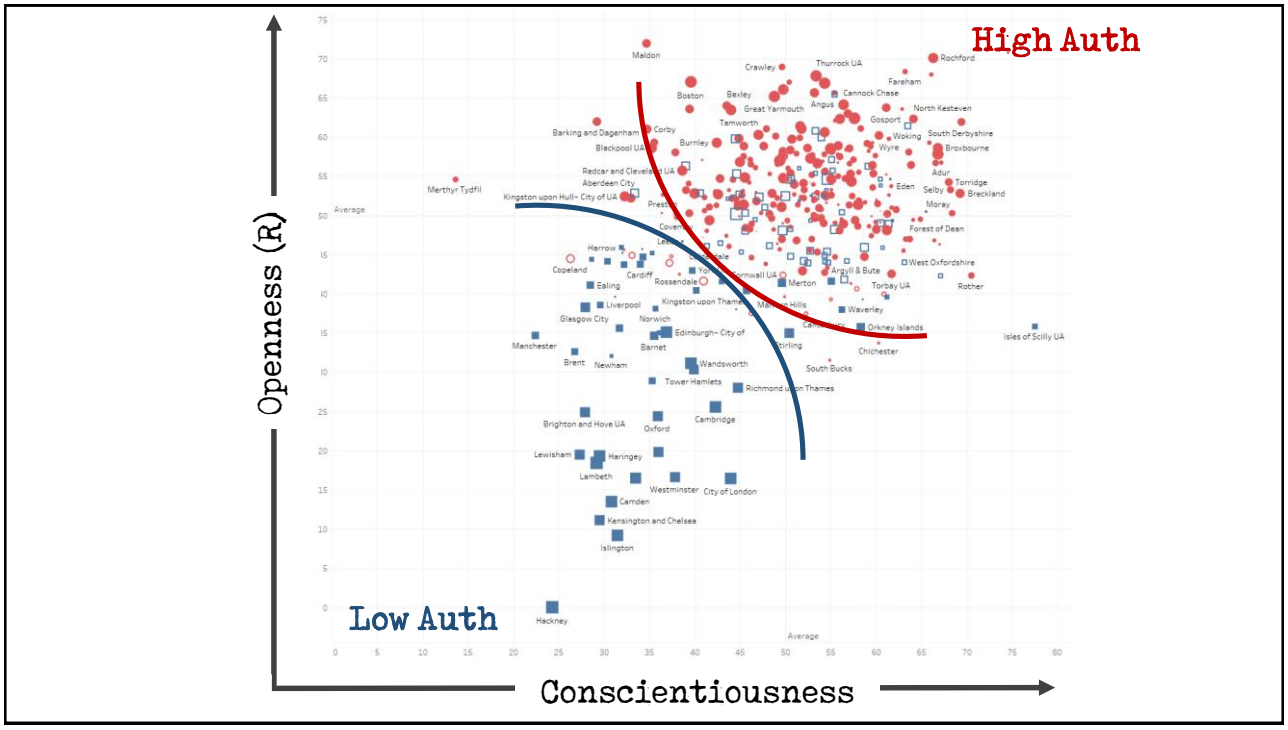
Rentfrow PJ, Jokela M, Lamb ME (2015) Regional Personality Differences in Great Britain. PLOS ONE 10(3): e0122245. https://doi.org/10.1371/journal.pone.0122245
http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0122245

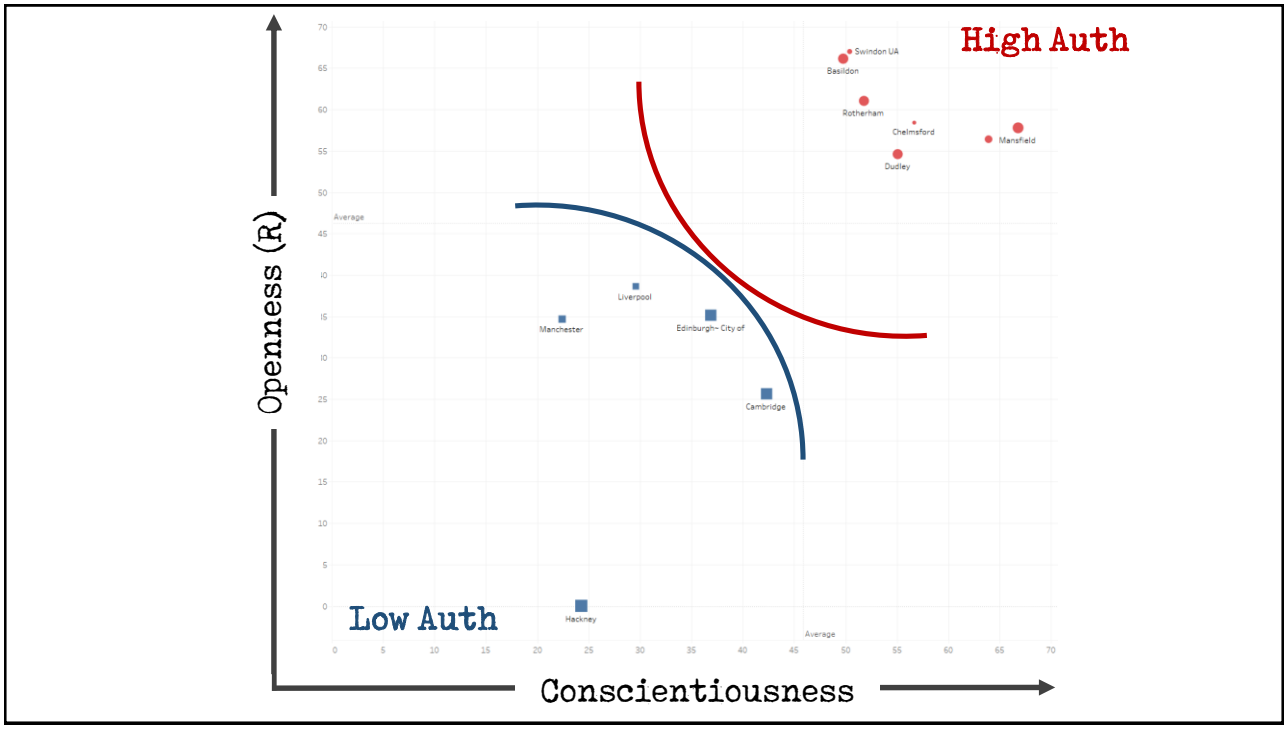
Big 5 & Authoritarianism



Sibley, C. G., & Duckitt, J. (2008). Personality and prejudice: A meta-analysis and theoretical review. *Personality and Social Psychology Review*, *12*(3), 248-279.




High Auth
Low Auth
Openness (R)
Conscientiousness
Average
Maldon
Rochford
Crawley
Thurrock UA
Fareham
Boston
Bexley
Cannock Chase
Great Yarmouth
Angus
North Kesteven
Tamworth
Gosport
Barking and Dagenham
Corby
Woking
South Derbyshire
Blackpool UA
Burnley
Wyre
Broxbourne
Aberdeen City
Eden
Torridge
Selby
Breckland
Merthyr Tydfil
Kingston upon Hull- City of UA
Moray
Forest of Dean
Harrow
Copeland
Cardiff
Argyll & Bute
West Oxfordshire
Rossendale
Merton
Torbay UA
Rother
Ealing
Liverpool
Waverley
Glasgow City
Norwich
Orkney Islands
Edinburgh- City of
Isles of Scilly UA
Manchester
Barnet
Stirling
Chichester
Brent
Newham
Wandsworth
South Bucks
Tower Hamlets
Richmond upon Thames
Brighton and Hove UA
Oxford
Cambridge
Lewisham
Haringey
Lambeth
Westminster
City of London
Camden
Kensington and Chelsea
Islington
Hackney


High Auth
Low Auth
Openness (R)
Conscientiousness
Average
Swindon UA
Basildon
Rotherham
Chelmsford
Mansfield
Dudley
Liverpool
Manchester
Edinburgh- City of
Cambridge
Hackney

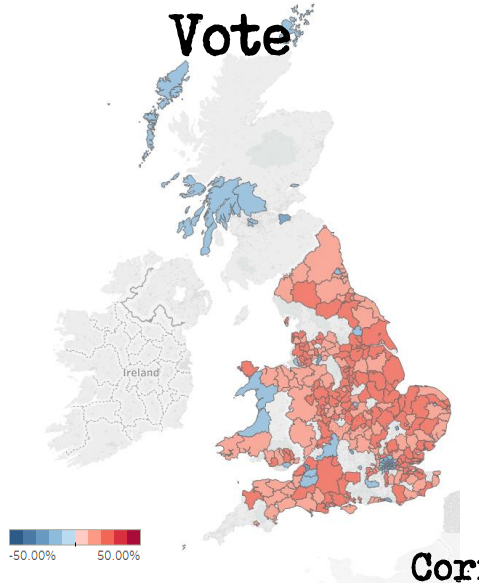
Low Authoritarian

Cambridge,
Liverpool,
Manchester,
Edinburgh,
Hackney

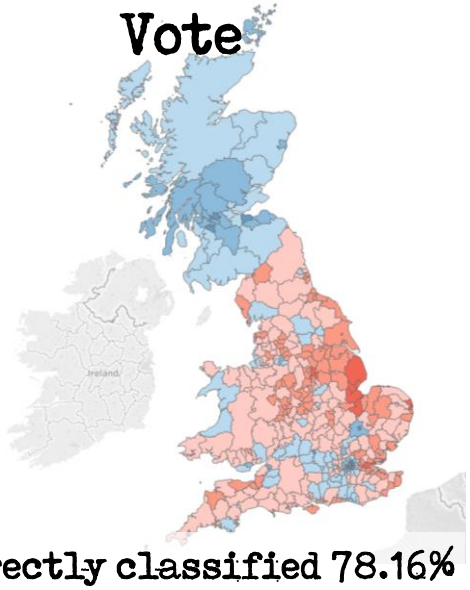
High Authoritarian

Basildon,
Chelmsford
Dudley
Thurrock,
Mansfield,
Market Weighton,
Rotherham,
Swindon

Predicted Vote

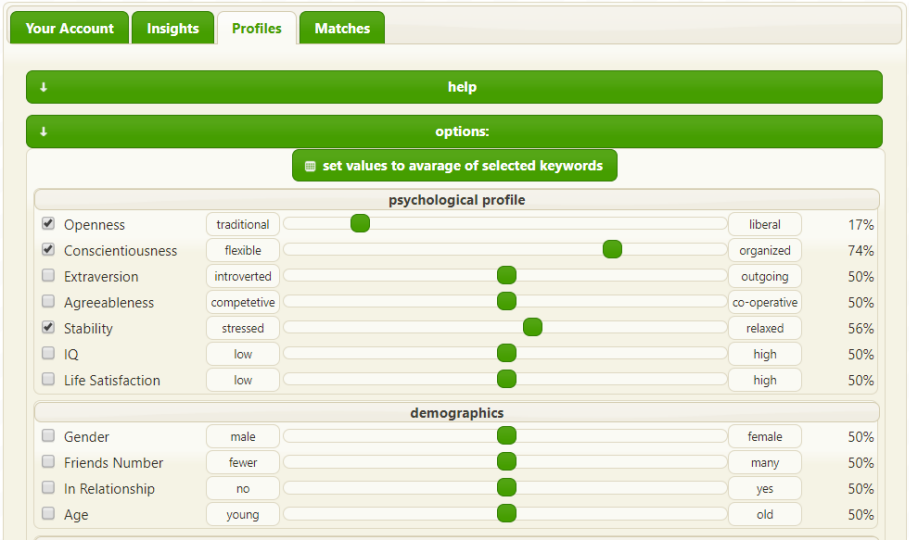


Actual Vote



Correctly classified 78.16%

Facebook Interests



PreferenceTool.com

Note: We did not use the PreferenceTool.com. See slide notes for further information

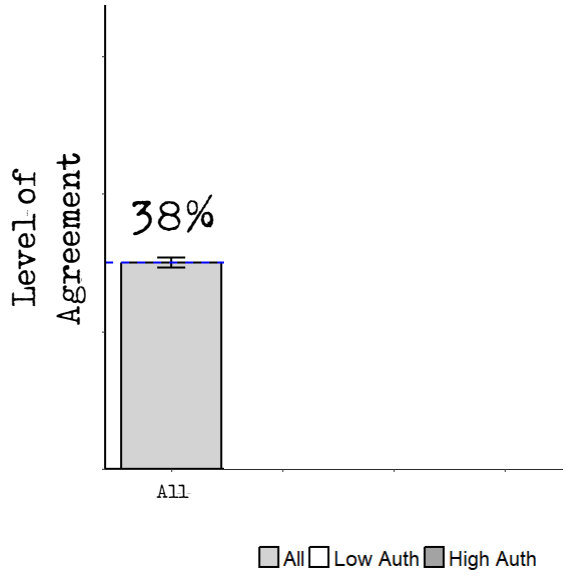
Low Authoritarian

Liberalism,
The Guardian

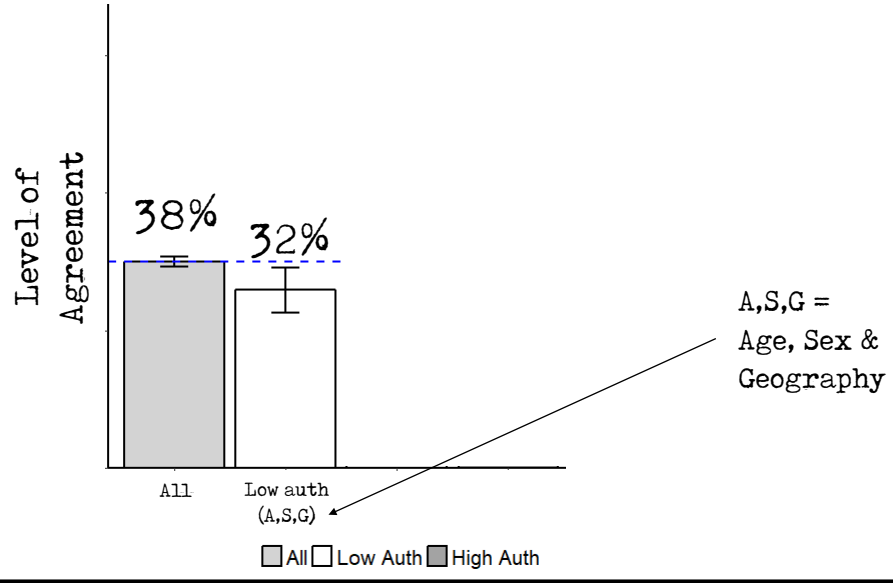
High Authoritarian

Conservatism,
Mail Online

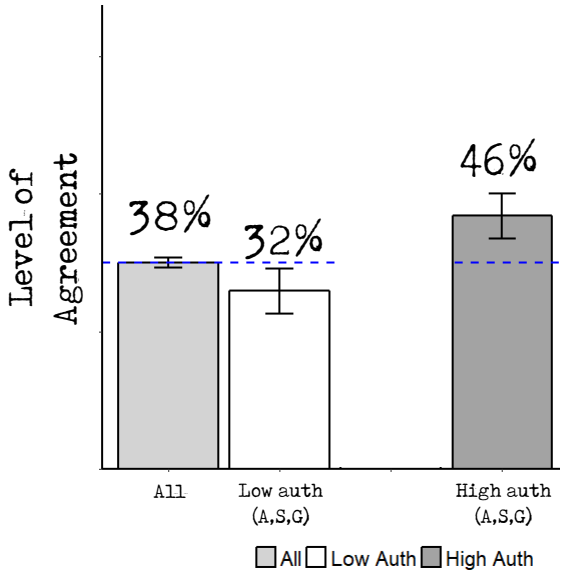
% people who agree with "Nothing to Hide, Nothing to Fear"



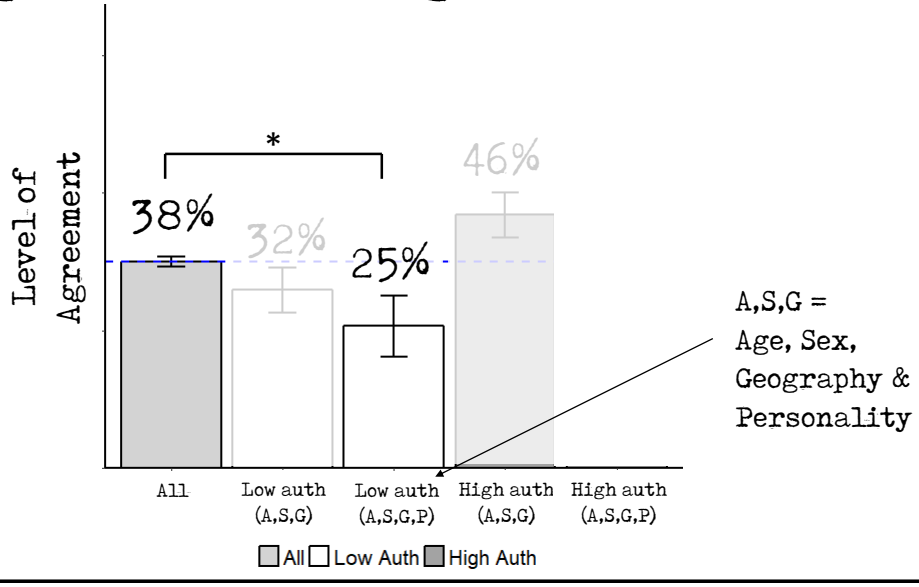
% people who agree with "Nothing to Hide, Nothing to Fear"



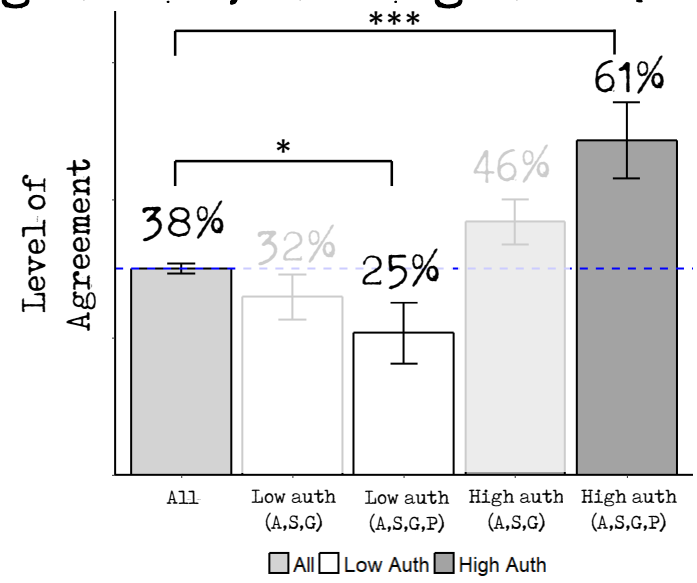
% people who agree with "Nothing to Hide, Nothing to Fear"



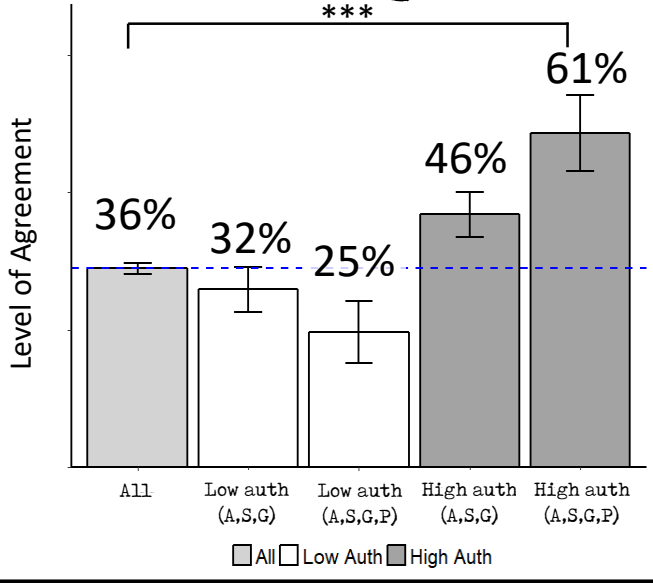
% people who agree with "Nothing to Hide, Nothing to Fear"



% people who agree with "Nothing to Hide, Nothing to Fear"



% people who agree with "Nothing to Hide, Nothing to Fear"



4. How Persuasive Are Targeted Ads?

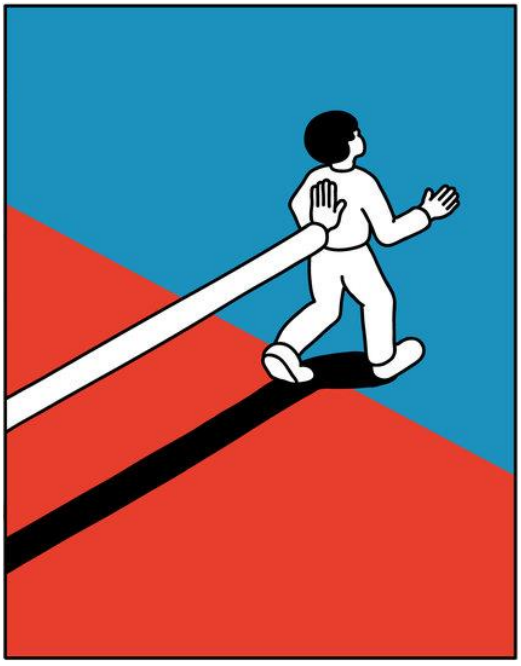
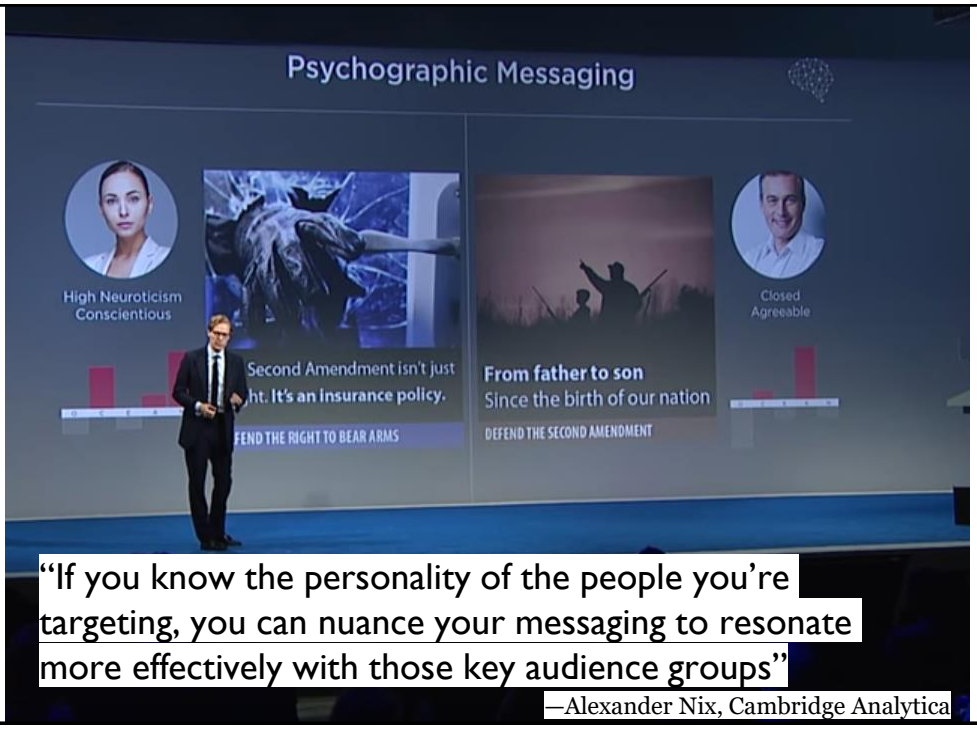


Image with permission from : Oscar Bolton Green



"If you know the personality of the people you're targeting, you can nuance your messaging to resonate more effectively with those key audience groups"

—Alexander Nix, Cambridge Analytica

Hirsh, Kang & Bodenhausen Phone study (2012)

Hirsh, Kang & Bodenhausen Phone study (2012)

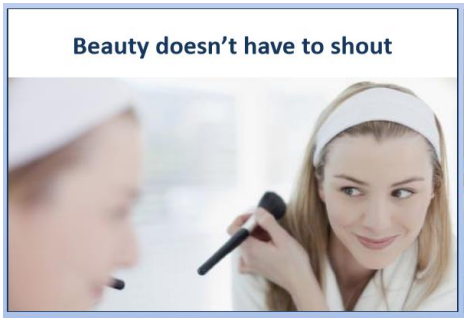
With XPhone, you'll always be where the **excitement** is

Hirsh, Kang & Bodenhausen Phone study (2012)

Stay **safe and secure** with the Xphone

Matz, Popov, Kosinski, Stillwell

Aimed at Introverts

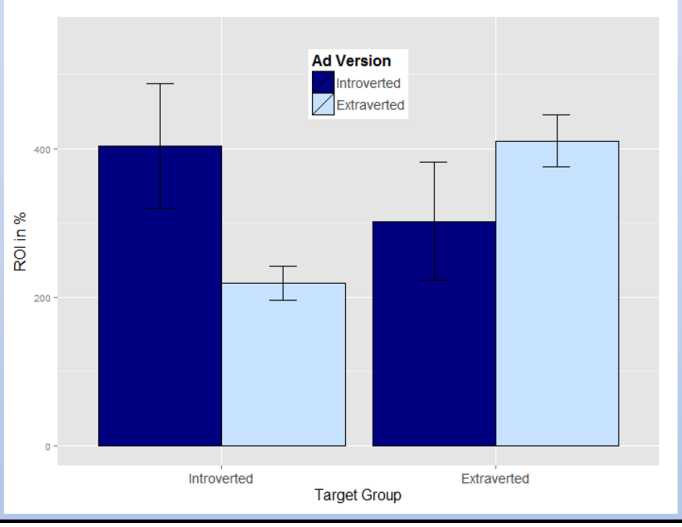


Aimed at Extraverts

Matz, S., Popov, V., Kosinski, M. & Stillwell, D (2015). *Using The Big Five For Customised Advertising On Facebook. Poster session presented at 16th Annual Meeting of the Society for Personality and Social Psychology*, Long Beach, CA, USA

Results of factorial ANOVA:

1) H1: Non-sig. interaction effect of target group × advertisement style on CTR ($F(1,16) = 0.03$, $p = .861$, $\omega = .04$)
2) H2: Sig. interaction effect of target group × advertisement style on ROI ($F(1,16) = 5.67$, $p = .029$, $\omega = .20$)



Study

Method & Results

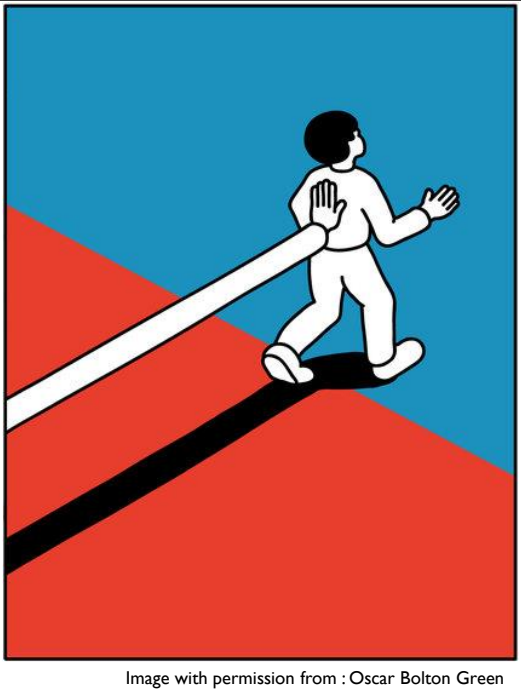
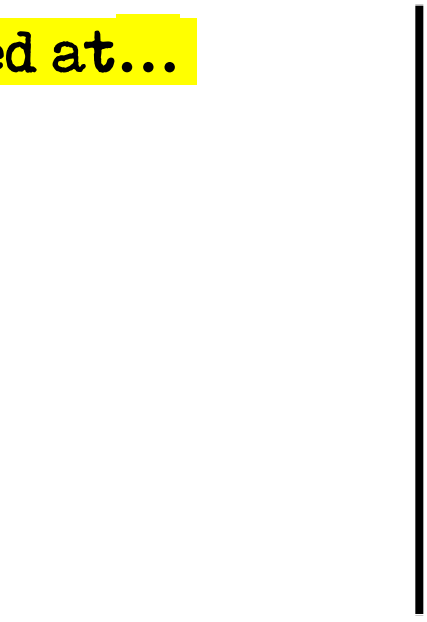


Image with permission from : Oscar Bolton Green

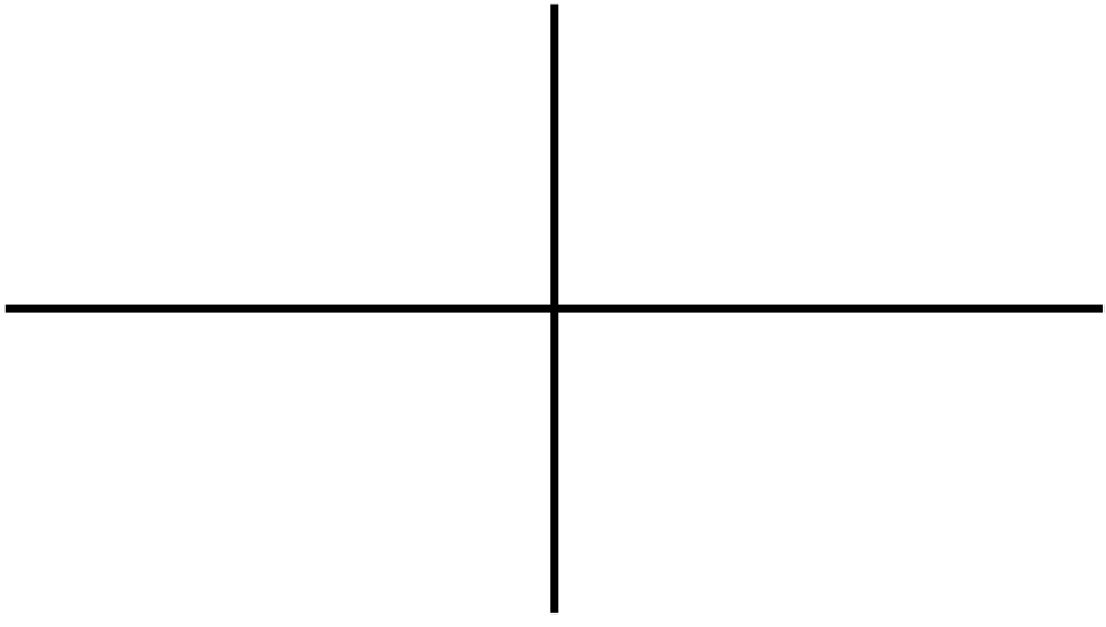
Ads aimed at...



High Auth ← Target Audience → Low Auth

Pro

Anti



High Auth ← Target Audience → Low Auth

Pro

Anti

High Auth ← Target Audience → Low Auth

Pro

Anti

High Auth ← Target Audience → Low Auth

Pro

Anti

High Auth ← Target Audience → Low Auth

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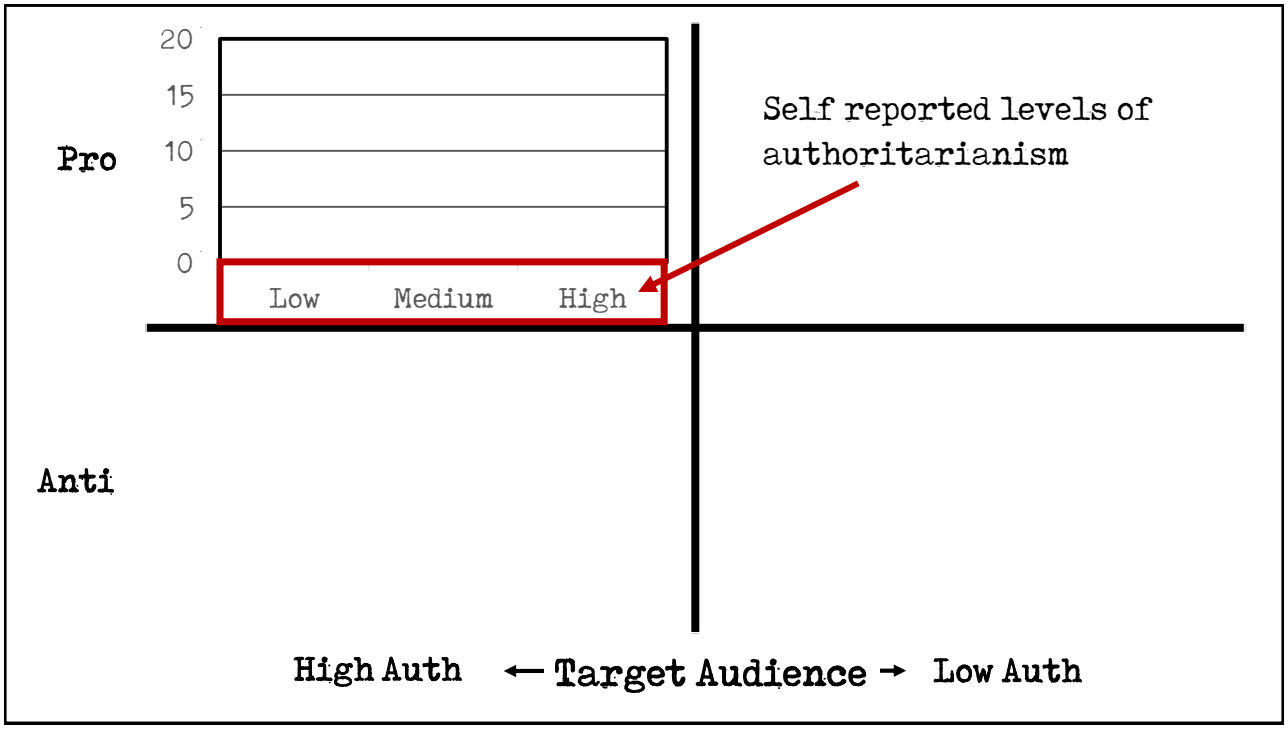
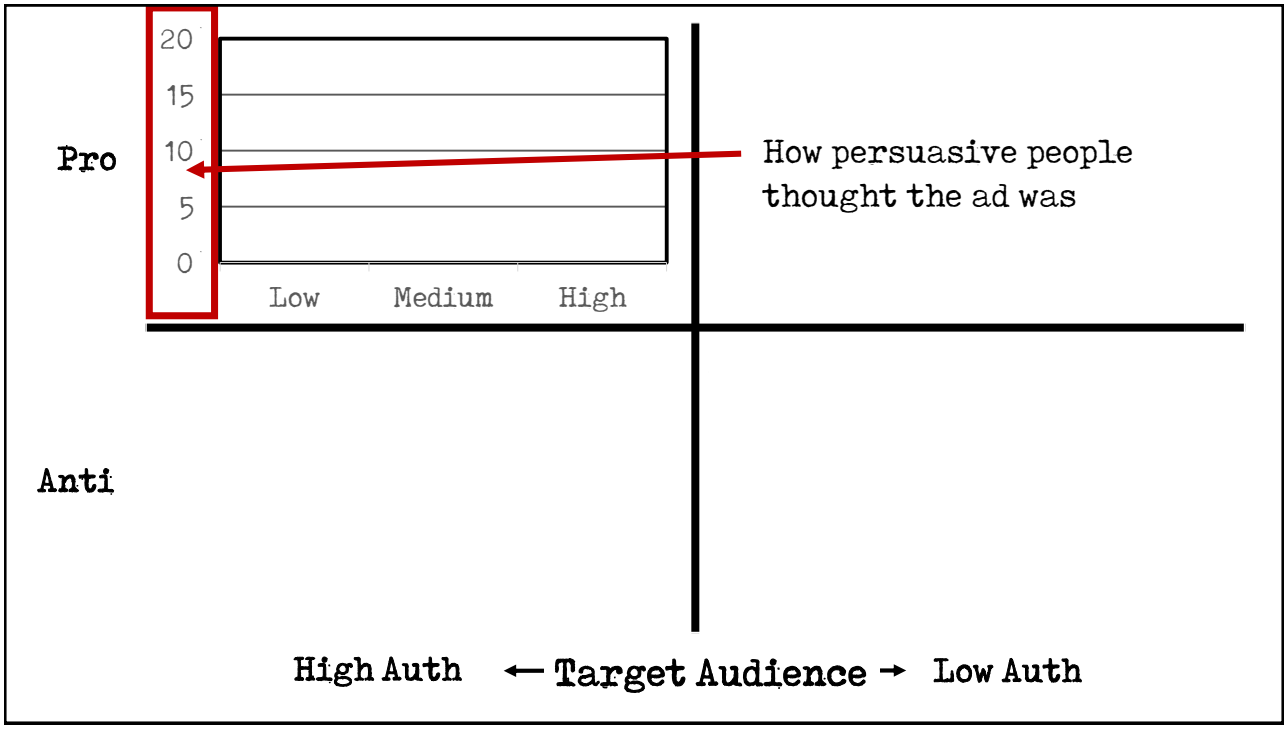
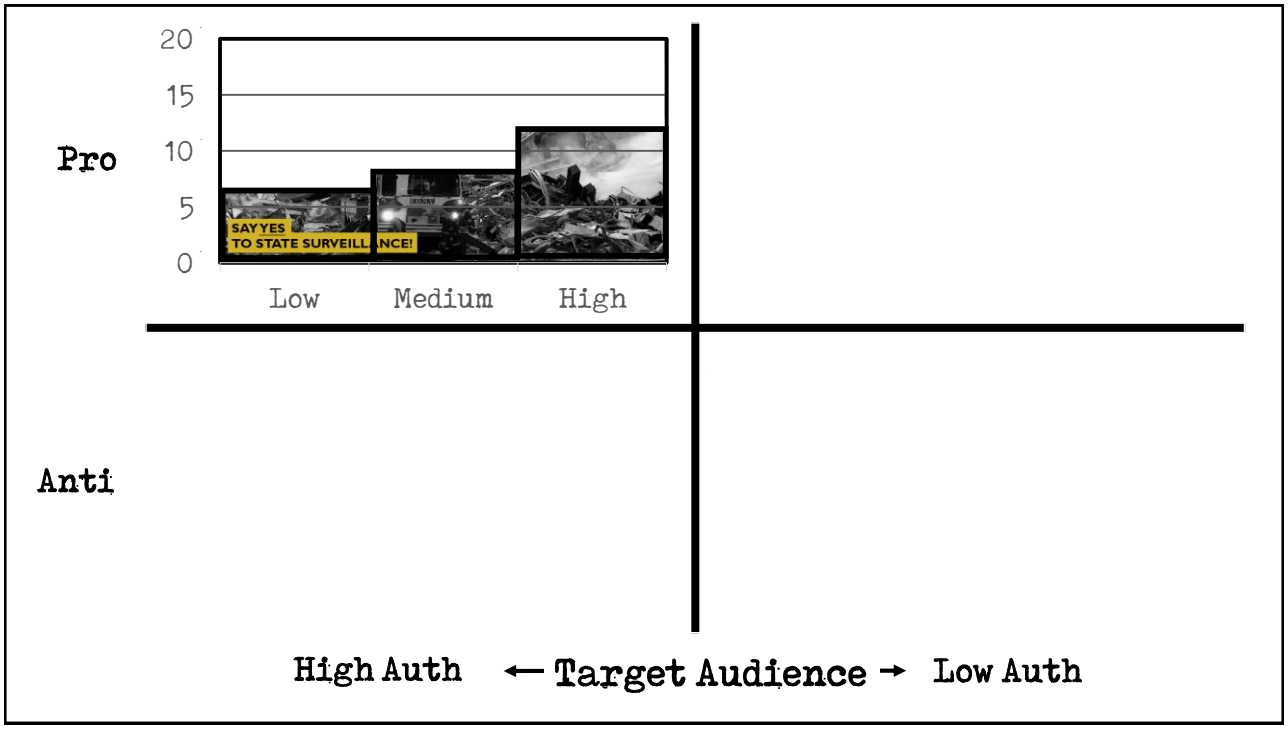
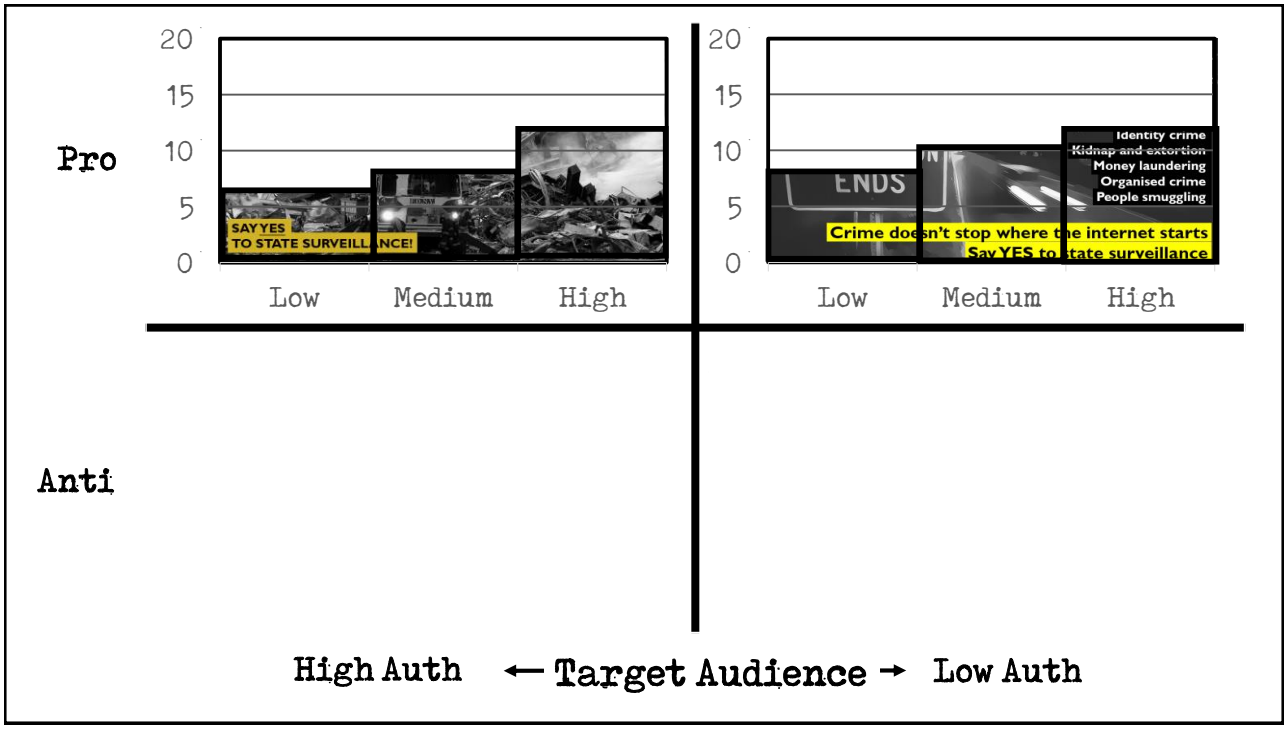
Anti

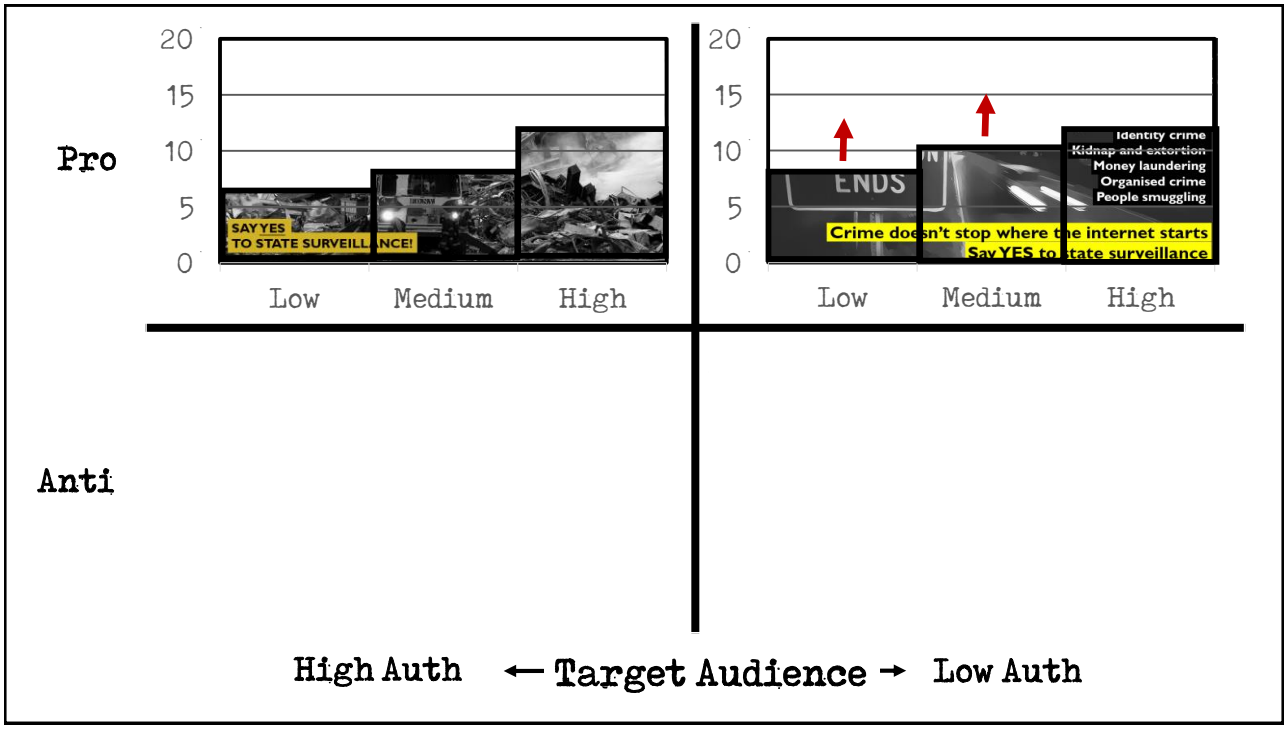
High Auth ← Target Audience → Low Auth

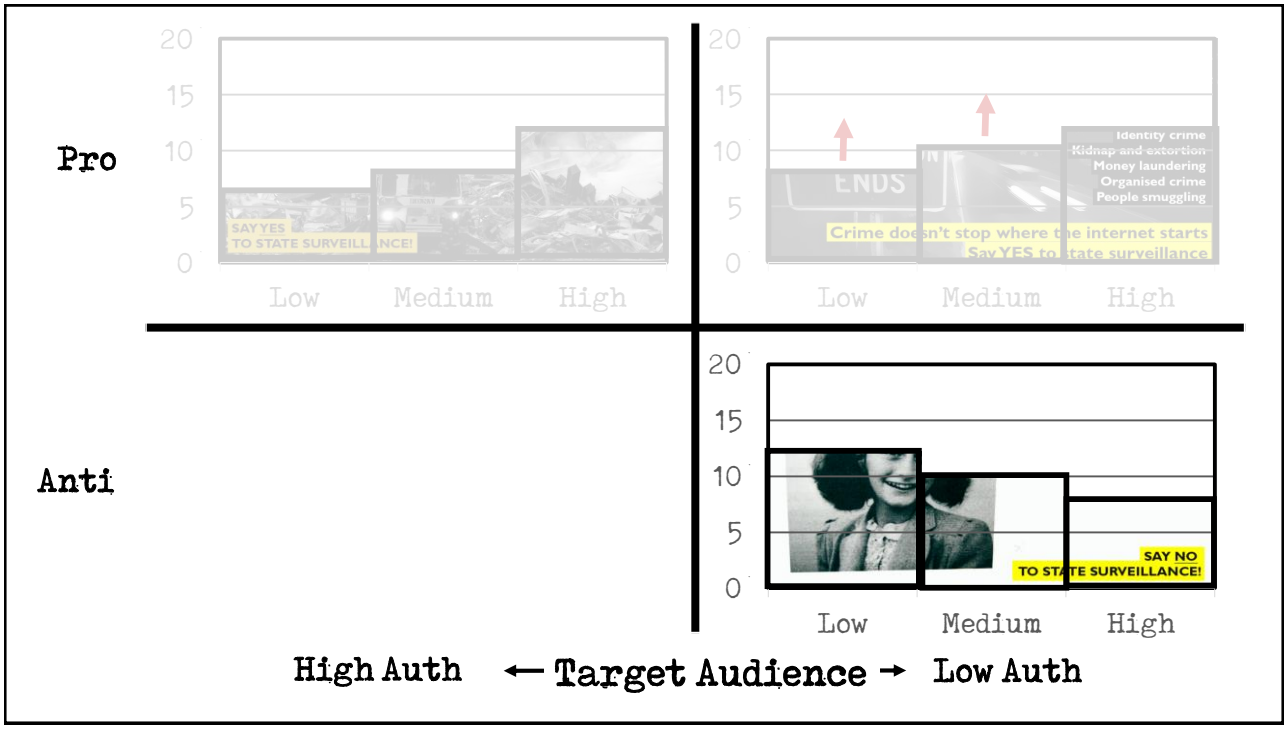

20
15
10
5
0
Pro
Low
Medium
High
Self reported levels of authoritarianism
Anti
High Auth
Target Audience
Low Auth

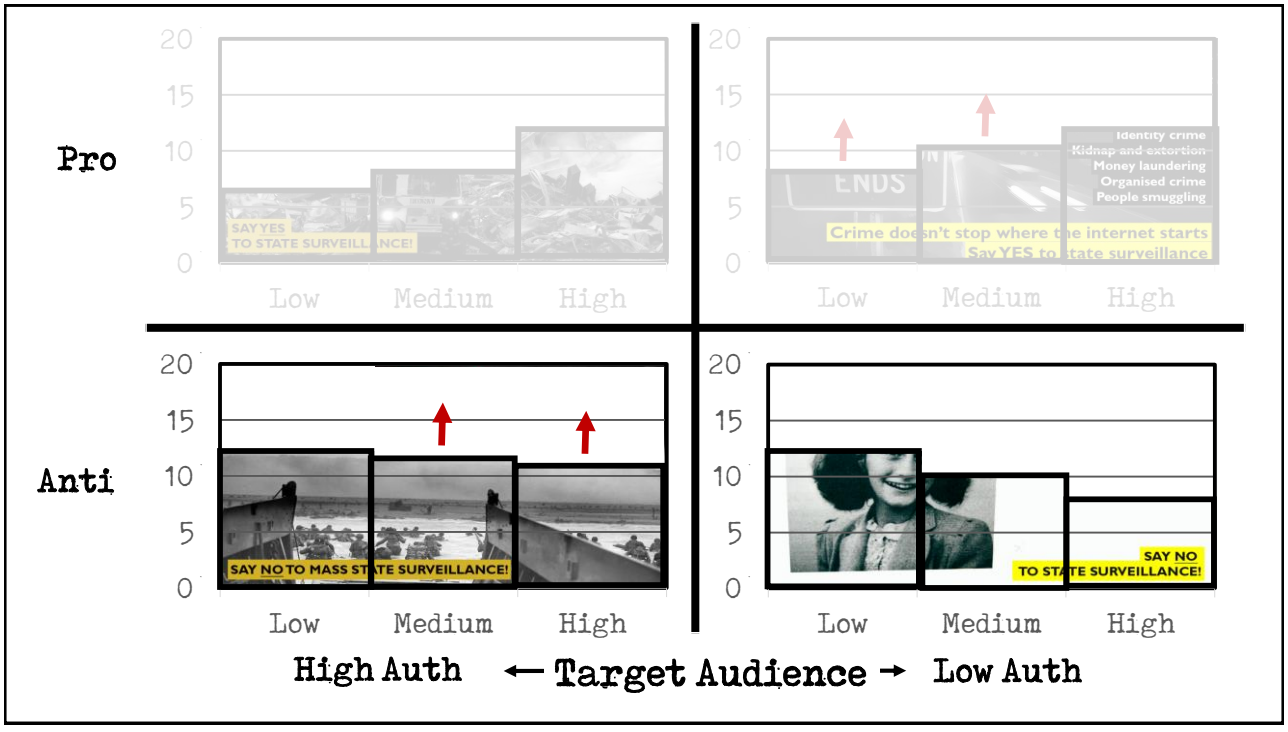

20
15
10
5
0
Pro
Low
Medium
High
How persuasive people thought the ad was
Anti
High Auth
Target Audience
Low Auth

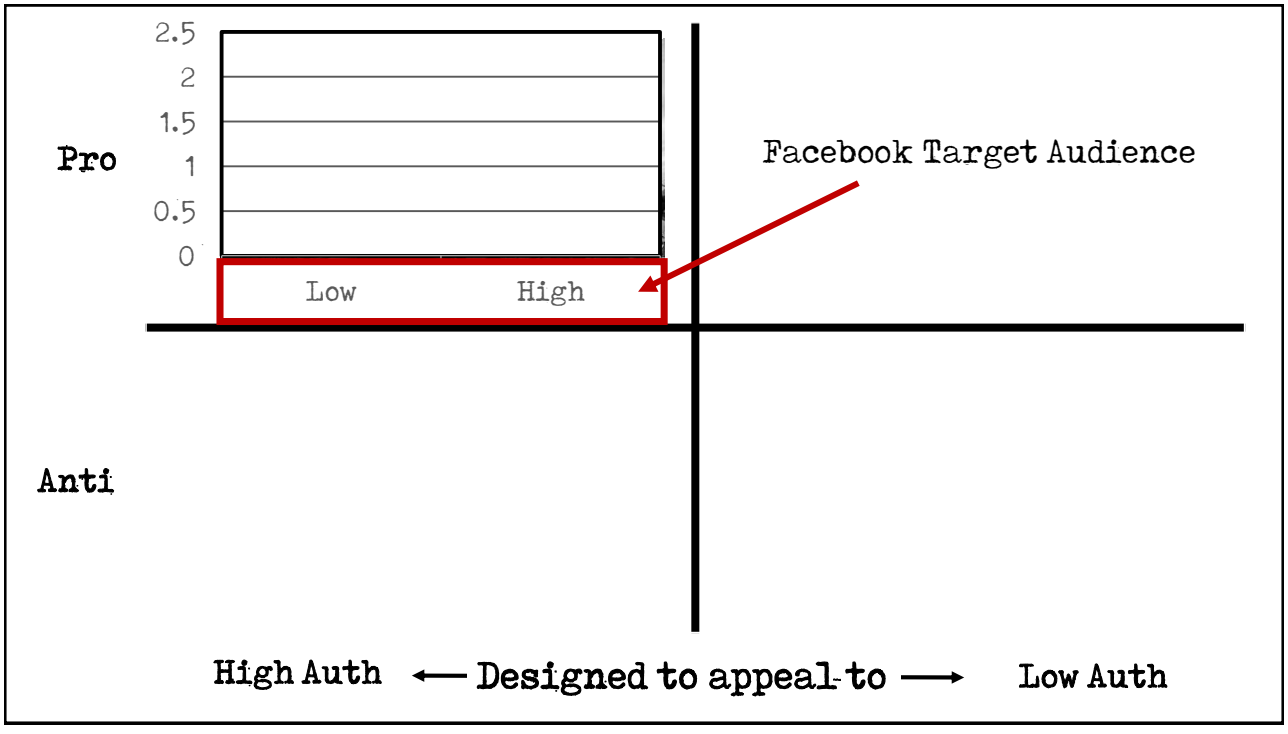

Pro
20
15
10
5
0
SAY YES
TO STATE SURVEILLANCE!
Low
Medium
High
Anti
High Auth
Target Audience
Low Auth

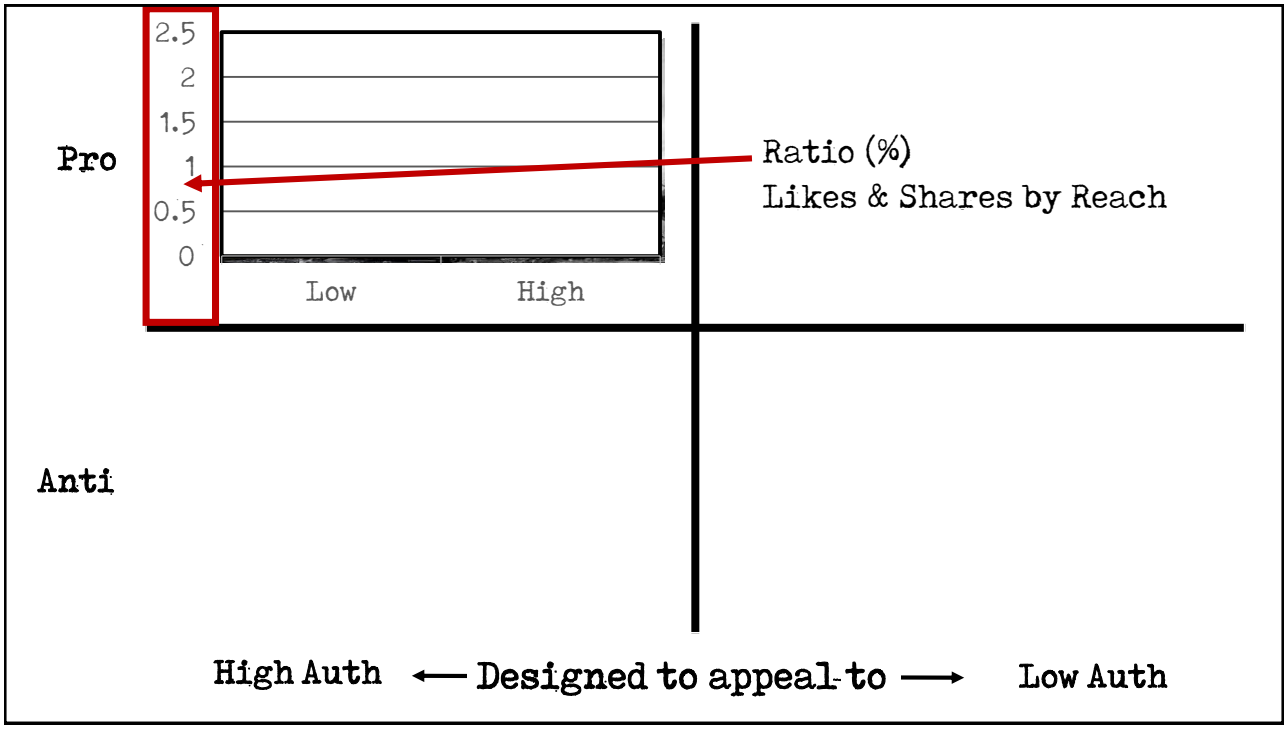

Pro
20
15
10
5
0
SAY YES
TO STATE SURVEILLANCE!
Low
Medium
High
20
15
10
5
0
ENDS
Identity crime
Kidnap and extortion
Money laundering
Organised crime
People smuggling
Crime doesn't stop where the internet starts
Say YES to state surveillance
Low
Medium
High
Anti
High Auth
Target Audience
Low Auth

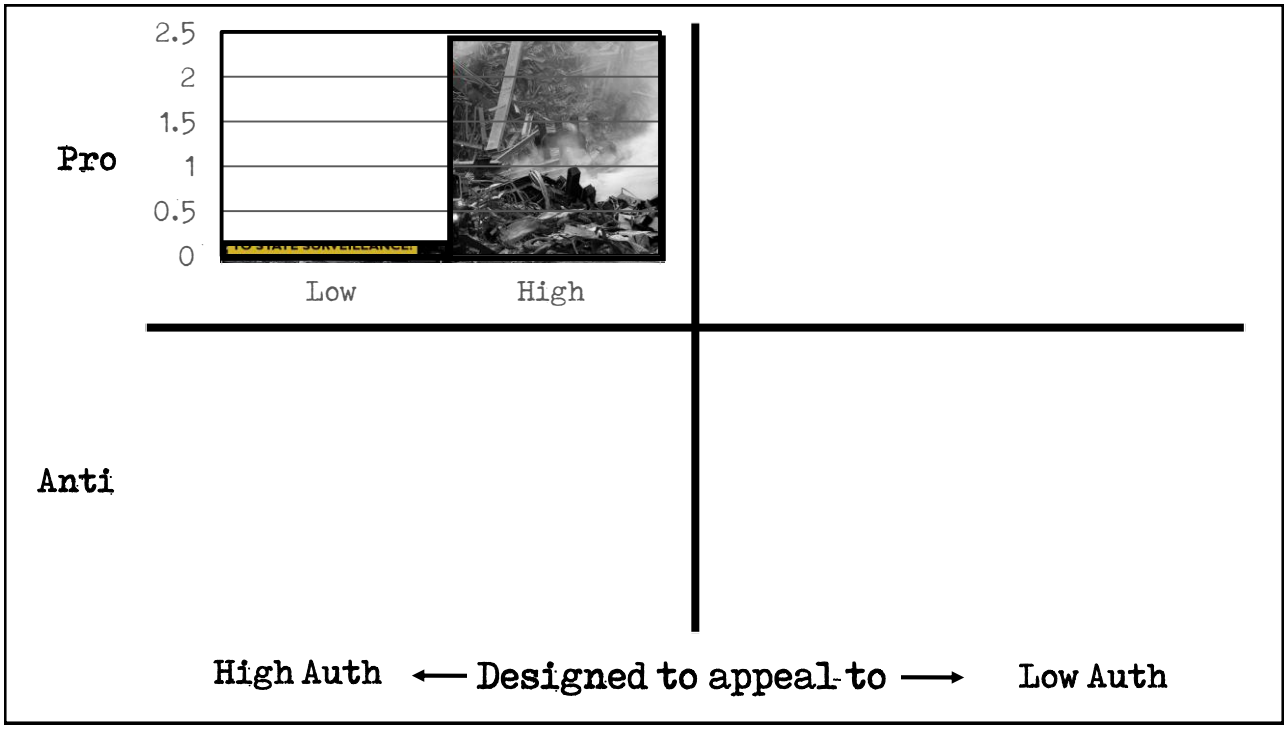

Pro
Anti
20
15
10
5
0
Low
Medium
High
SAY YES
TO STATE SURVEILLANCE!
ENDS
Identity crime
Kidnap and extortion
Money laundering
Organised crime
People smuggling
Crime doesn't stop where the internet starts
Say YES to state surveillance
High Auth
← Target Audience →
Low Auth

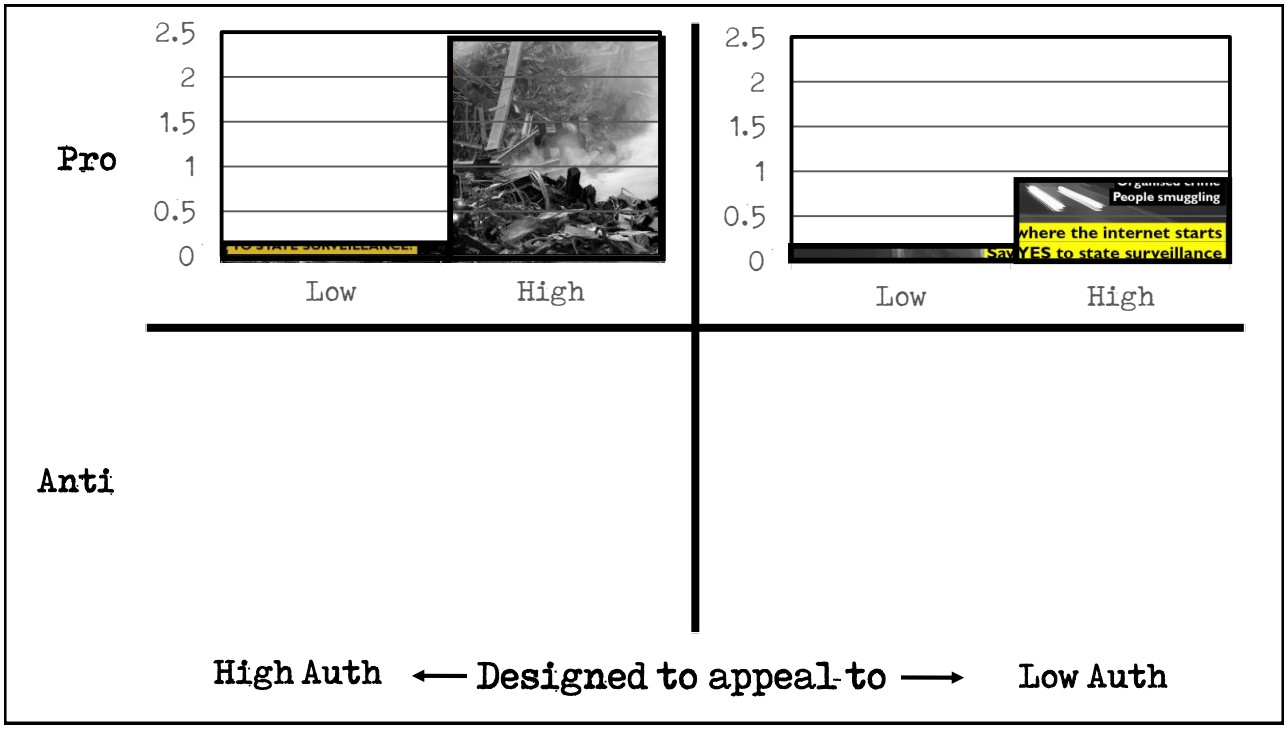

Pro
Anti
20
15
10
5
0
Low
Medium
High
SAY YES
TO STATE SURVEILLANCE!
ENDS
Identity crime
Kidnap and extortion
Money laundering
Organised crime
People smuggling
Crime doesn't stop where the internet starts
Say YES to state surveillance
SAY NO
TO STATE SURVEILLANCE!
High Auth
← Target Audience →
Low Auth

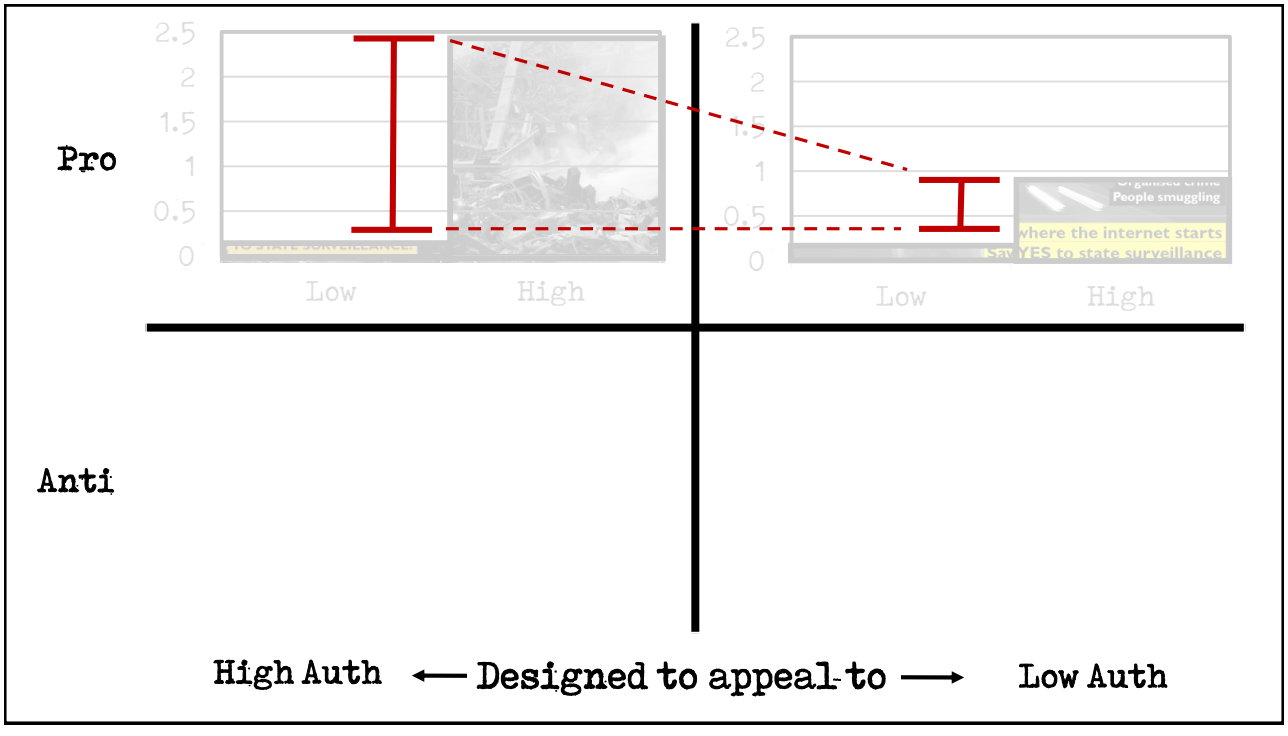

Pro
Anti
20
15
10
5
0
Low
Medium
High
SAY NO TO MASS STATE SURVEILLANCE!
Identity crime
Kidnap and extortion
Money laundering
Organised crime
People smuggling
Crime doesn't stop where the internet starts
Say YES to state surveillance
SAY NO
TO STATE SURVEILLANCE!
High Auth ← Target Audience → Low Auth

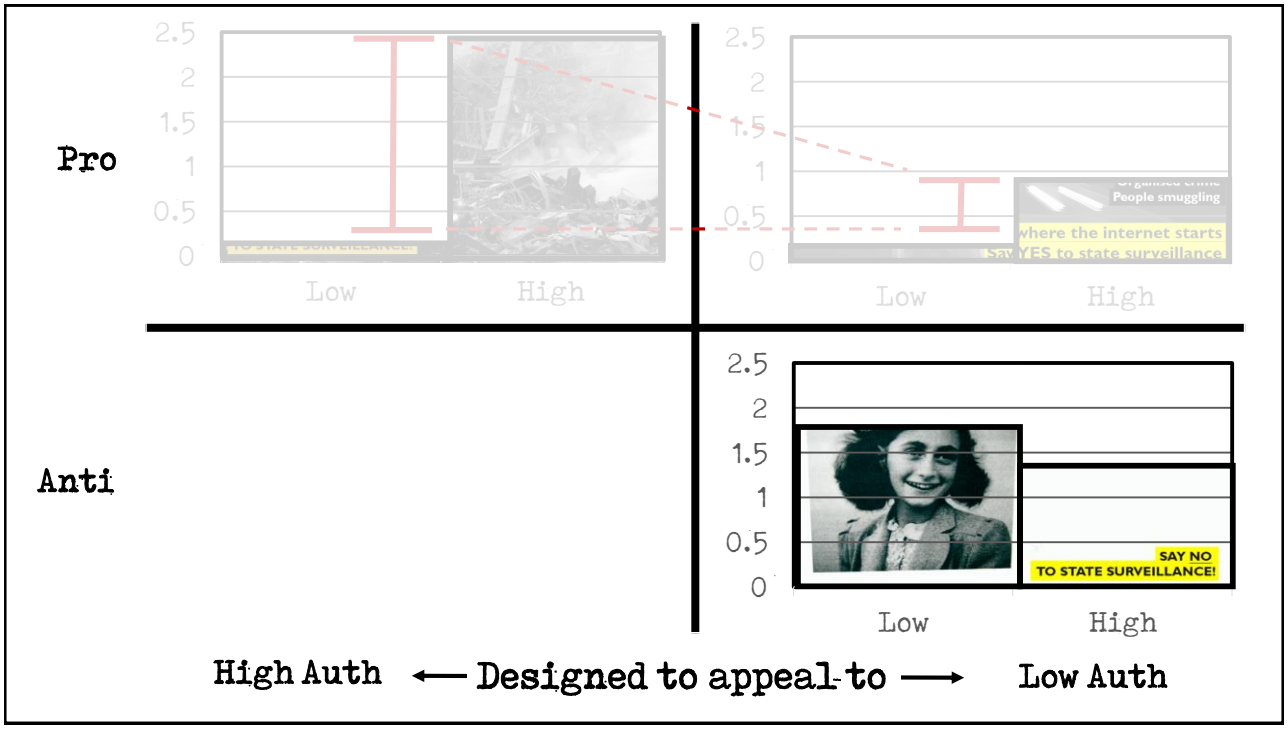

Pro
Anti
2.5
2
1.5
1
0.5
0
Low
High
Facebook Target Audience
High Auth ← Designed to appeal to → Low Auth

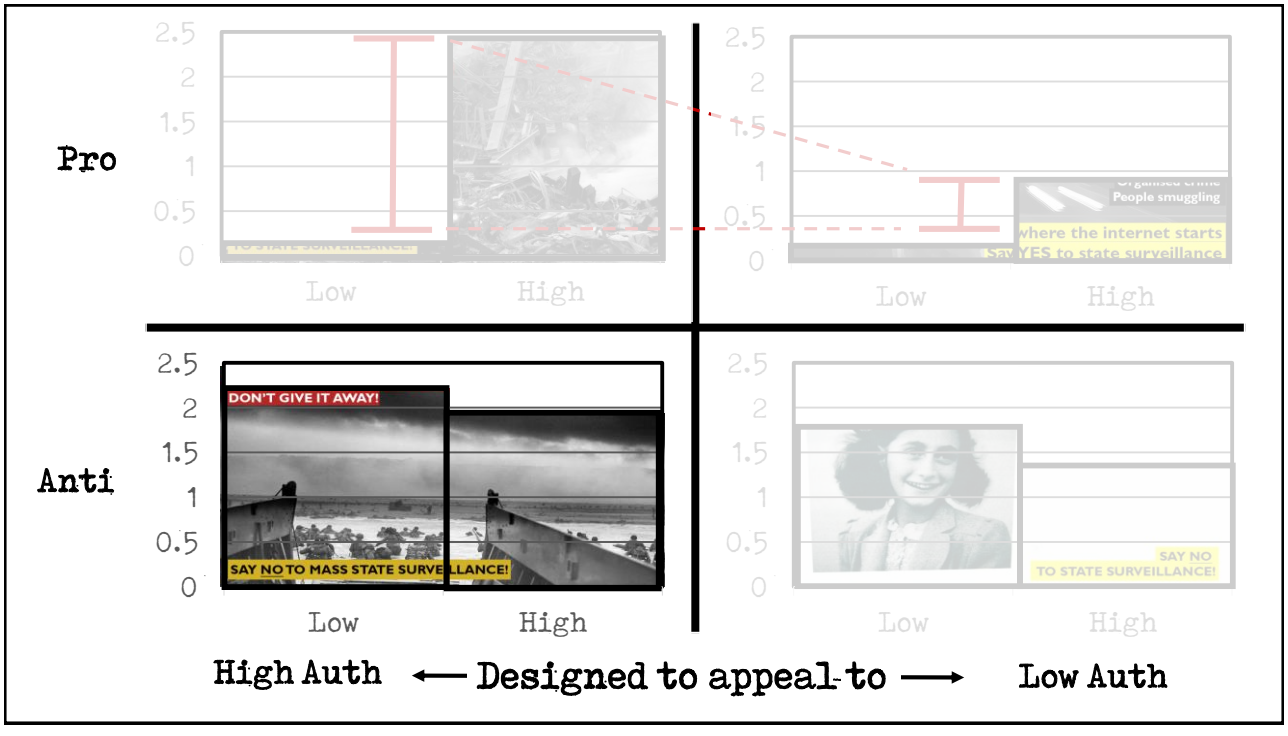

2.5
2
1.5
1
0.5
0
Low
High
Pro
Anti
Ratio (%)
Likes & Shares by Reach
High Auth
Designed to appeal to
Low Auth

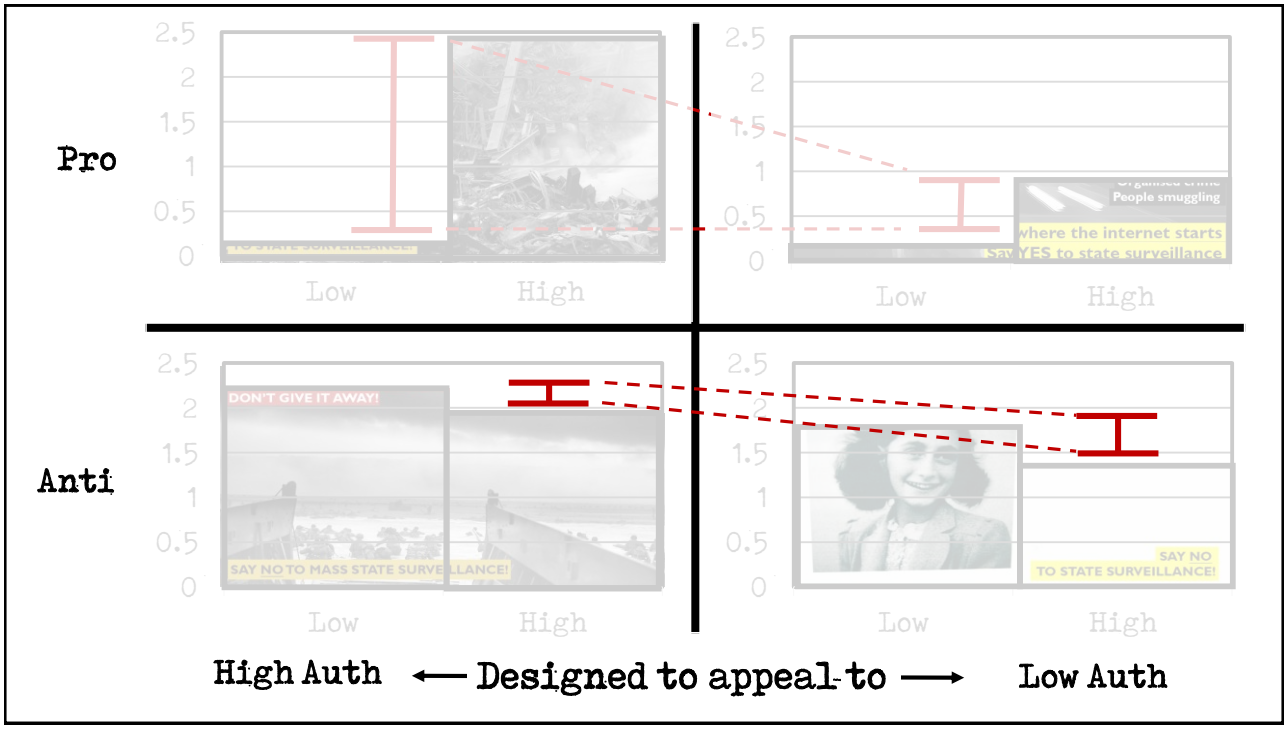

2.5
2
1.5
1
0.5
0
Low
High
Pro
Anti
High Auth
Designed to appeal to
Low Auth


Pro
Anti
2.5
2
1.5
1
0.5
0
Low
High
People smuggling
where the internet starts
YES to state surveillance
High Auth ⟵ Designed to appeal to ⟶ Low Auth


Pro
Anti
2.5
2
1.5
1
0.5
0
Low
High
People smuggling
where the internet starts
YES to state surveillance
High Auth ⟵ Designed to appeal to ⟶ Low Auth

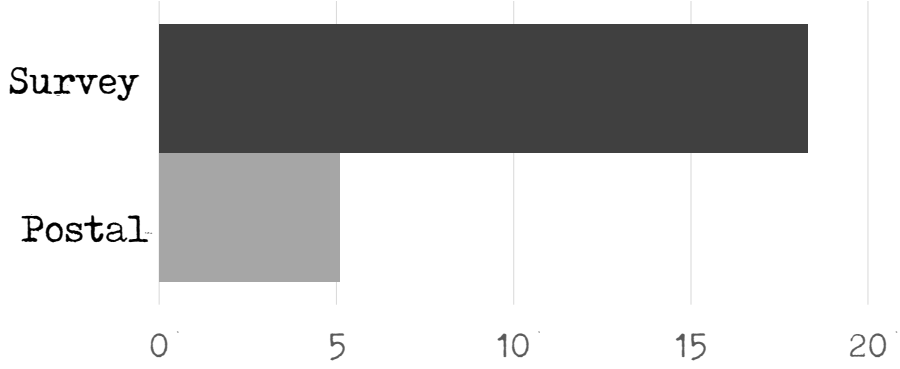

Pro
Anti
2.5
2
1.5
1
0.5
0
Low
High
People smuggling
where the internet starts
YES to state surveillance
SAY NO
TO STATE SURVEILLANCE!
High Auth ⟵ Designed to appeal to ⟶ Low Auth


Pro
Anti
2.5
2
1.5
1
0.5
0
Low
High
People smuggling
where the internet starts
YES to state surveillance
DON'T GIVE IT AWAY!
SAY NO TO MASS STATE SURVEILLANCE!
SAY NO
TO STATE SURVEILLANCE!
High Auth ⟵ Designed to appeal to ⟶ Low Auth



But does persuasion work?

Jungherr, Wuttke, Mader, Schoen



"Those who have received a postal letter from the interest group which argued for the benefits of TTIP have considerably more favourable(sic) attitudes towards this trade deal."

A C

B D

A C

E45
Cream
DERMATOLOGICAL
E45
Cream
Treatment for Dry Skin Conditions

B D

E45
Cream
DERMATOLOGICAL
E45
Cream
Treatment for Dry Skin Conditions

Control Questions

A – Control Condition #1		
	Rash Got Worse	**Rash Got Better**
Patients who did use the new skin cream	223	**75**
Patients who did NOT use the new skin cream	107	21

A – People who used the skin cream were more likely to get BETTER than those didn't
B – People who used the skin cream were more likely to get WORSE than those didn't

Control Questions

A – Control Condition #1		
	Rash Got Worse	**Rash Got Better**
Patients who did use the new skin cream	223	**75**
Patients who did NOT use the new skin cream	107	21

A – People who used the skin cream were more likely to get BETTER than those didn't
B – People who used the skin cream were more likely to get WORSE than those didn't

Group B – Control Condition #2		
	Rash Got Better	**Rash Got Worse**
Patients who did use the new skin cream	223	**75**
Patients who did NOT use the new skin cream	107	21

A – People who used the skin cream were more likely to get BETTER than those didn't
B – People who used the skin cream were more likely to get WORSE than those didn't

A

E45
Cream
DERMATOLOGICAL
E45
Cream
Treatment for Dry Skin Conditions

C

B

E45
Cream
DERMATOLOGICAL
E45
Cream
Treatment for Dry Skin Conditions

D

A

E45
Cream
DERMATOLOGICAL
E45
Cream
Treatment for Dry Skin Conditions

C

BREAKING
POINT
The EU has failed us all
We must break free of the EU and take back control of our borders.
Leave the European Union

B

E45
Cream
DERMATOLOGICAL
E45
Cream
Treatment for Dry Skin Conditions

D

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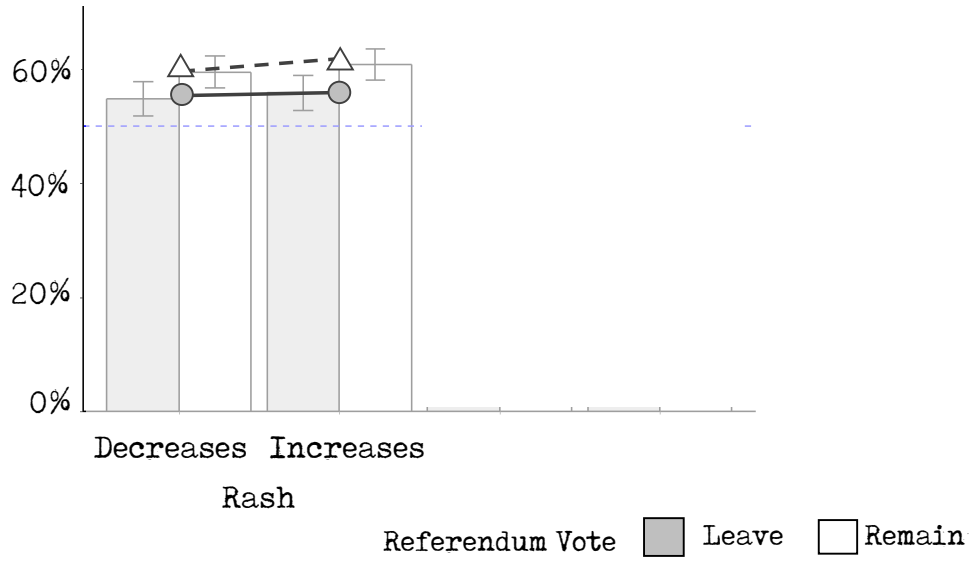
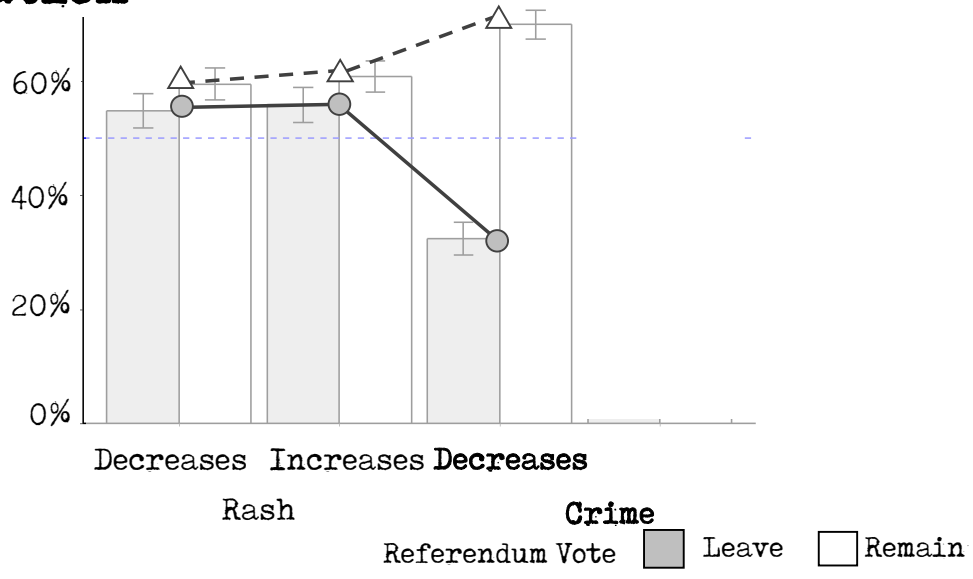
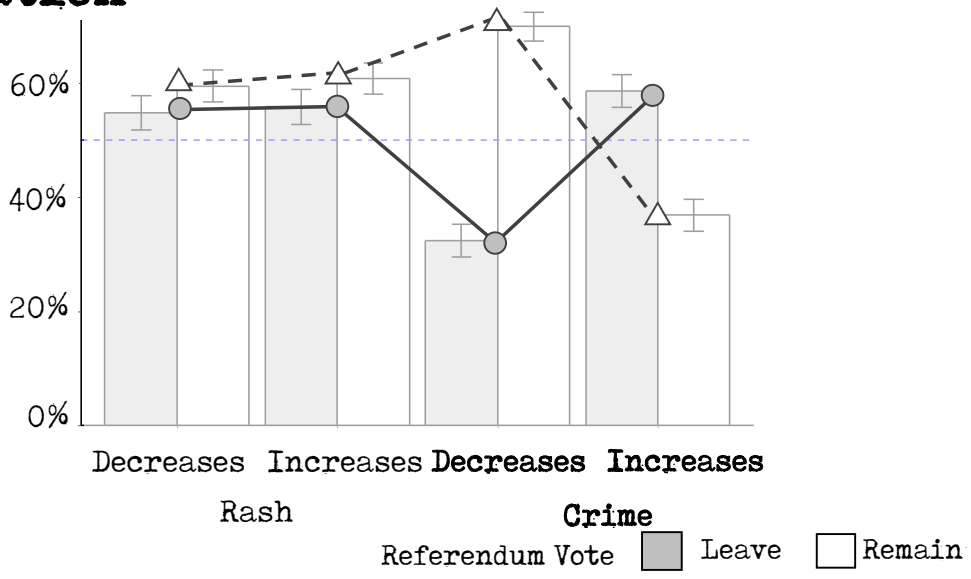
EU Referendum Voters
Skin Cream



EU Referendum Voters
Immigration



EU Referendum Voters Immigration



THE BLOG 09/16/2013 03:51 pm ET | Updated Nov 16, 2013

Most Depressing Brain Finding Ever

By Marty Kaplan

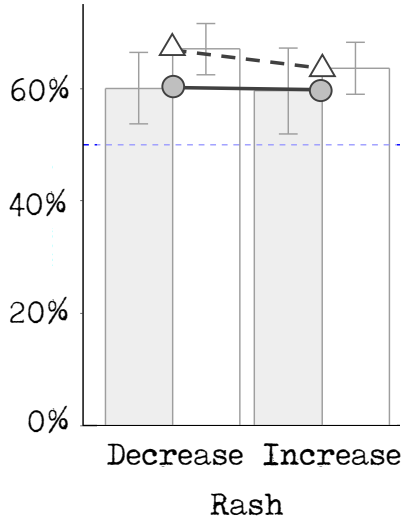
GETTY

Yale law school professor Dan Kahan's new research paper is called "Motivated Numeracy and Enlightened Self-Government," but for me a better title is the headline on science writer Chris Mooney's piece about it in Grist: "Science Confirms: Politics Wrecks Your Ability to Do Math."

Study
Method & Results

Skin Cream

N = 1,574



Nothing to Hide, Nothing to Fear ■ Agree □ Disagree

Indicate whether the research shows that online surveillance is likely to increase the terrorist threat or decrease it.

C – Threat Condition #1		
	Increase in Threat	Decrease in Threat
Countries with LEAST pervasive online surveillance	223	75
Countries with MOST pervasive online surveillance	107	21

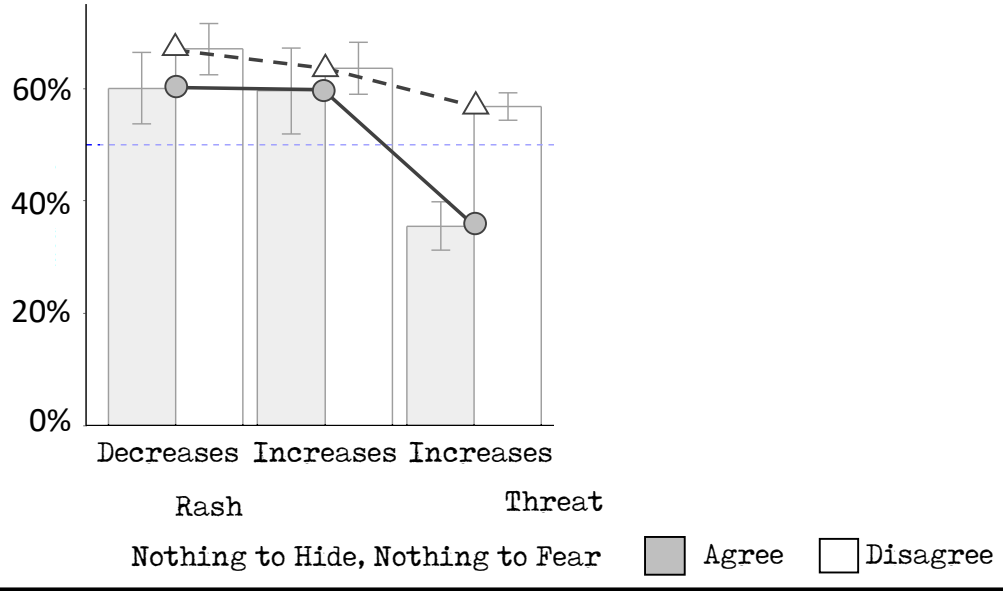
Group D – Threat Condition #2		
	Decrease in Threat	Increase in Threat
Countries with LEAST pervasive online surveillance	223	75
Countries with MOST pervasive online surveillance	107	21

A – Countries with the LEAST pervasive online surveillance were more likely to see a DECREASE in the terrorist threat
B – Countries with the LEAST pervasive online surveillance were more likely to see a INCREASE in the terrorist threat

A – Countries with the LEAST pervasive online surveillance were more likely to see a DECREASE in the terrorist threat
B – Countries with the LEAST pervasive online surveillance were more likely to see an INCREASE in the terrorist threat

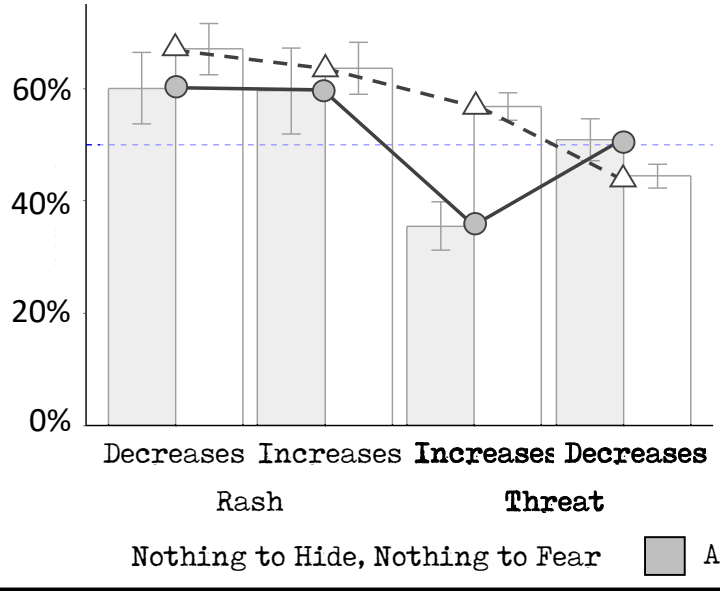
Surveillance increases the threat

N = 1,574



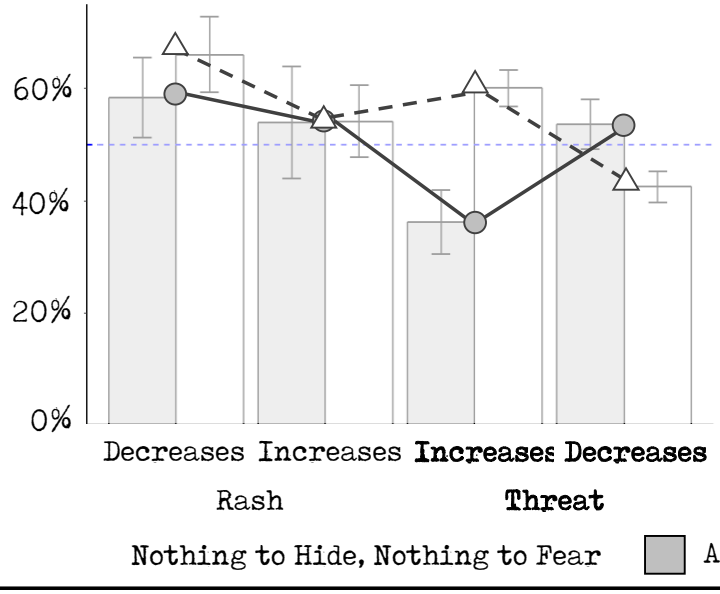
Surveillance decreases the threat

N = 1,574

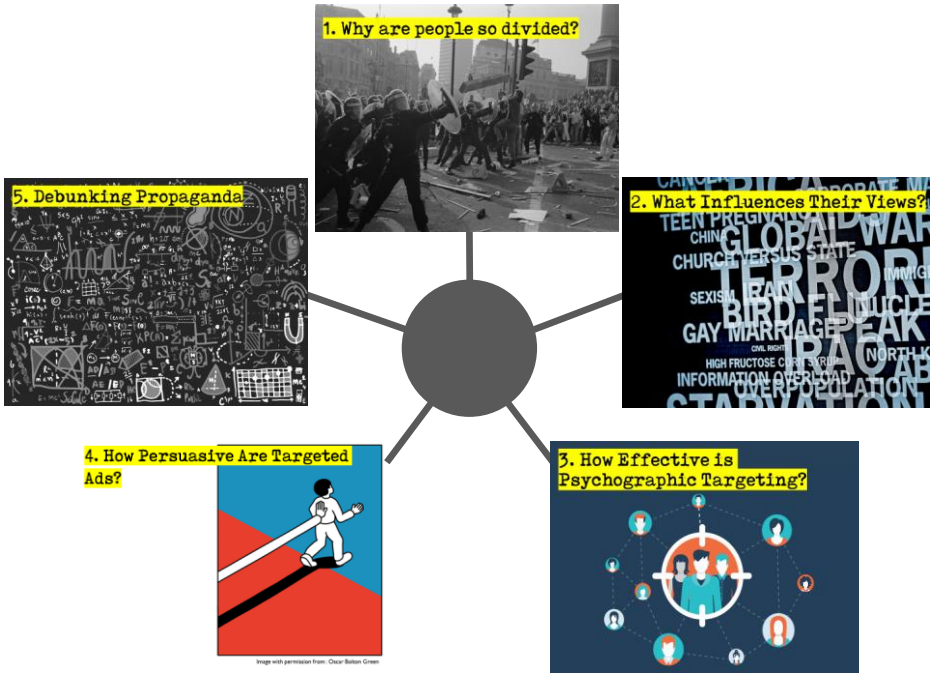


44 & over

N = 1,574



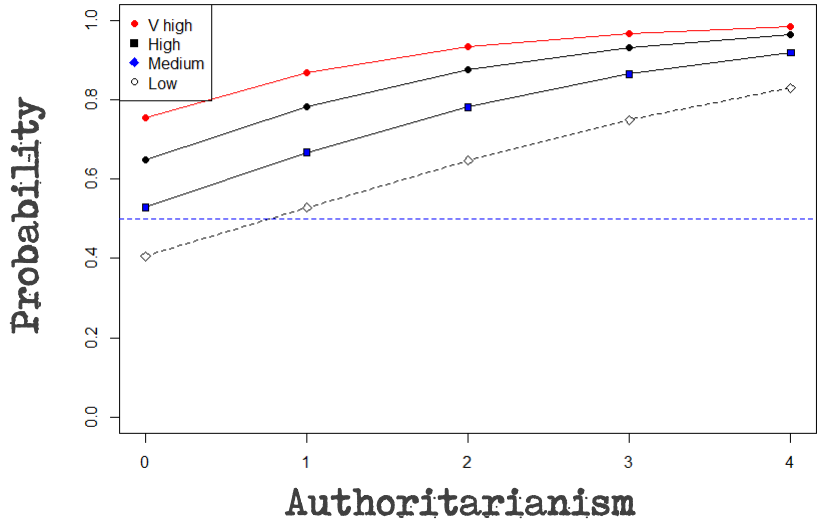
Conclusions & Discussion



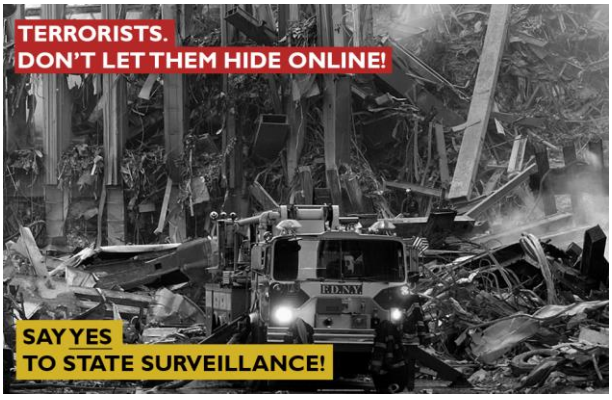
If both sides use this,
do the effects equal-out?

If both sides use this,
do the effects equal-out?

Momentum / Public Mood
"Shut Down The Dark Net"



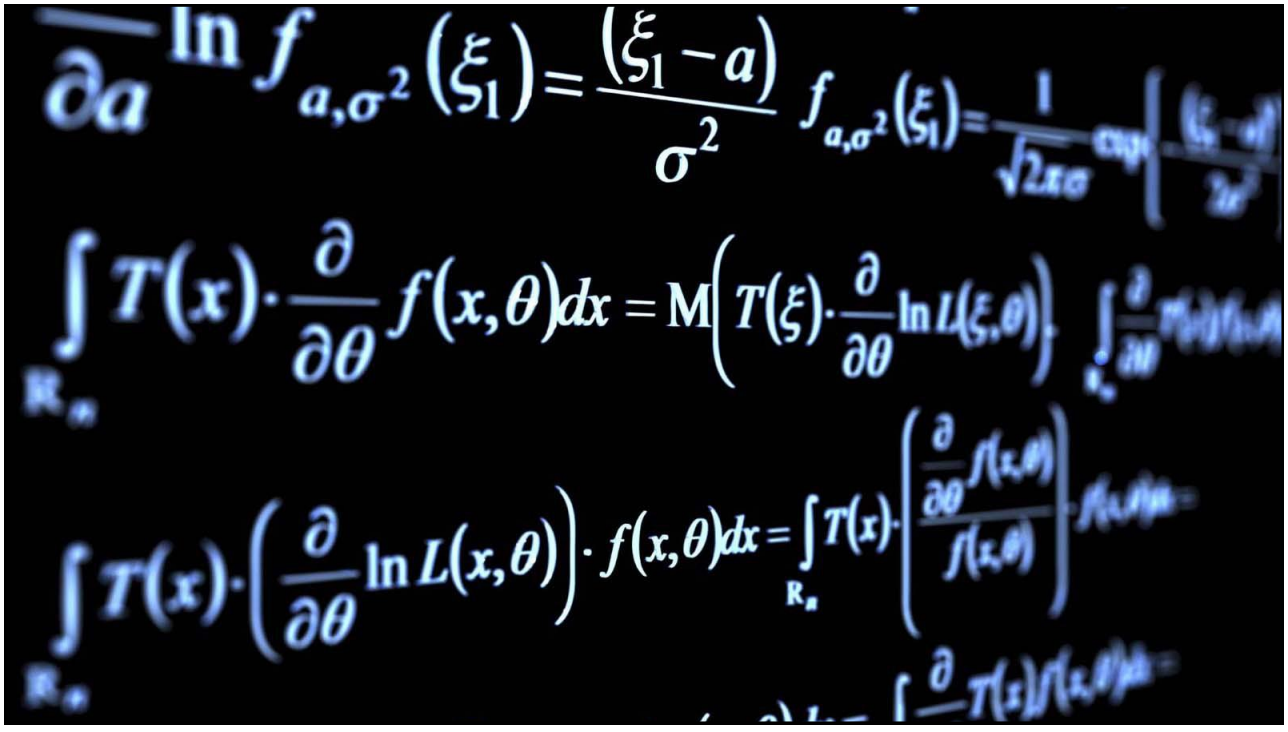
How political ads motivate and persuade voters by appealing to emotions
Brader (2005)



Lower ⟵ Attention ⟶ Higher

Towards tackling the problem

s an emotional
nt to ignorance."


$\frac{\partial}{\partial a}\ln f_{a,\sigma^2}(\xi_1)=\frac{(\xi_1-a)}{\sigma^2}$
$\int_{R_n} T(x)\cdot\frac{\partial}{\partial\theta}f(x,\theta)dx=\mathrm{M}\left(T(\xi)\cdot\frac{\partial}{\partial\theta}\ln L(\xi,\theta)\right)$
$\int_{R_n} T(x)\cdot\left(\frac{\partial}{\partial\theta}\ln L(x,\theta)\right)\cdot f(x,\theta)dx=\int_{R_n} T(x)\cdot\left(\frac{\frac{\partial}{\partial\theta}f(x,\theta)}{f(x,\theta)}\right)$

RULES AND REGULATIONS

Adopted by the Local United States Food Administration for the season of 1918, pertaining to the harvest and threshing of grain.

RULE I.

That the local U. S. Food Administration deputize the man in charge of each threshing machine operating to act as their agent, to see that all ways and means be observed, so as to prevent the waste of grain in any manner.

RULE II.

It shall be in his power to direct all men who are working about the machine or on the job of threshing, and see that they give efficient service, and in any event any one is disloyal he shall be reported to the United States Food Administration and dealt with according to the rules laid down by the Government.

RULE III.

It shall be the imperative duty of every man in charge of a threshing machine to see that his machine is in perfect running order before he shall attempt to do any work at threshing and in case he is unable to correct the defects, he is allowed the privilege of seeking aid of the U. S. Food Administrator who will report his troubles to the manufacturer of his machine, and get his troubles adjusted.

RULE IV.

As it is an order to save grain, the man in charge of the machine and farmer are to arrange to have a man to attend to the cleaning up around the machine, and help where needed, to keep the machine running correctly, and not allow bundles to be run over by teams and wagon; also it is recommended that they shall arrange to have a sufficient number of racks to haul bundles on, which will be built with tight floor and a 2 x 4 around edge for the express purpose to save grain.

RULE V.

It is also demanded of the managers of threshing machines to provide canvass, size not less than 10 x 14, to be put under the feeder of the machine and to avoid all leaks; and the men who are pitching to the machine must observe these rules:

1. That bundles must be pitched head first into the machine which is the correct way of feeding a machine. Also the bundles must be pitched at a uniform speed, and in no case pile them upon the feeder.
2. It is demanded by the Government that the fall wheat and rye shall be threshed first. Spring wheat to be threshed at time of threshing oats.
3. In regard to time for a day's work, we would recommend that as the Government asks us to save all the grain possible, we think it advisable to use all the day time that is available and it shall be expected that the people will be loyal and work the best hours of the day; owing to the morning's dampness and the difficulty in doing good work in the early morning, we would recommend that the hour of quitting shall not be before 7 p. m., new time.

RULE VI.

It shall be the duty of the machine man to avoid all waste for the following reasons:

A. Threshing grain when it is tough (damp and unripe.)

B. Loss from shattering in bundle wagons.

C. Carelessness in keeping threshing cylinder up to speed, and in adjustment of blower, etc., dull and bent teeth.

D. Carelessness in feeding bundles or loose grain into the machine.

E. Carelessness in allowing grain to leak on the ground around and under the machine and haste in cleaning up at close of operations.

F. Improper adjustment of concaves and other parts of machine.

RULE VII.—Pertaining to Farmers.

It shall be the duty of the farmer to see that all wagon boxes are tight. Also to see that there is no waste at the bins due from scooping and at the machine while changing the conveyor from one wagon to another. We will also recommend that if it is impossible to rake the wheat field before the finish of the wheat threshing; it be raked after, and threshed on the return of the machine for the oats threshing, also to see that no grain is left by the man who pitches on the shocks; "Always scrape up after each shock and pick up all bundles lost or dropped from wagons by the wayside."

Every effort should be given with the object of getting the grain into proper channels of trade and not permit so great a percentage to be distributed upon the ground or into the straw pile to be fed later to the stock on the farm. The practice of overlooking the leaks with the excuse that the stock will get the benefit when turned in, should be discouraged this year, when no wheat should be fed to animals.

Suggestions and mention of instances where wastes during threshing has occurred in the past will be appreciated.

We are all soldiers of the Home Guard fighting to win the war, and the first duty of a soldier is to obey orders.

A. F. PADEN **F. H. FAULKNER** **W. H. MACHIN**

Threshing Committee of the U. S. Food Administr'n for Knox Co.