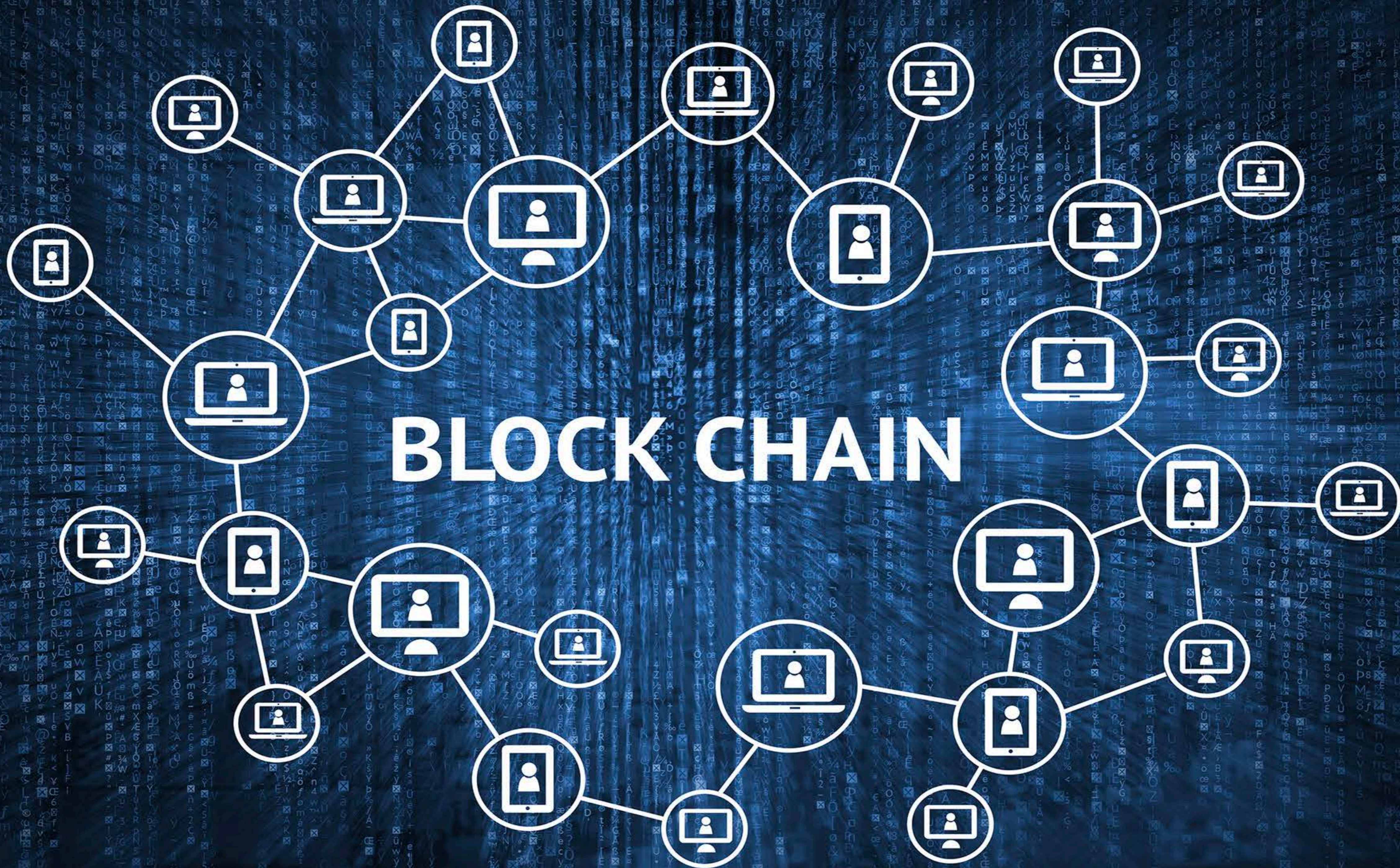
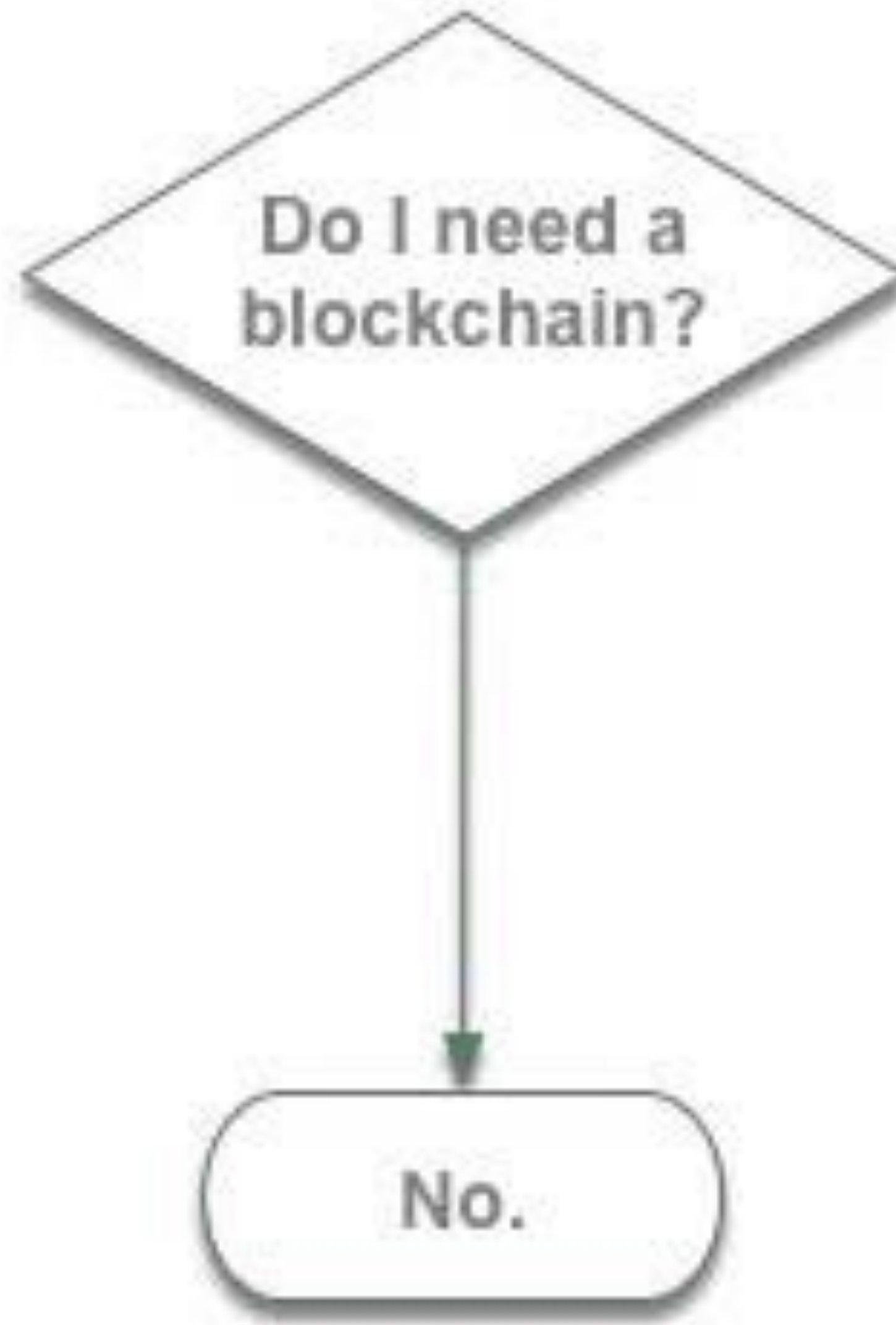


The End of Trust
March 27, 2019

Ethan Zuckerman
@ethanz
ethanz@mit.edu

BLOCK CHAIN





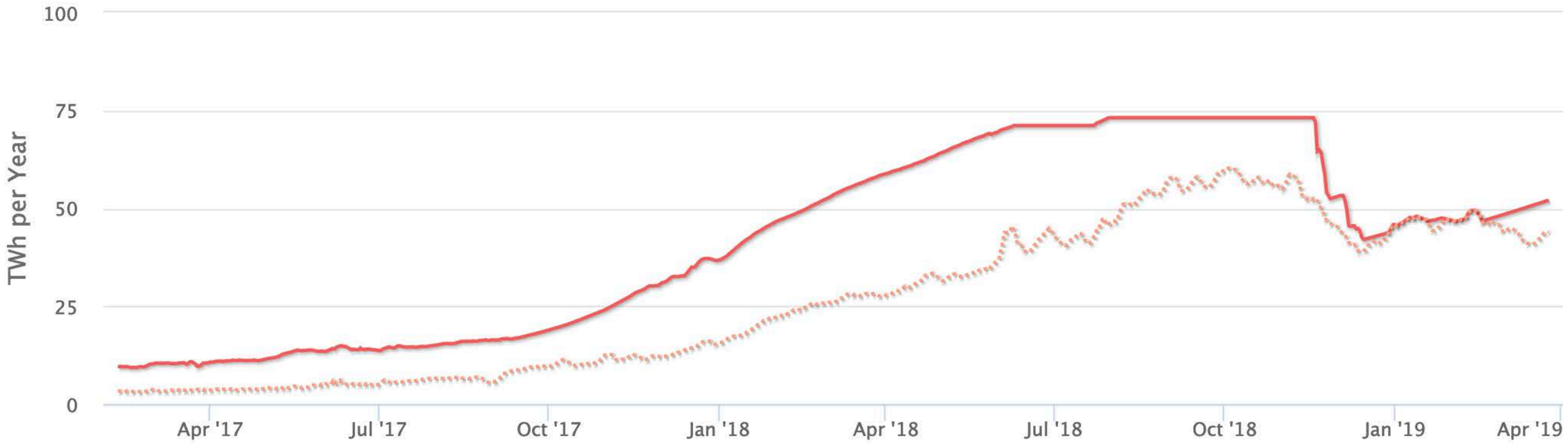
attributed to David Birch

Bitcoin Energy Consumption Index

NEW: [Bitcoin Electronic Waste Monitor](#)

Bitcoin Energy Consumption Index Chart

Click and drag in the plot area to zoom in

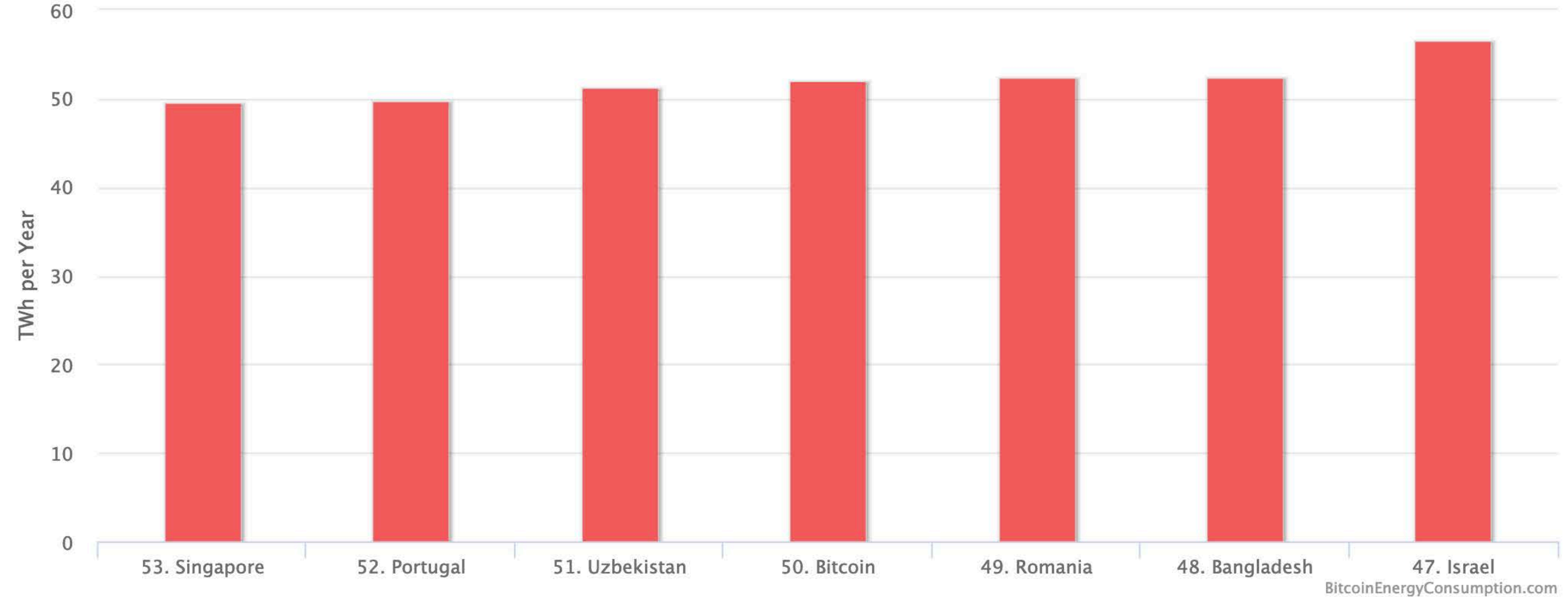


Zoom

From To

Estimated TWh per Year Minimum TWh per Year

Energy Consumption by Country Chart





bitcoin

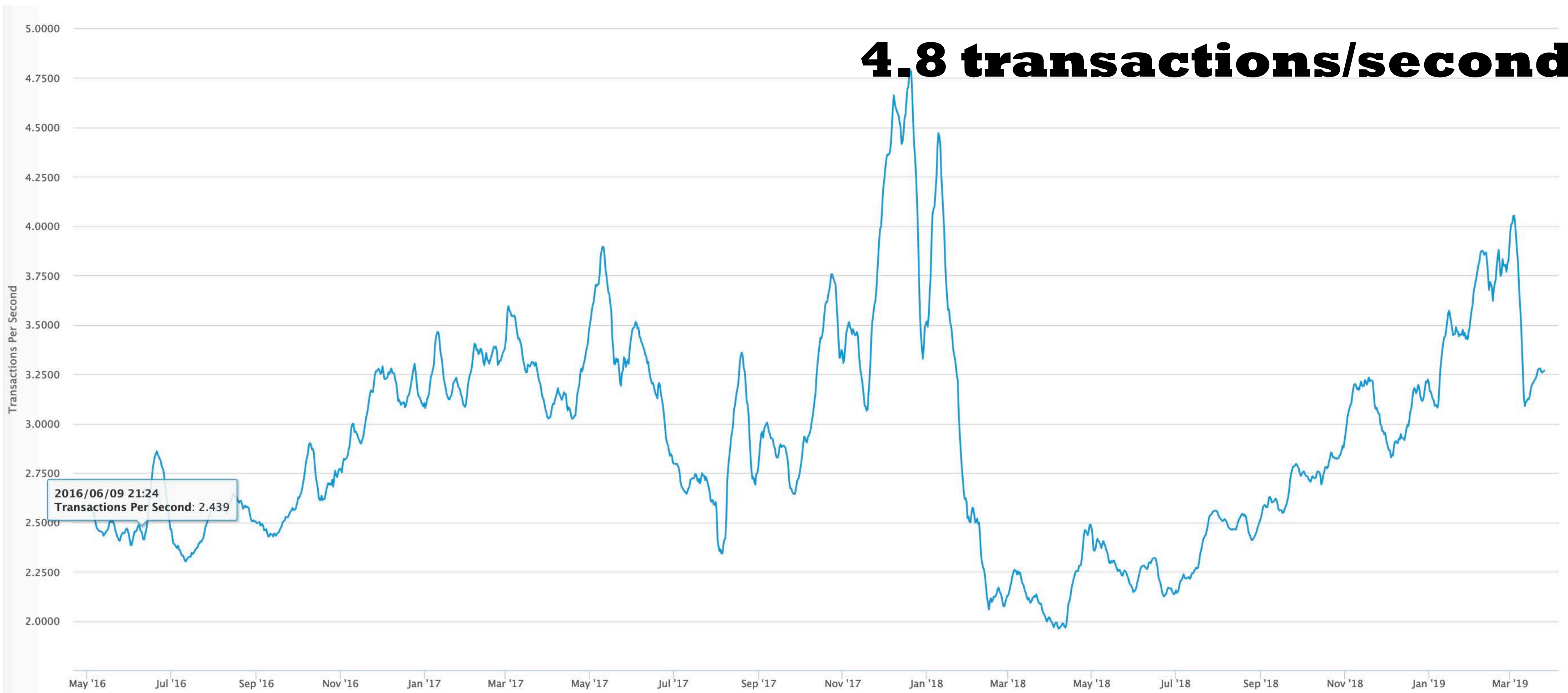
**One bitcoin transaction:
509 Kwh of electricity**



**250km drive:
40 Kwh of electricity**

One bitcoin transaction : 3200km driving

4.8 transactions/second



**Bitcoin transactions per second, 2016-present
(7 day moving average) blockchain.com**



**4.8 transactions per second
43-52 twh/year energy***



**~1700 transactions per second
0.187 twh/year energy****

* Digiconomist Bitcoin Energy Consumption Index ** VISA 2016 corporate social responsibility report



**4.8 transactions per second
43-52 twh/year energy***

public ledger

reviewable code

distributed consensus



**~1700 transactions per second
0.187 twh/year energy****

private ledger

proprietary code

centralized consensus



**4.8 transactions per second
43-52 twh/year energy***

public ledger

reviewable code

distributed consensus



**~1700 transactions per second
0.187 twh/year energy****

private ledger

proprietary code

centralized consensus

*The root problem with conventional currency is all the **trust** that's required to make it work. The central bank must be **trusted** not to debase the currency, but the history of fiat currencies is full of breaches of that **trust**. Banks must be **trusted** to hold our money and transfer it electronically, but they lend it out in waves of credit bubbles with barely a fraction in reserve.*

**Satoshi Nakamoto, announcement of Bitcoin 0.1
February 11, 2009**



what you don't need to trust

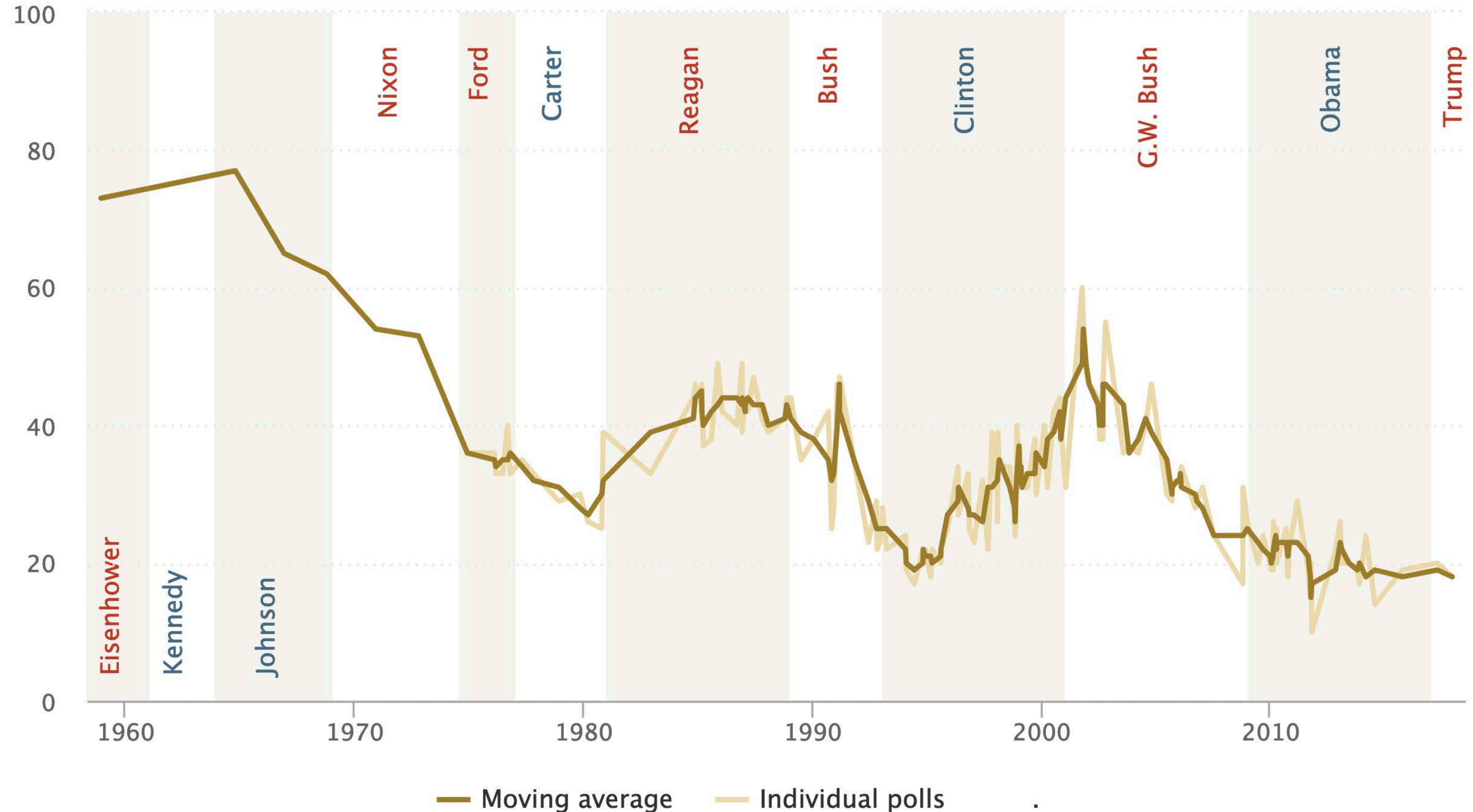
**banks
central banks
governments**

what you need to trust

**the math
the code
exchanges**

bitcoin is about mistrust of institutions

% who trust the govt in Washington always or most of the time



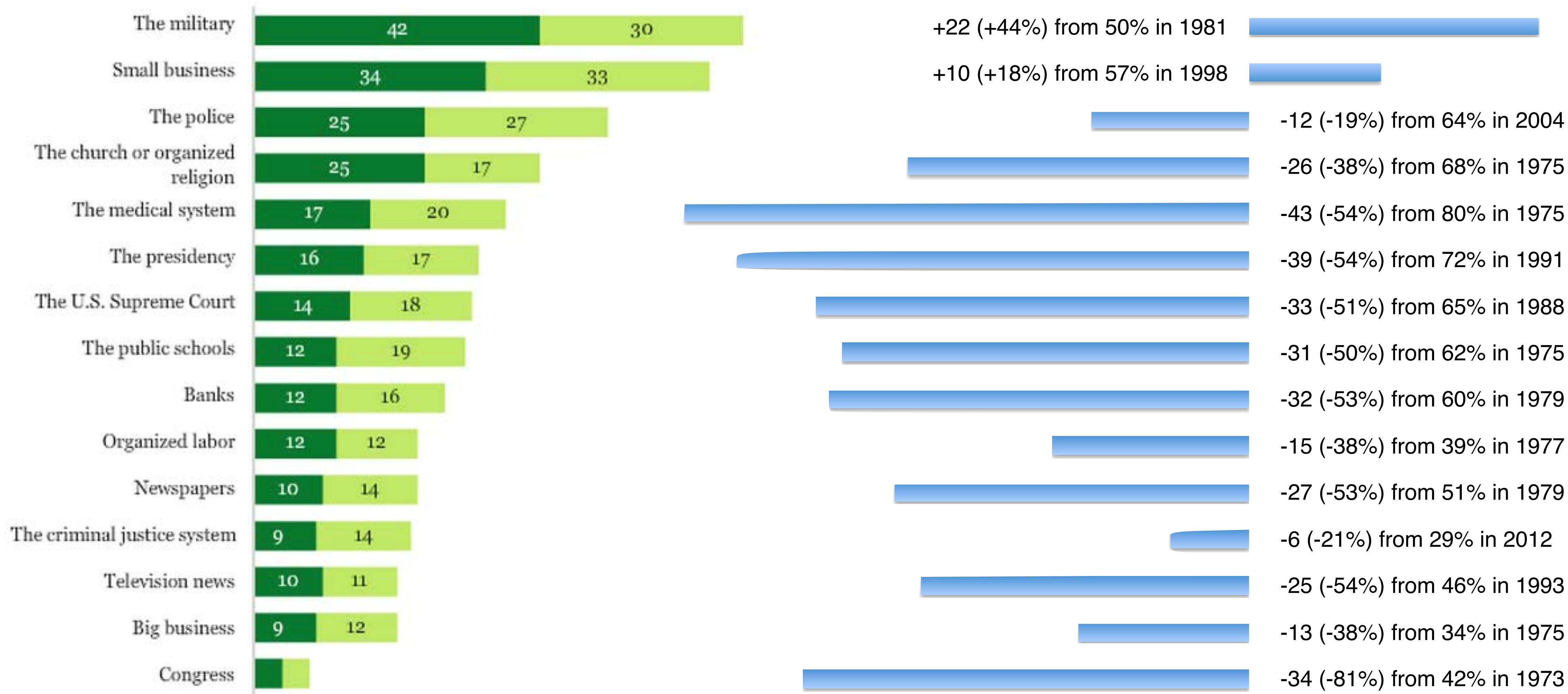
“Do you trust the government in Washington to do the right thing all or most of the time?” 77% in 1964, 18% in 2017.

Pew Research Center, Public Trust in Government: 1958-2017

I am going to read you a list of institutions in American society. Please tell me how much confidence you, yourself, have in each one -- a great deal, quite a lot, some or very little?

June 2-7, 2015

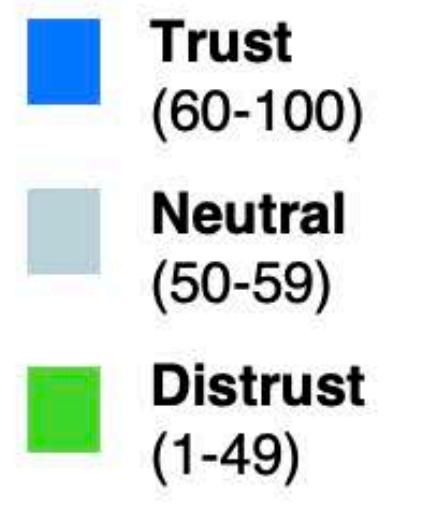
■ % Great deal ■ % Quite a lot



▲ 2018
General Population



▲ 2019
General Population

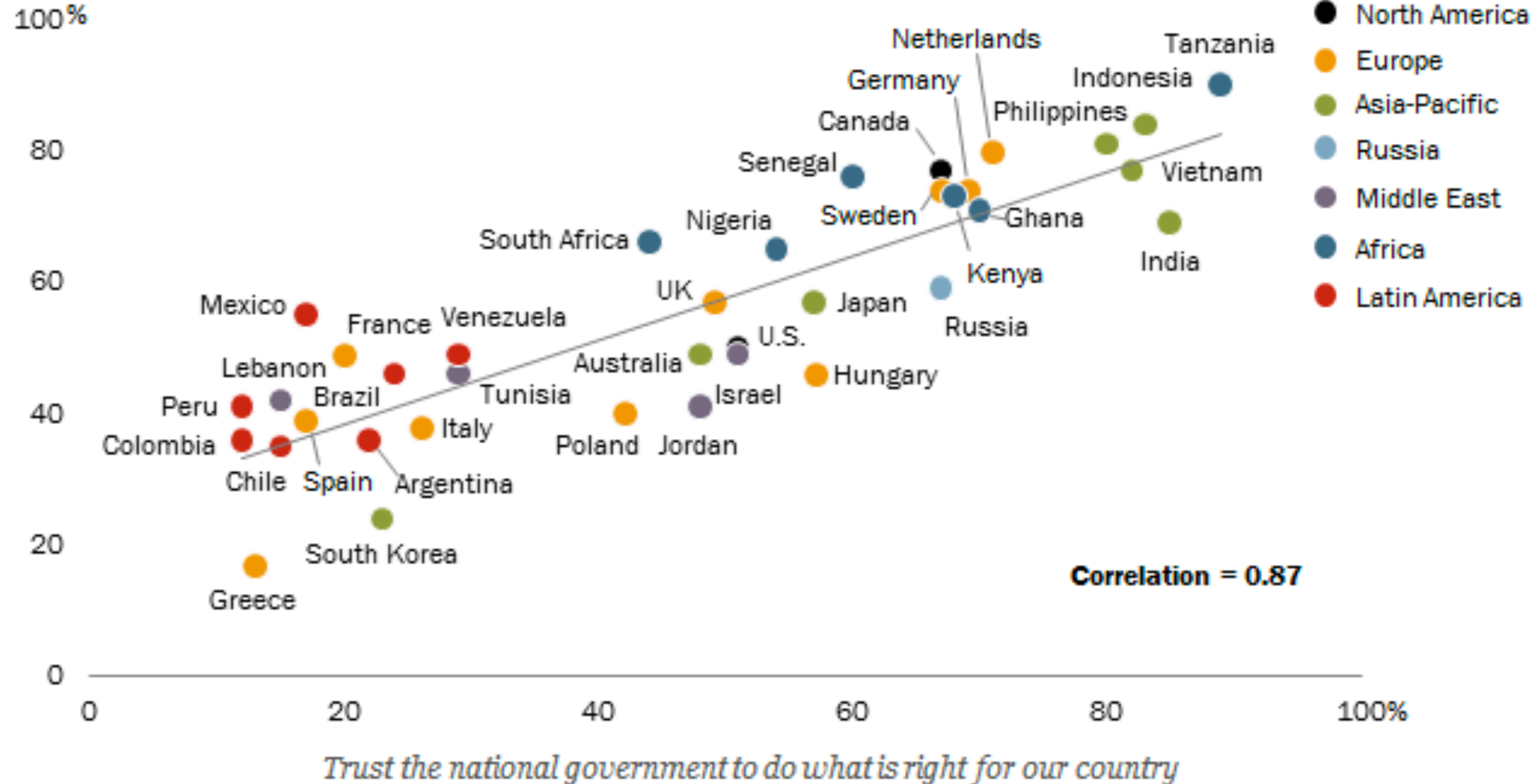


Biggest changes in



Strong relationship between trust in the government and media satisfaction

*Satisfied with news media in our country**



*Respondents are classified as satisfied with the news media in their country if they say news organizations are doing very or somewhat well on at least three of the four issues surveyed.

Note: Data for Turkey not available.

Source: Spring 2017 Global Attitudes Survey. Q4 & Q42a-d.

PEW RESEARCH CENTER

mistrust is
expensive



**mistrust creates
a crisis for civics**

**Institutionalists want progress
through strong institutions**

**Insurrectionists want better,
new or no institutions**

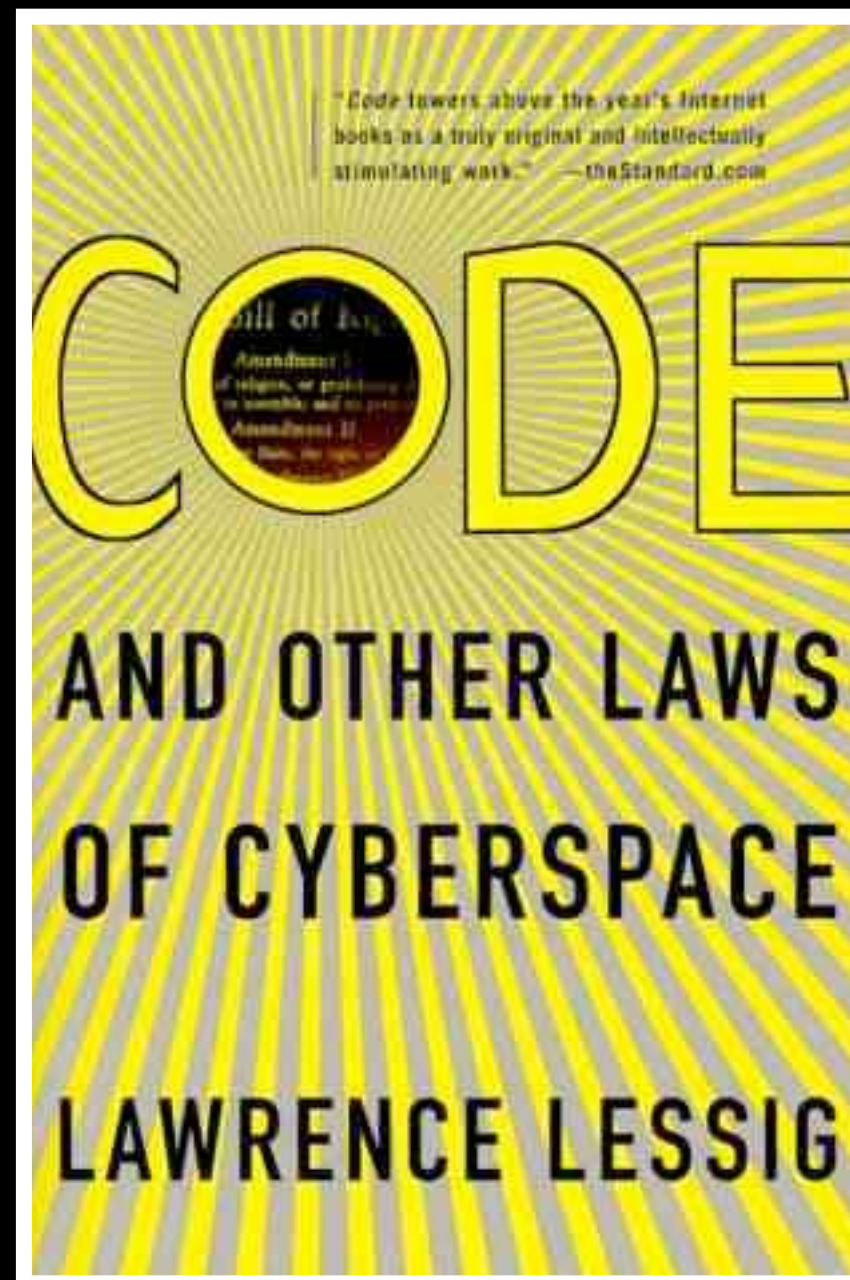




right and insurrectionist



left and insurrectionist



law

norms

markets

code



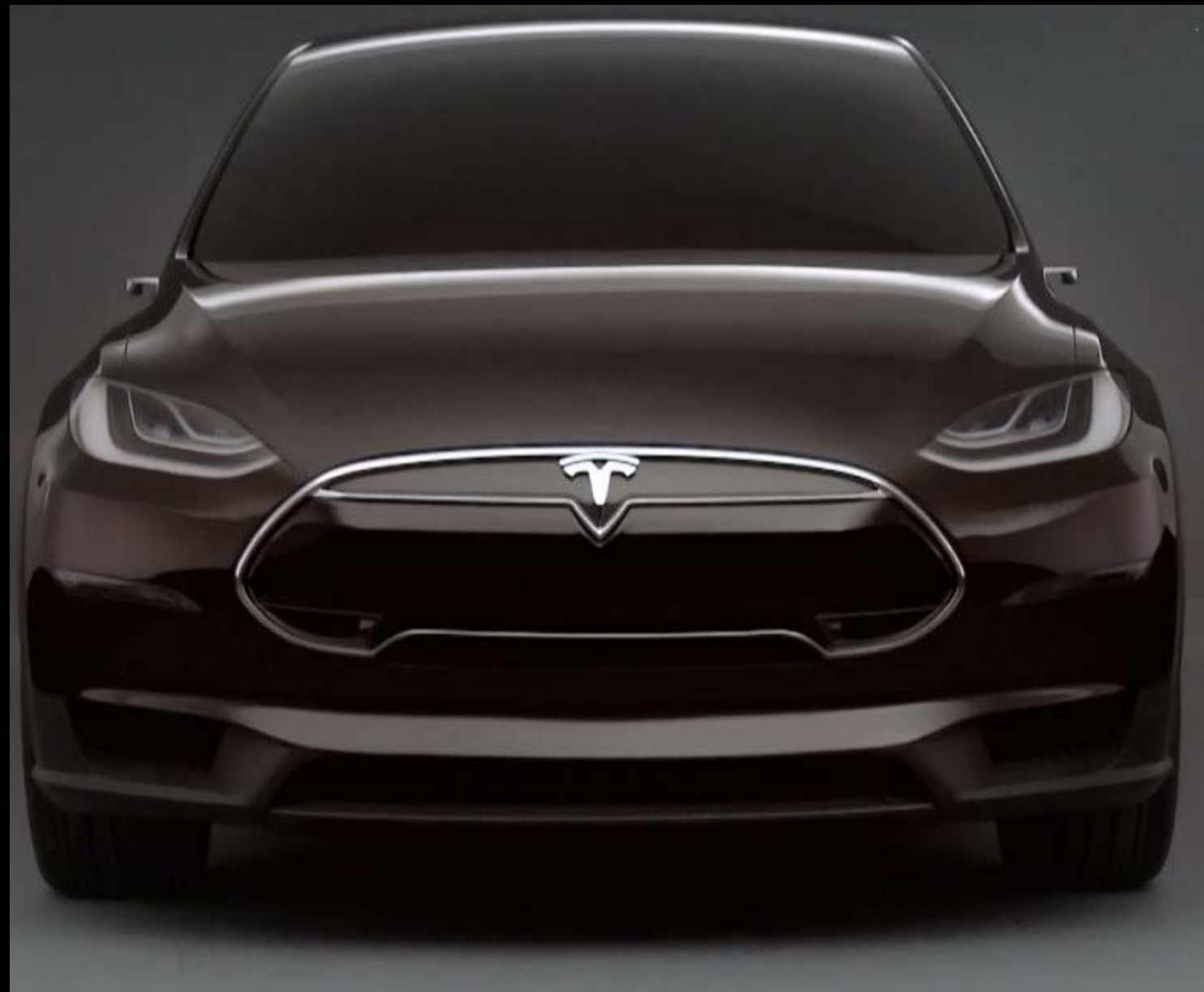
law



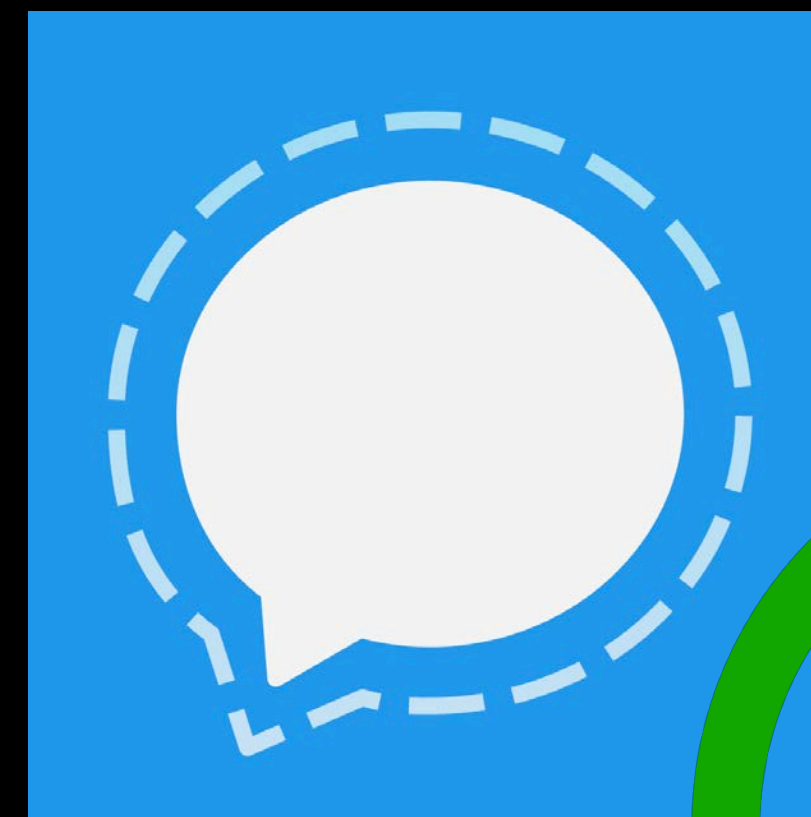
norms



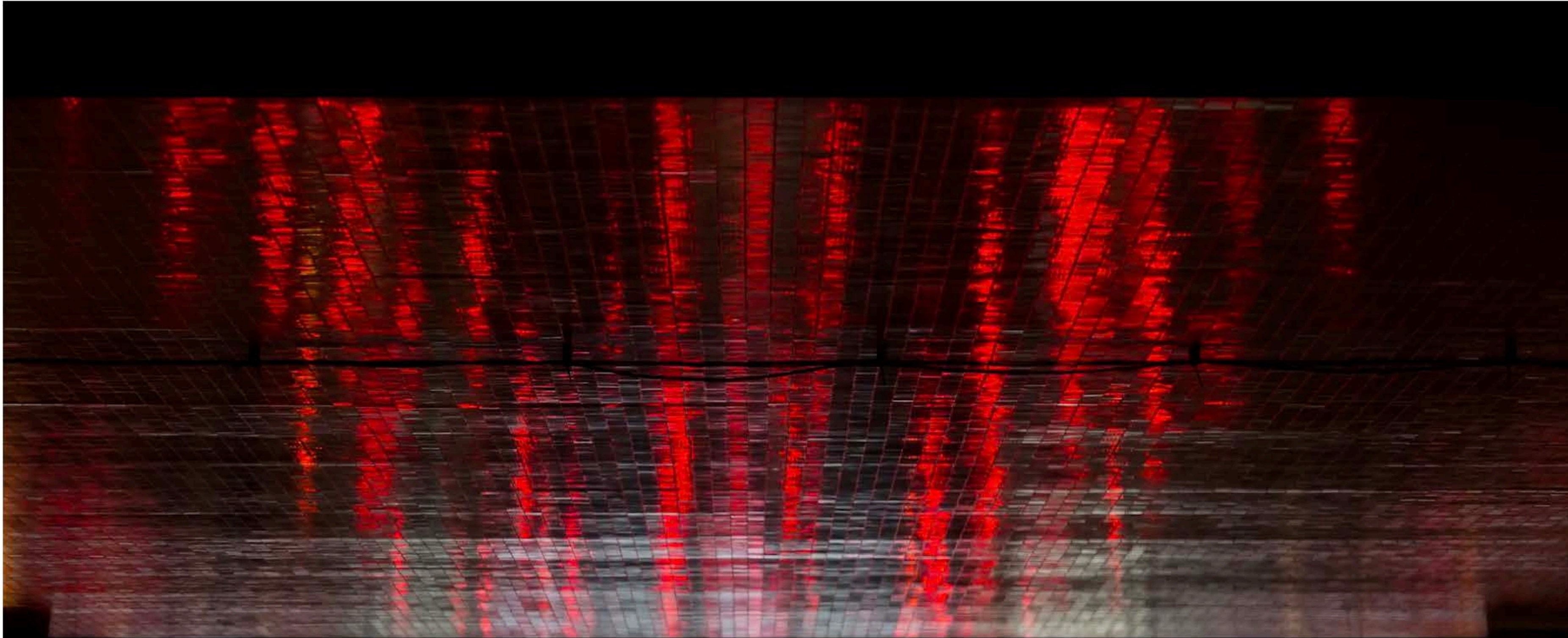
markets



code



Trump Administration Unveils Its Plan to Relax Car Pollution Rules



Each year, 214 million U.S. drivers emit about 2.4 trillion pounds of carbon dioxide.





markets



"On the Internet, nobody knows you're a dog."

cartoon by Peter Steiner

The Joy of Tech™



© 2013 Geek Culture

by Nitrozac & Snaggy



joyoftech.com

CN COLLECTION



code



COPYRIGHTED PHOTO BY RICHARD L. COBLEY

law

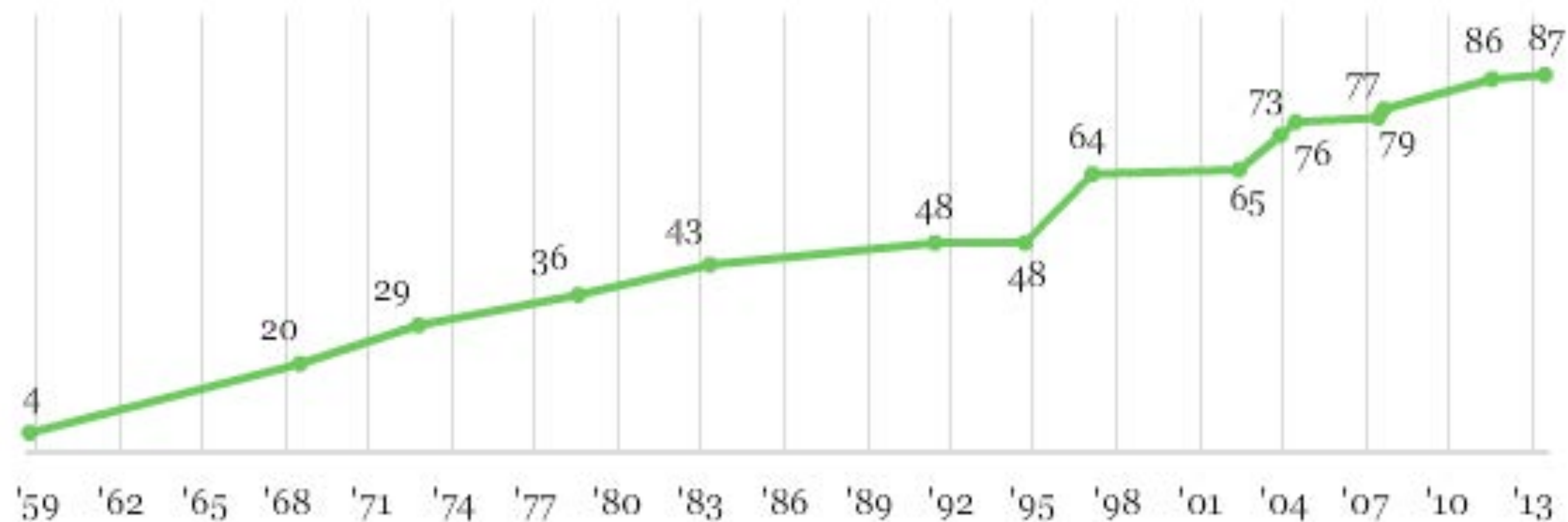


JUSTIN SULLIVAN/GETTY IMAGES

law

Do you approve or disapprove of marriage between blacks and whites?

■ % Approve



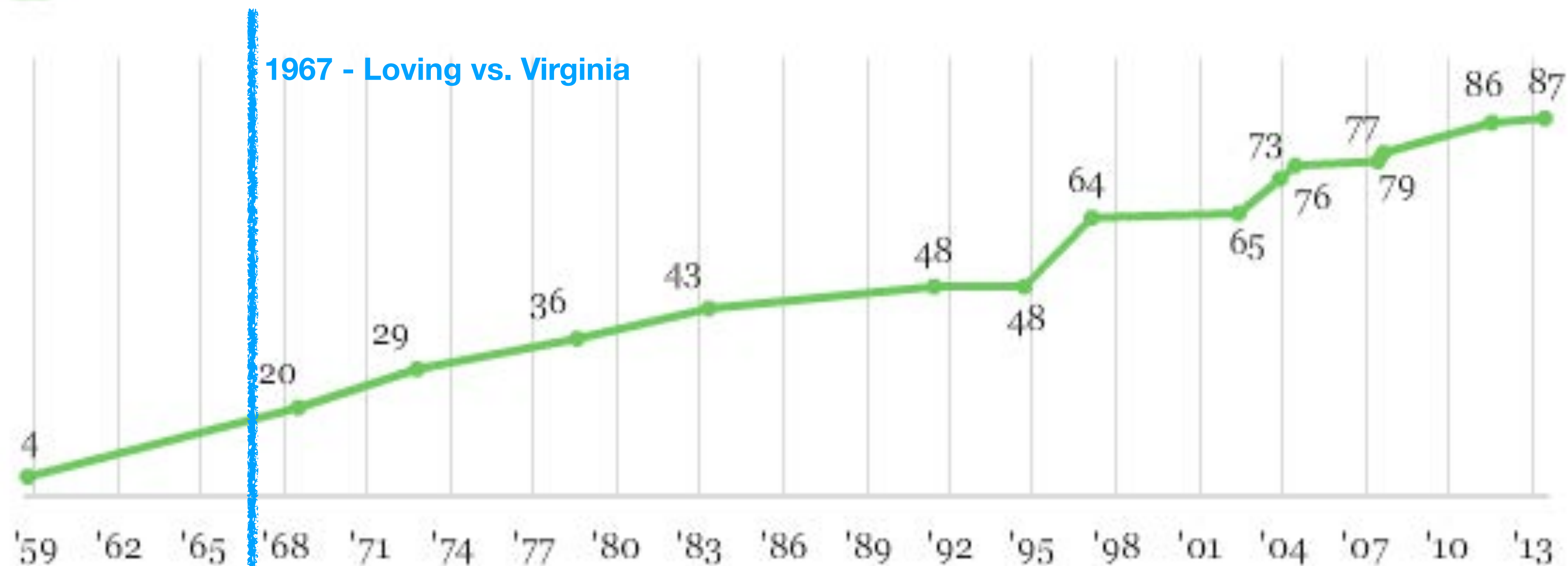
1958 wording: "... marriages between white and colored people"

1968-1978 wording: "... marriages between whites and nonwhites"

GALLUP

Do you approve or disapprove of marriage between blacks and whites?

■ % Approve



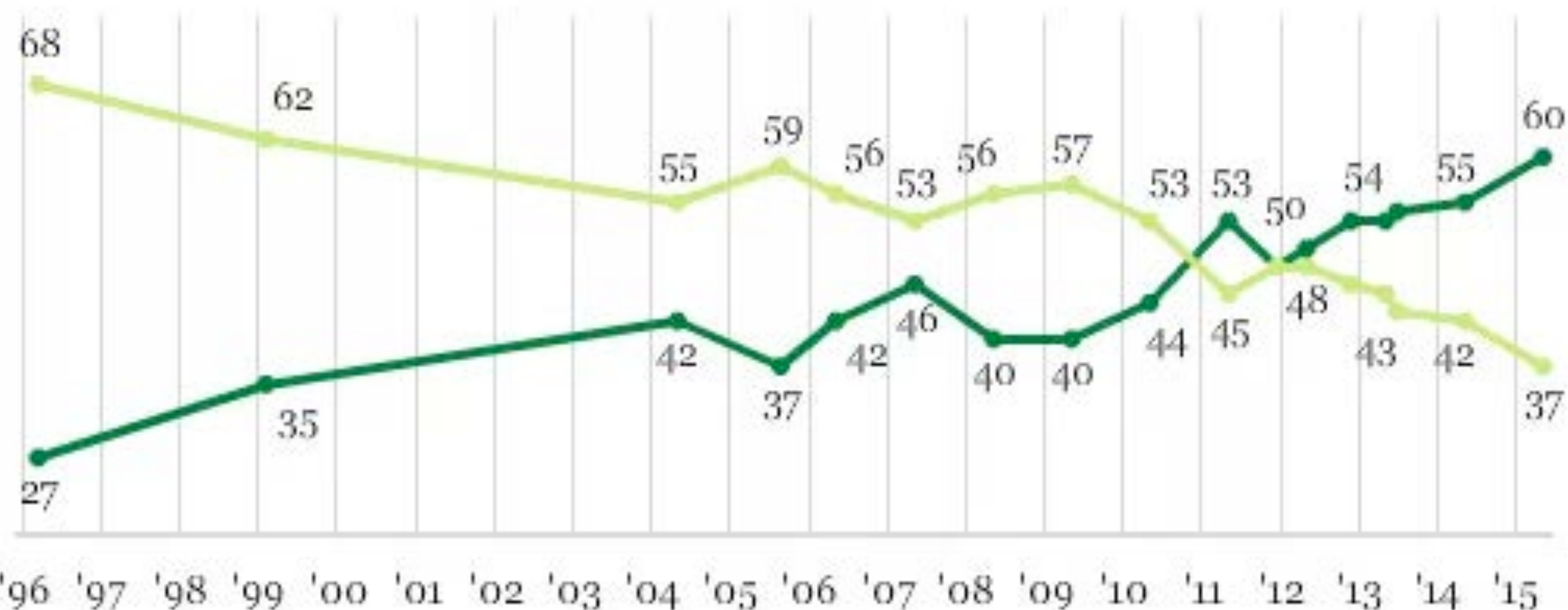
1958 wording: "... marriages between white and colored people"

1968-1978 wording: "... marriages between whites and nonwhites"

GALLUP

Do you think marriages between same-sex couples should or should not be recognized by the law as valid, with the same rights as traditional marriages?

■ % Should be valid ■ % Should not be valid

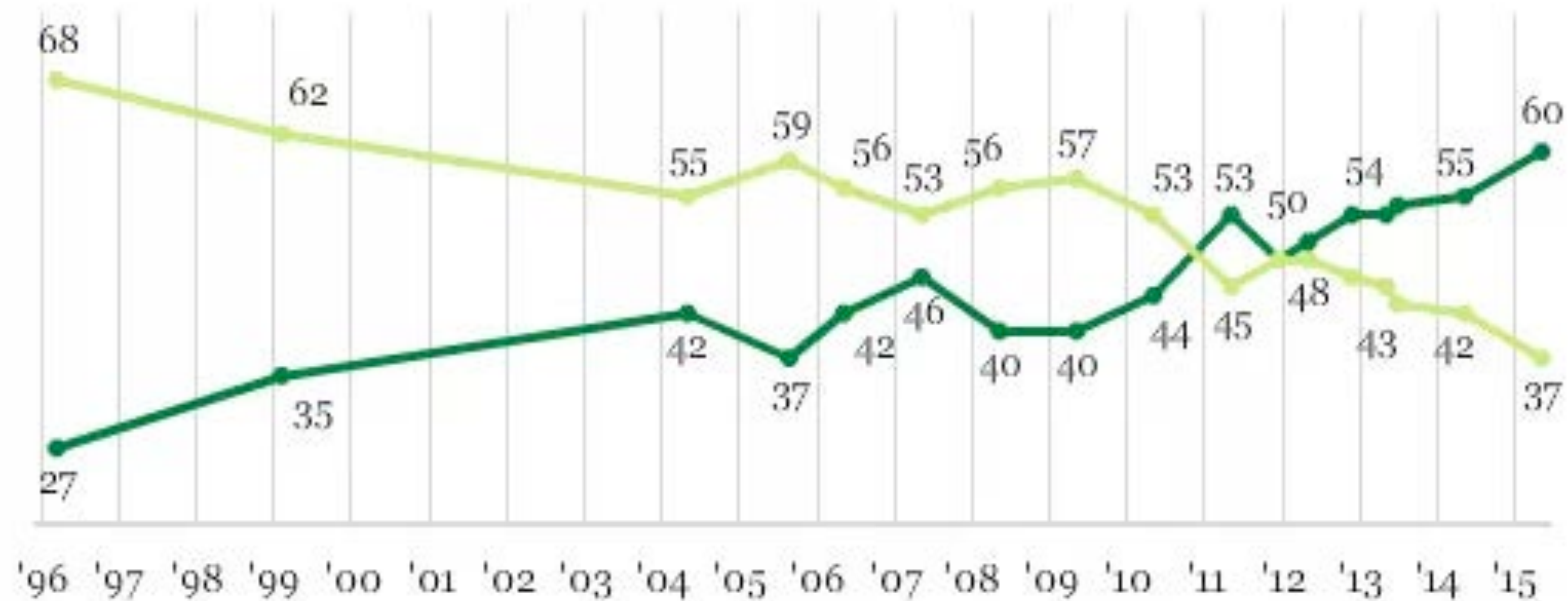


Note: Trend shown for polls in which same-sex marriage question followed questions on gay/lesbian rights and relations
1996-2005 wording: "Do you think marriages between homosexuals ..."

GALLUP®

Do you think marriages between same-sex couples should or should not be recognized by the law as valid, with the same rights as traditional marriages?

■ % Should be valid ■ % Should not be valid



2015 - Obergefell v. Hodges

Note: Trend shown for polls in which same-sex marriage question followed questions on gay/lesbian rights and relations

1996-2005 wording: "Do you think marriages between homosexuals ..."

GALLUP®

ellen
the ellen degeneres show



norms precede laws



norms



flickr photo by Sean Davis

Michael Brown



The Root
@TheRoot



Follow

If you died, which picture would the media use? #IfTheyGunnedMeDown #MikeBrown
bit.ly/1sNIKhe

Reply Retweet Favorite More



RETWEETS 523 FAVORITES 182



9:55 AM - 11 Aug 2014

Flag media



Name Ring BELLS
@Heartbreak_Rell



Follow

#iftheygunnedmedown which picture would they use?

Reply Retweet Favorite More



RETWEETS 5,905 FAVORITES 3,819



5:38 PM - 10 Aug 2014

Flag media

#iftheygunnedmedown

The New York Times

U.S.

Shooting Spurs Hashtag Effort on Stereotypes

By TANZINA VEGA AUG. 12, 2014



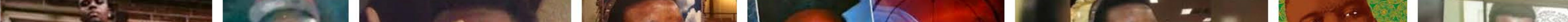
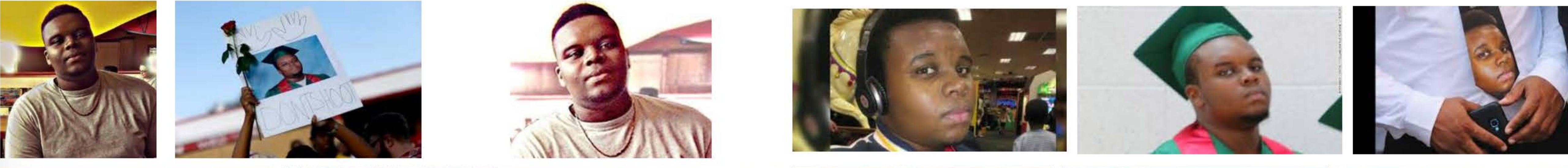
Tyler Atkins posted these pictures on Twitter and suggested that the news media would select the one on the left to depict him if he were shot.

When Tyler Atkins heard about the fatal shooting of Michael Brown, 18, an unarmed black teenager in Ferguson, Mo., he posted on Twitter a picture of himself in a tuxedo, with a saxophone around his neck, next to a [photograph](#) of himself dressed in a black T-shirt with a blue bandanna tied around his head and his finger pointed at the camera.

Like hundreds of young African-Americans, he placed his pictures under the hashtag [#IfTheyGunnedMeDown](#), protesting Mr. Brown's killing by a police officer and the way young black men are depicted in the news media. He said that Mr. Brown's identity was distorted and filtered through negative stereotypes, and that the same would have been done to him with the bandanna image if he found himself the victim of a similar event.

The first picture was taken after a jazz concert at the High School for the Performing and Visual Arts in Houston, where Mr. Atkins, a senior, studies music. The other was taken during a recording for a [rap video](#) he made with friends for a school math project.

- dead
- 4 hour
- street
- ground
- floor
- road
- 4chan
- 9gag
- facebook
- twitter
- the funeral
- hands up
- st louis blues
- trayvon martin
- eric garner
- shooter
- oscar grant
- dillon taylor
- tamir rice
- co





Adam Foss
Radical
Institutionalist

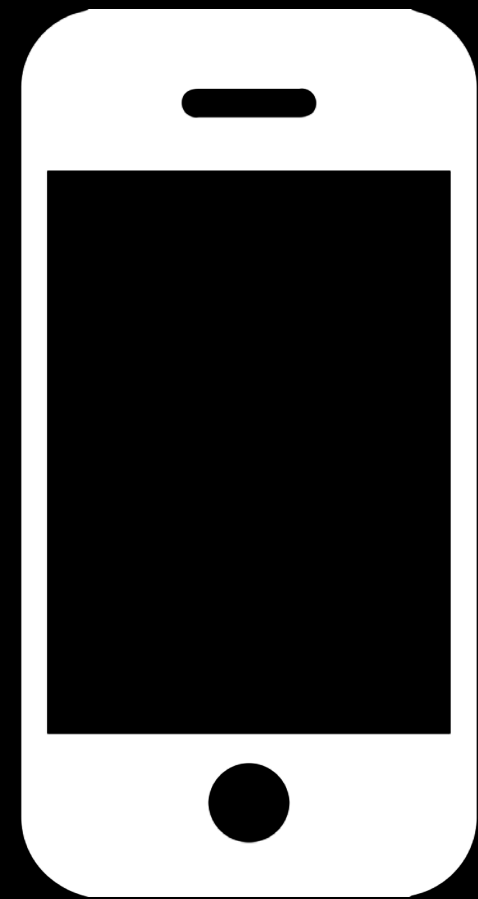


monithon.it
Counter-Democracy
Monitorial Citizenship



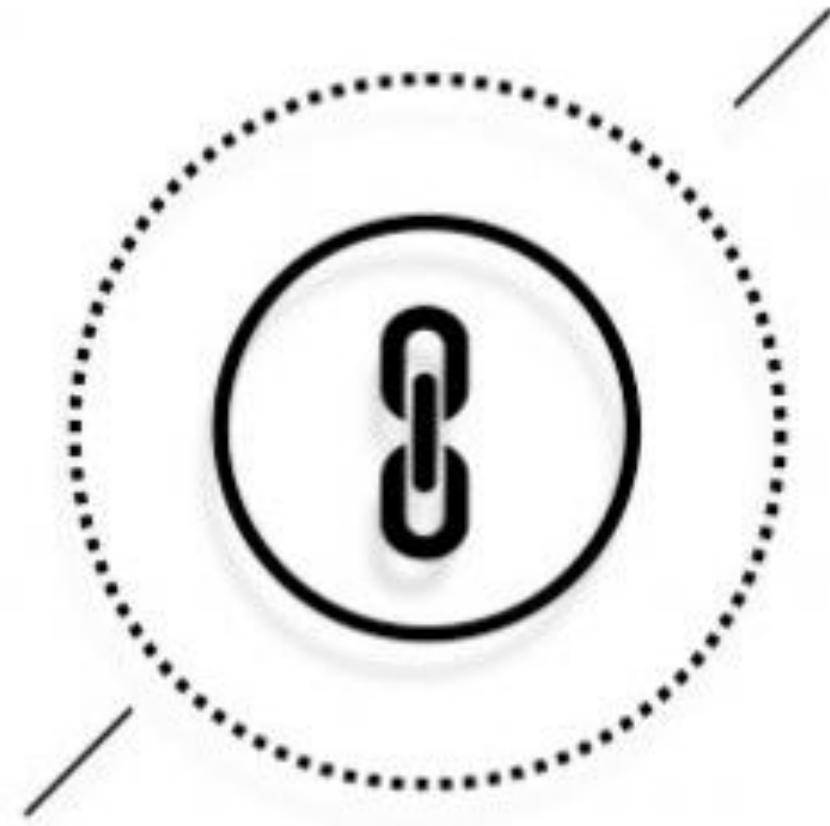
Presentation's name
Helvetica Bold 18/18pt

Name of presenter
Helvetica Regular 18/18pt



G ~~**O**~~ **V**

disruption
replace old institutions
with new ones



BITNATION

GOVERNANCE 2.0

CIVIL

civil.co

**distributed
institutions**

institutionalists

radical institutionalists

counter-democrats

disruptors

decentralizers

institutionalist or insurrectionist?

inside, outside, new or no institutions?

law, code, markets, norms?

choose what works for you.

what matters is efficacy.

people need to know

that they can change the world.

**if trust isn't coming back
what does it mean for other
institutions?**

**what does an insurrectionist
customer look like?
an insurrectionist patient?**

thank you

@ethanz

ethanz@mit.edu