ETHICS & OPEN SCIENCE

PMAP 8521: Program Evaluation for Public Service

December 9, 2019

Fill out your reading report on iCollege!

PLAN FOR TODAY

Ethics of data analytics

Ethics of stories

Reproducibility and open science

Curiosity and learning more

COURSE OBJECTIVES

BY THE END OF THIS COURSE, you (1) will be literate in the language of causal inference, (2) will communicate evaluation outcomes clearly, and (3) will understand the ethics and limits of data analysis by designing, critiquing, coding, and running rigorous, valid, and feasible evaluations of public sector programs focused on society's most pressing problems.

Specifically, you'll be able to:

- Explain the philosophy of causation
- Identify and diagram program logic models
- Outline theories of change with directed acyclic graphs (DAGs)
- Summarize key threats to causal inference, identify these threats in evaluations, and mitigate these threats with research design
- Develop rigorous and valid statistical measures
- Run statistical models
- Explain the theory, research design, methods, and results of evaluations to all types of stakeholders, from highly trained econometricians to the general public
- Share your analyses and data with the public
- Identify ethical issues and limits in data science and program evaluation
- Become curious and confident in consuming and producing evaluations

MAIN TAKEAWAY

Don’t be afraid of causal language

The C-Word: Scientific Euphemisms Do Not Improve Causal Inference From Observational Data

Causal inference is a core task of science. However, authors and editors often refrain from explicitly acknowledging the causal goal of research projects; they refer to causal effect estimates as associational estimates.

This commentary argues that using the term "causal" is necessary to improve the quality of observational research.

Specifically, being explicit about the causal objective of a study reduces ambiguity in the scientific question, errors in the

Miguel A. Hernán, MD, DrPH

See also Galea and Vaughan, p. 602; Begg and March, p. 620; Ahern, p. 621; Chiolero, p. 622; Glymour and Hamad, p. 623; Jones and Schooling, p. 624; and Hernán, p. 625.

You know the story:

> Dear author: Your observational study cannot prove causation. Please replace all references to causal effects by references to associations.

Many journal editors request authors to avoid causal language,[1] and many observational researchers, trained in a scientific environment that frowns upon

Confusion then ensues at the most basic levels of the scientific process and, inevitably, errors are made.

We need to stop treating "causal" as a dirty word that respectable investigators do not say in public or put in print. It is true that observational studies cannot definitely prove causation, but this statement misses

glass of red wine per day versus no alcohol drinking. For simplicity, disregard measurement error and random variability—that is, suppose the 0.8 comes from a very large population so that the 95% confidence interval around it is tiny.

The risk ratio of 0.8 is a measure of the association between wine intake and heart disease.

ETHICS OF DATA ANALYTICS

POSSIBLE PITFALLS

Manipulation

Don’t coerce people

Bias

There’s no such thing as an objective model

Accidental evil

Don’t let stupidity transform into evil

Manipulation

Welcome!
Everything is fine.

SING TO A CHILD: +0.69

FAIL TO DISCLOSE CAMEL ILLNESS WHEN SELLING CAMEL: -22.22

END SLAVERY: +814292.09

COMMIT GENOCIDE: -433115.25

HARASSMENT (SEXUAL): -731.26

FIX BROKEN TRICYCLE FOR CHILD WHO LOVES TRICYCLES: +6.60

REMEMBER SISTER'S BIRTHDAY: +15.02

STEP CAREFULLY OVER FLOWER BED: +2.09

FIX BROKEN TRICYCLE FOR CHILD WHO IS INDIFFERENT TO TRICYCLES: +0.04

BE COMMISSIONER OF PROFESSIONAL FOOTBALL LEAGUE (AMERICAN): -824.55

STEAL COPPER WIRING FROM DECOMMISSIONED MILITARY BASE: -16.00

POISON A RIVER: -4010.55

SAVE A CHILD FROM DROWNING +1202.33

REV A MOTORCYCLE: -64.42

PLANT BAOBOB TREE IN MADAGASCAR: +9.40

DISTURB CORAL REEF WITH FLIPPER: -53.83

SCRATCH ELBOW: +1.06

PET A LAMB: +0.89

EAT A SANDWICH: +1.

HUG SAD FRIEND: +4.98

PURIFY WATER SOURCE (VILLAGE): POP. >250): +295.98

BLOW NOSE BY PRESSING ONE NOSTRIL DOWN AND EXHALING: -1.44

STIFF A WAITRESS: -6.83

BUY A TRASHY MAGAZINE: -0.75

USE THE TERM "BRO-CODE": -8.20

USE "FACEBOOK" AS A VERB: -5.55

ROOT FOR NEW YORK YANKEES: -99.15

POLITELY TOLERATE STRANGER RECOUNTING NEW YORKER ARTICLE AT COCKTAIL PARTY: +12.23

REMAIN LOYAL TO CLEVELAND BROWNS: +53.83

TELL A WOMAN TO "SMILE": -53.83

OVERSTATE PERSONAL CONNECTION TO TRAGEDY THAT HAS NOTHING TO DO WITH YOU: -40.57

RUIN OPERA WITH BOORISH BEHAVIOR: -90.90

MAINTAIN COMPOSURE IN LINE AT WATER PARK IN HOUSTON: +61.14

Imagine a future
where your life is measured by a number—three digits
that dictate your place in society.
That future is now.

WIRED

JANUARY 2018 | ADD IT UP

WIRED—29.01

CREATE. CONNECT. CONDUCT.

Instagram's feed ranking criteria

Instagram relies on machine learning based on your past behavior to create a unique feed for everyone. Even if you follow the exact same accounts as someone else, you'll get a personalized feed based on how you interact with those accounts.

Three main factors determine what you see in your Instagram feed:

1. **Interest:** How much Instagram predicts you'll care about a post, with higher ranking for what matters to you, determined by past behavior on similar content and potentially machine vision analyzing the actual content of the post.
2. **Recency:** How recently the post was shared, with prioritization for timely posts over weeks-old ones.
3. **Relationship:** How close you are to the person who shared it, with higher ranking for people you've interacted with a lot in the past on Instagram, such as by commenting on their posts or being tagged together in photos.

THE WALL STREET JOURNAL.

Blue Feed, Red Feed

See Liberal Facebook and Conservative Facebook, Side by Side

*By **Jon Keegan***

Published May 18, 2016 at 8:00 a.m. ET | Updated hourly

FILTER FEEDS BY TOPIC:

PRESIDENT TRUMP | HEALTH CARE | GUNS | ABORTION | ISIS | BUDGET | EXECUTIVE ORDER | IMMIGRATION

LIBERAL

SHOWING POSTS ABOUT:
"PRESIDENT TRUMP"

CONSERVATIVE

MSNBC
on Wednesday

New York Attorney Gen.-elect Letitia James says she plans to launch sweeping investigations into President Trump, his family and "anyone" in his circle who may have violated the law.

NBCNEWS.COM
Incoming New York attorney general plans wide-rang…

2.5K 334 742

LIVE: Senate Minority Leader Schumer speaks on Senate floor about his Oval Office meeting with President Trump.
https://nbcnews.to/2EezUoG

2.5K 2K 980

The Raw Story
on Wednesday

Can't fix stupid.

RAWSTORY.COM
Trump supporter attacks Pelosi on Fox & Friends: Cr…
Fox News reporter Todd Piro spoke to a group of viewers in North…

The Federalist Papers
on Wednesday

The President just set three traps for Schumer and Pelosi on immigration yesterday and they fell for all three.

This is brilliant!

THEFEDERALISTPAPERS.ORG
Trump Just Set 3 Traps For Schumer, Pelosi Over Im…
Hook, line and sinker.

29K 1.5K 10K

The Daily Signal
on Wednesday

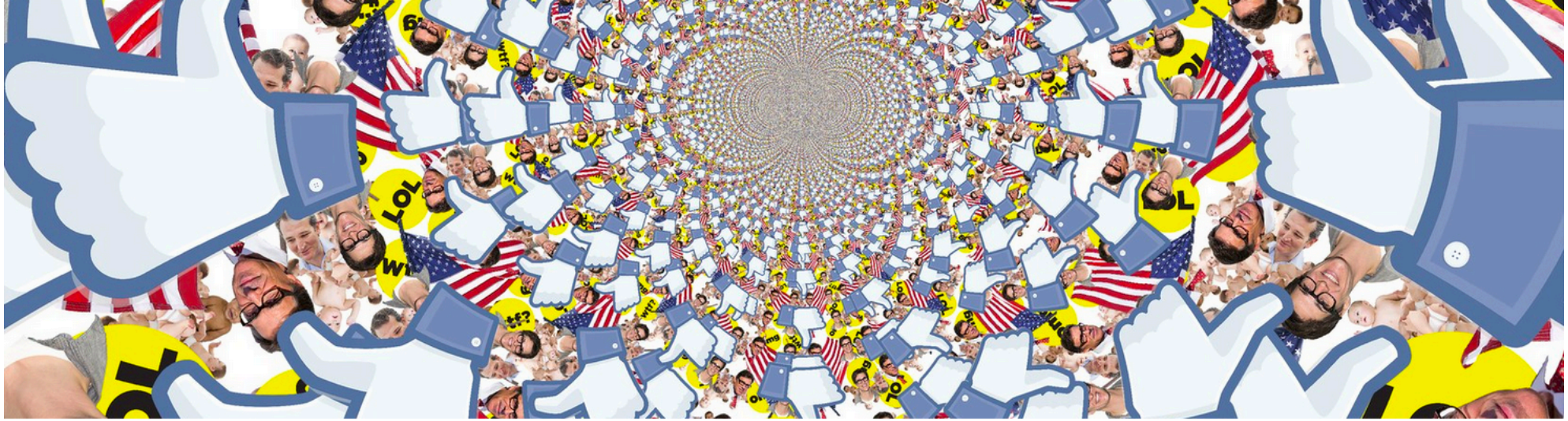
Michael Cohen's payments to two women during the 2016 campaign may have been unseemly—but they were not illegal.

DAILYSIGNAL.COM
Trump's Ex-Lawyer Didn't Violate Campaign Finance …
Michael Cohen's payments to two women during the 2016 campa…

2.3K 165 1.1K

Breitbart
on Wednesday

"I'm not concerned, no. I think that the people would revolt if that happened," Trump said.



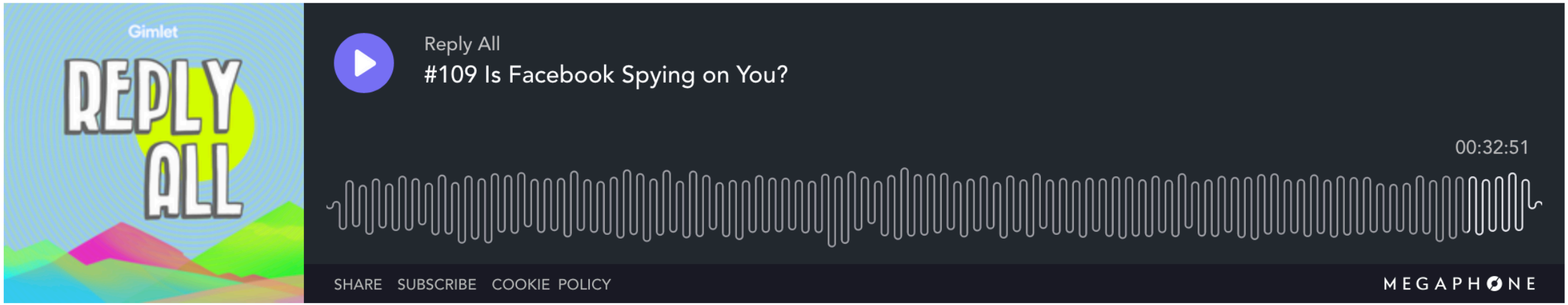
WIRED

MAT HONAN GEAR 08.11.14 06:30 AM

I LIKED EVERYTHING I SAW ON FACEBOOK FOR TWO DAYS. HERE'S WHAT IT DID TO ME

#109 Is Facebook Spying on You?

November 2, 2017



How Target Figured Out A Teen Girl Was Pregnant Before Her Father Did

Kashmir Hill Forbes Staff
Welcome to The Not-So Private Par

> As Pole's computers crawled through the data, he was able to identify about 25 products that, when analyzed together, allowed him to assign each shopper a "pregnancy prediction" score. More important, he could also estimate her due date to within a small window, so Target could send coupons timed to very specific stages of her pregnancy.
>
> One Target employee I spoke to provided a hypothetical example. Take a fictional Target shopper named Jenny Ward, who is 23, lives in Atlanta and in March bought cocoa-butter lotion, a purse large enough to double as a diaper bag, zinc and magnesium supplements and a bright blue rug. There's, say, an 87 percent chance that she's pregnant and that her delivery date is sometime in late August.
>
> via How Companies Learn Your Secrets - NYTimes.com.

AIRLINES FACE CRACK DOWN ON USE OF ‘EXPLOITATIVE’ ALGORITHM THAT SPLITS UP FAMILIES ON FLIGHTS

Government ministers have condemned the practice

Helen Coffey | @LenniCoffey

Monday 19 November 2018 12:22 | 9 comments |

Click to follow
The Independent Travel

Algorithms used by airlines to split up those travelling together unless they pay more to sit next to each other have been called “exploitative” by a government minister.

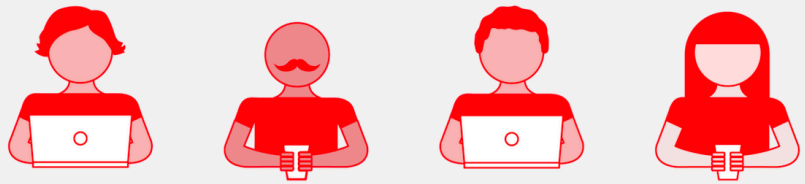
IT'S NOT ALL DYSTOPIAN

The White House
Office of the Press Secretary

For Immediate Release January 30, 2015

FACT SHEET: President Obama's Precision Medicine Initiative

Building on President Obama's announcement in his State of the Union Address, today the Administration is unveiling details about the Precision Medicine Initiative, a bold new research effort to revolutionize how we improve health and treat disease. Launched with a $215 million investment in the President's 2016 Budget, the Precision Medicine Initiative will pioneer a new model of patient-powered research that promises to accelerate biomedical discoveries and provide clinicians with new tools, knowledge, and therapies to select which treatments will work best for which patients.



Crisis Text Line

Text from anywhere in the USA to text with a trained Crisis Counselor.

Every texter is connected with a Crisis Counselor, a real-life human being trained to bring texters from a hot moment to a cool calm through active listening and collaborative problem solving. All of Crisis Text Line's Crisis Counselors are volunteers, donating their time to helping people in crisis.

Read more »

them. For example, the data shows the most effective conversations are between 45 and 60 messages. Or, if a texter messages in with the word "ibuprofen" they are 16 times more likely to be actively suicidal ("bridge" is 8 times and "tonight" is 3 times) and the crisis counselors can immediately begin a risk assessment to help de-escalate the texter.

What makes the social score and the crisis score ethically different?

Or are they the same thing?

AVOID MANIPULATION

Think about people

Think about autonomy

Don’t rely 100% on data!

Bias

ARTIFICIAL INTELLIGENCE

Predictim Claims Its AI Can Flag 'Risky' Babysitters. So I Tried It on the People Who Watch My Kids.

Brian Merchant

12/06/18 3:57pm • Filed to: AUTOMATON

72.9K 110 2

At issue is the fact that I've used Predictim to scan a handful of people I very much trust with my own son. Our actual babysitter, Kianah Stover, returned a ranking of "Moderate Risk" (3 out 5) for "Disrespectfulness" for what appear to me to be innocuous Twitter jokes. She returned a worse ranking than a friend I also tested who routinely spews vulgarities, in fact. She's black, and he's white.

I tell them I am sure that they don't have a 'Do Racism' button on their program's dashboard, but wonder if systemic bias could nonetheless have entered into their datasets. Parsa says, "I absolutely agree that it's not perfect, it could be biased, it could flag things that are not really supposed to be flagged, and that's why we added the human review." But the human review let these results stand.

Personal Information

What does this score mean?

Kianah Jay

Scan completed on: November 27, 2018

Summary

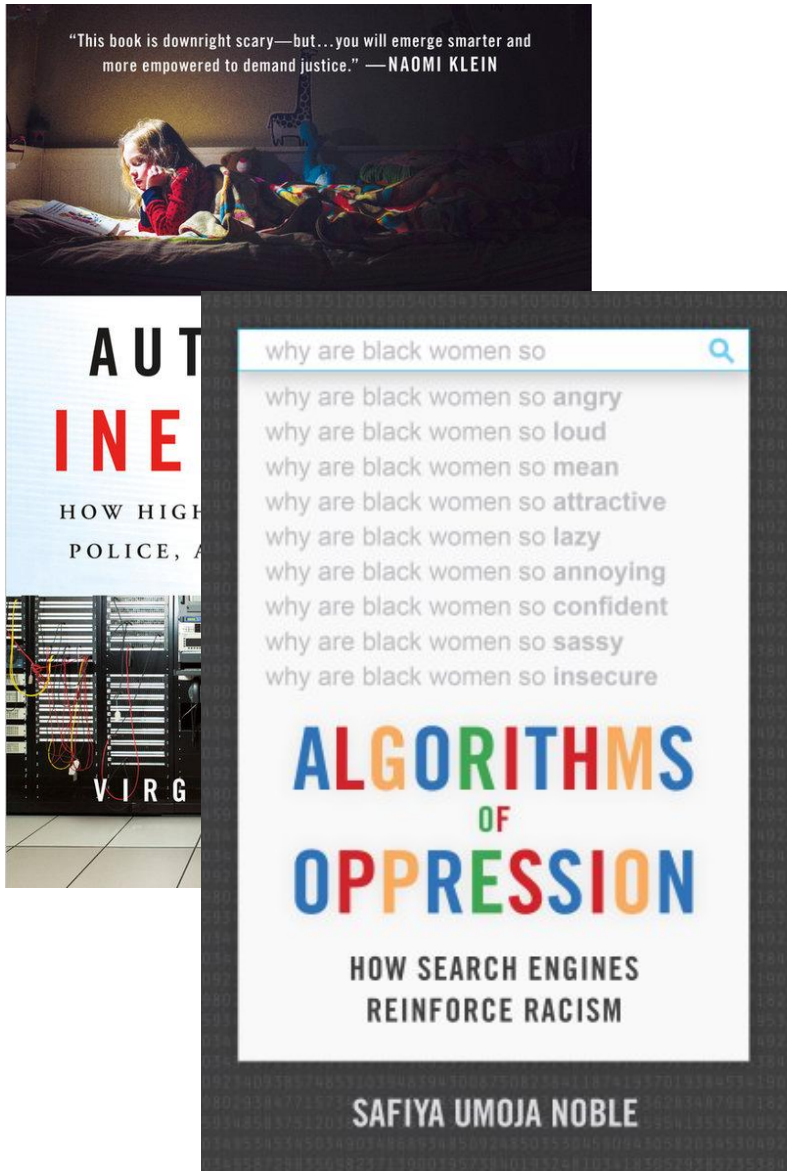
Low Risk

Bullying / Harassment:	**2**
Disrespectful Attitude:	**3**
Explicit Content:	**1**
Drug Abuse:	**1**

Report Summary

Initiate A New Scan

Bullying / Harassment:	Low Risk
Disrespectful Attitude:	Moderate Risk



After an audit of the algorithm, the resume screening company found that the algorithm found two factors to be most indicative of job performance: their name was Jared, and whether they played high school lacrosse. Girouard's client did not use the tool.

Algorithms sold to courts across the United States have been crunching those numbers since 2000. And they did so without much oversight or criticism, until *ProPublica* released an investigation showing the bias of one particular system against black defendants. The algorithm, called COMPAS, could single out those who would go on to reoffend with roughly the same accuracy for each race. But it guessed wrong about twice as often for black people. COMPAS mislabeled a person who *didn't* go on to reoffend as "high risk" almost twice as often for those individuals. And COMPAS also mistakenly assigned a higher number of "low risk" labels to white convicts who went on to commit more crimes. So the system essentially demonizes black offenders while simultaneously giving white criminals the benefit of the doubt.

Defend the Facts Support fearless journalism that makes a difference.

MACHINE BIAS

Facebook Lets Advertisers Exclude Users by Race

Facebook's system allows advertisers to exclude black, Hispanic, and other "ethnic affinities" from seeing ads.

by Julia Angwin and Terry Parris Jr., Oct. 28, 2016, 1 p.m. EDT

UNITED STATES OF AMERICA
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
OFFICE OF ADMINISTRATIVE LAW JUDGES

The Secretary, United States Department of Housing and Urban Development, on behalf of Complainant Assistant Secretary for Fair Housing and Equal Opportunity, Charging Party, v. Facebook, Inc., Respondent	HUD ALJ No. FHEO No. 01-18-0323-8

CHARGE OF DISCRIMINATION

I. JURISDICTION

On August 13, 2018, the Assistant Secretary for Fair Housing and Equal Opportunity ("Assistant Secretary") filed a timely complaint with the Department of Housing and Urban Development ("HUD" or the "Department") alleging that Respondent violated subsections 804(a), 804(b), 804(c) and 804(f) of the Fair Housing Act, 42 U.S.C. §§ 3601-19 ("Act"), by discriminating because of race, color, religion, sex, familial status, national origin and disability.

Marisa Robertson

AVOID BIAS

Make sure your sample is representative

Think about theory

Remember that no data, models, or algorithms are neutral

FIGHT THE ALGORITHMS

Very feebly, but still...

Incognito / private windows

adssettings.google.com

Accidental(?) evil

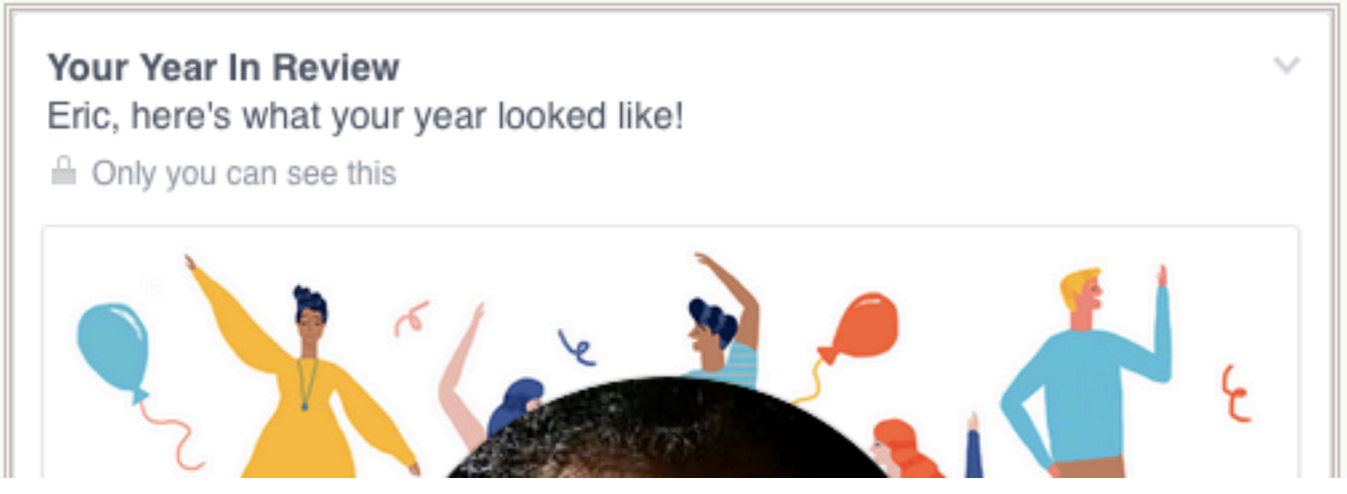
Inadvertent Algorithmic Cruelty

Published 4 years, 11 months ago

I didn't go looking for grief this afternoon, but it found me anyway, and I have designers and programmers to thank for it. In this case, the designers and programmers are somewhere at Facebook.

I know they're probably pretty proud of the work that went into the "Year in Review" app they designed and developed, and deservedly so—a lot of people have used it to share the highlights of their years. Knowing what kind of year I'd had, though, I avoided making one of my own. I kept seeing them pop up in my feed, created by others, almost all of them with the default caption, "It's been a great year! Thanks for being a part of it." Which was, by itself, jarring enough, the idea that any year I was part of could be described as great.

Still, they were easy enough to pass over, and I did. Until today, when I got this in my feed, exhorting me to create one of my own. "Eric, here's what your year looked like!"



TECHNOLOGY

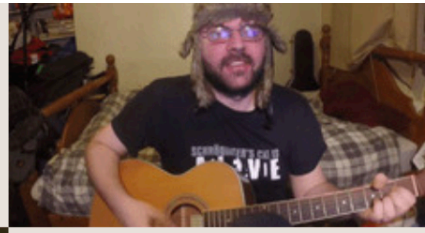
Feds Say Self-Driving Uber SUV Did Not Recognize Jaywalking Pedestrian In Fatal Crash

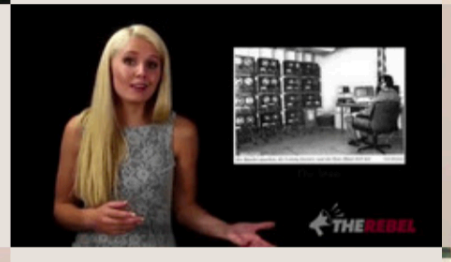
November 7, 2019 · 10:57 PM ET

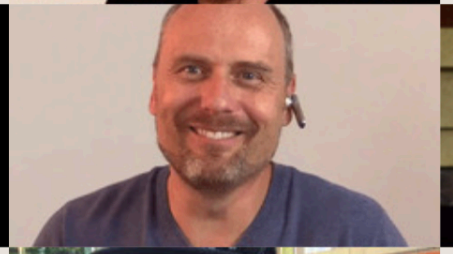
RICHARD GONZALES

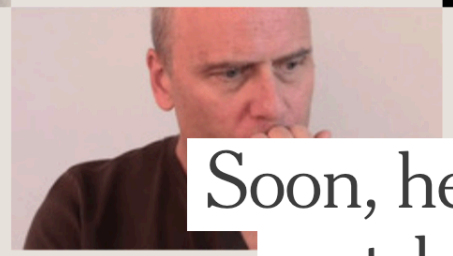
The New York Times

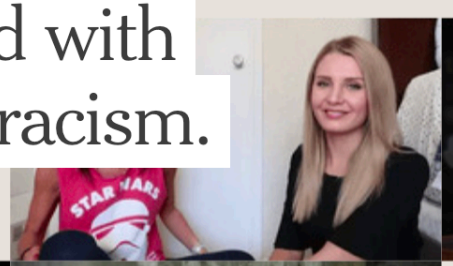
Older People Shared Fake News on Facebook More Than Others in 2016 Race, Study Says

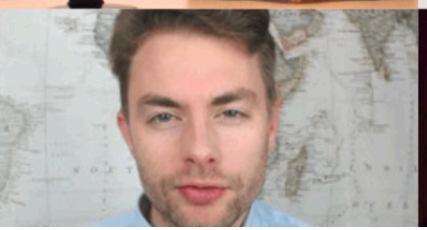








Soon, he was pulled into a far-right universe, watching thousands of videos filled with conspiracy theories, misogyny and racism.




https://www.youtube.com/watch?v=BSpAWkQLlgM

CBS News
@CBSNews

A geneticist at Harvard Medical School is working on a dating app that matches users based on their DNA. The goal: to eliminate all genetic diseases. @60Minutes reports, tonight cbsn.ws/2s5JWo8

ETHICS OF STORIES

Stories are how we translate core, essential content to different forms for specific audiences

POSSIBLE PITFALLS

Manipulation

Don’t make people do bad stuff

Misinterpretation

Temper expectations

Equity

Don’t dumb down

Amplify underrepresented voices

Manipulation

THIS AMERICAN LIFE
FROM WBEZ

555: The Incredible Rarity of Changing Your Mind

APR 24, 2015

It's rare for people to change what they believe, and if they do it, it's usually a long process. This week, stories of those very infrequent instances where people's opinions flip on fundamental things that they believe. Why does it happen in these particular and unusual circumstances? We explain. **NOTE: One of the authors of a study covered in this episode has asked that the study be retracted.**

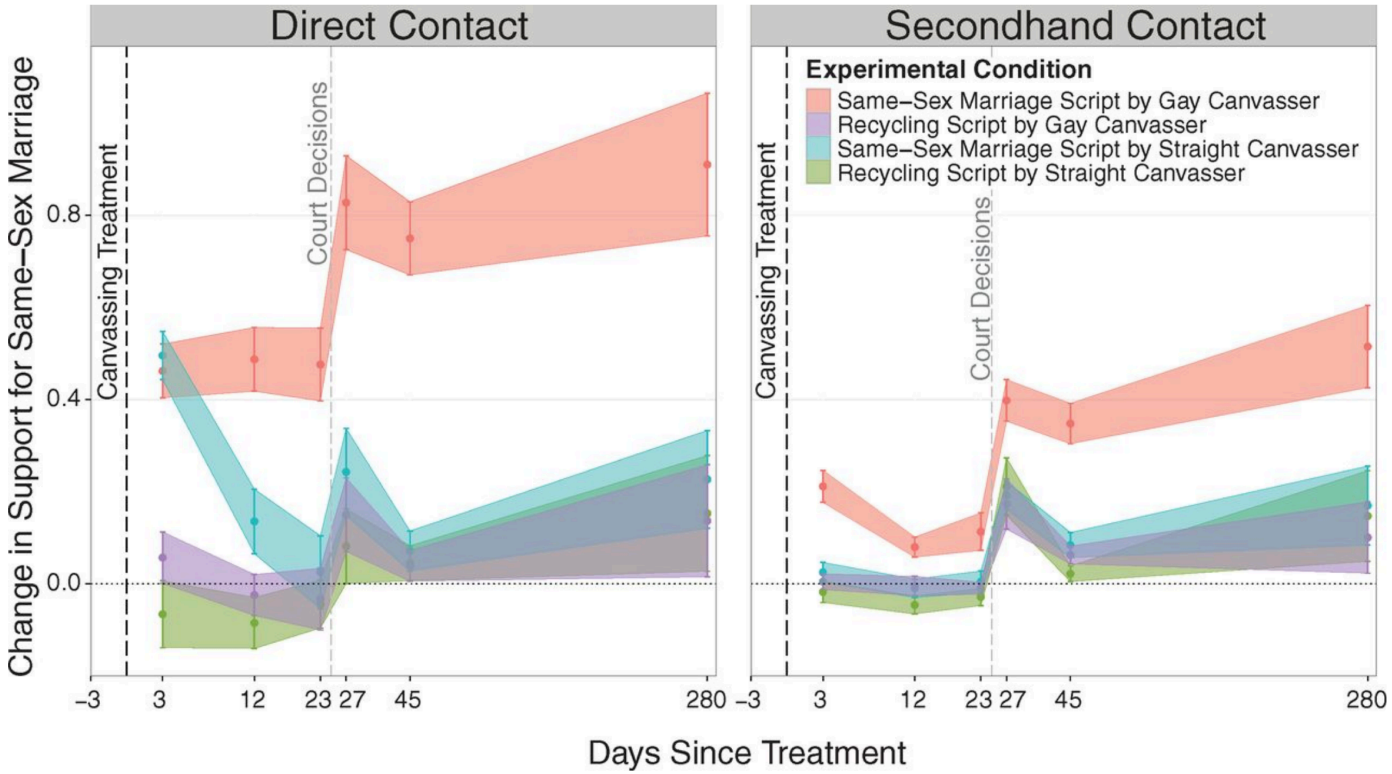
The iPad thing was LaCour's trademark. "He was sort of famous for taking his results from different studies he was working on, putting them on an iPad, and buttonholing people at the conferences and going over all of the research that he was doing, the different findings he had, and basically not letting the people go until they had an idea of what he was working on," says Tim Groeling, a communications professor at UCLA, who is listed as one of LaCour's references on his curriculum vitae. "It was infectious," continues Groeling. "Really cool stuff was on that iPad."

When contact changes minds: An experiment on transmission of support for gay equality

Michael J. LaCour[1], **Donald P. Green**[2]

+ See all authors and affiliations

Science 12 Dec 2014:
Vol. 346, Issue 6215, pp. 1366-1369
DOI: 10.1126/science.1256151



Irregularities in LaCour (2014)

David Broockman, Assistant Professor, Stanford GSB (as of July 1), dbroockman@stanford.edu
Joshua Kalla, Graduate Student, UC Berkeley, kalla@berkeley.edu
Peter Aronow, Assistant Professor, Yale University, peter.aronow@yale.edu

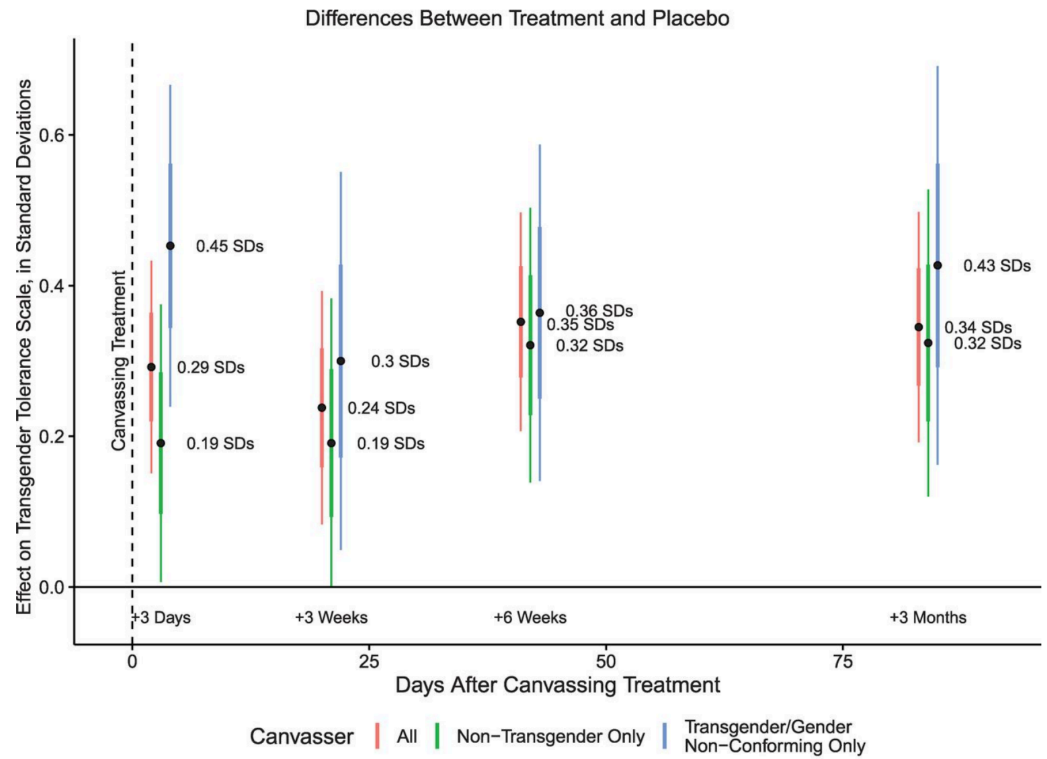
May 19, 2015

REPORT

Durably reducing transphobia: A field experiment on door-to-door canvassing

David Broockman[1,*], Joshua Kalla[2]
+ See all authors and affiliations

Science 08 Apr 2016:
Vol. 352, Issue 6282, pp. 220-224
DOI: 10.1126/science.aad9713

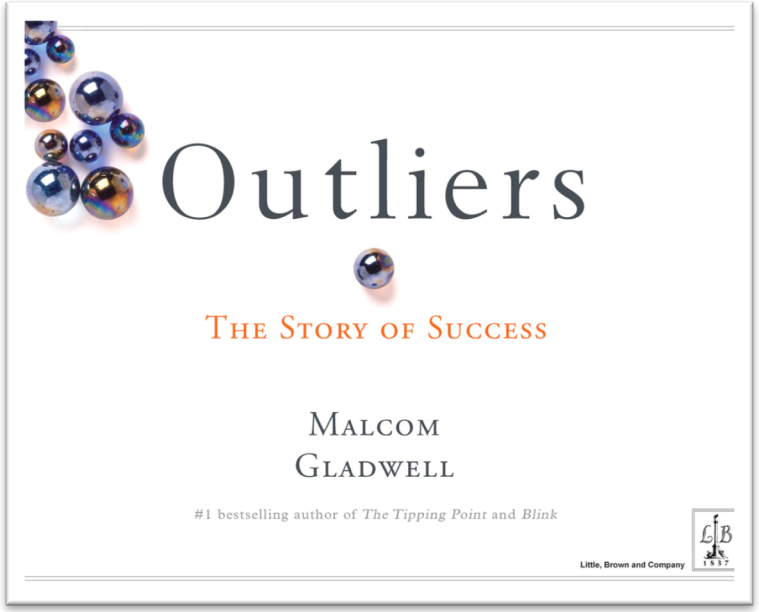


MANIPULATION

Don’t lie

**Emphasize the story,
but make full data available**

Misinterpretation



10,000 hours

"the magic number of greatness"

Psychological Review
1993, Vol. 100, No. 3, 363–406

Copyright 1993 by the American Psychological Association, Inc.
0033-295X/93/$3.00

The Role of Deliberate Practice in the Acquisition of Expert Performance

K. Anders Ericsson, Ralf Th. Krampe, and Clemens Tesch-Römer

The theoretical framework presented in this article explains expert performance as the end result of individuals' prolonged efforts to improve performance while negotiating motivational and external constraints. In most domains of expertise, individuals begin in their childhood a regimen of effortful activities (deliberate practice) designed to optimize improvement. Individual differences, even among elite performers, are closely related to assessed amounts of deliberate practice. Many characteristics once believed to reflect innate talent are actually the result of intense practice extended for a minimum of 10 years. Analysis of expert performance provides unique evidence on the potential and limits of extreme environmental adaptation and learning.

Training history, deliberate practise and elite sports performance: an analysis in response to Tucker and Collins review—what makes champions?

K Anders Ericsson

bodies of knowledge for a more complete understanding of the complex development of elite performance.[1] In their recent article, Tucker and Collins[2] criticised a popularised but simplistic view of our work circulated on the internet, which suggests that anyone who has accumulated sufficient number of hours of practise in a given domain will automatically become an expert and a champion. Unfortunately they incorrectly attributed this view to me and my colleagues and criticised our research on deliberate practise.

"[A] popularized but simplistic view of our work, which suggests that anyone who has accumulated sufficient number of hours of practice in a given domain will automatically become an expert and a champion."

10,000 is average

Quality matters

There are other factors

Deliberate Practice and Performance in Music, Games, Sports, Education, and Professions: A Meta-Analysis

Brooke N. Macnamara[1], David Z. Hambrick[2], and Frederick L. Oswald[3]

[1]Princeton University; [2]Michigan State University; and [3]Rice University

Abstract

More than 20 years ago, researchers proposed that individual differences in performance in such domains as music, sports, and games largely reflect individual differences in amount of *deliberate practice*, which was defined as engagement in structured activities created specifically to improve performance in a domain. This view is a frequent topic of popular-science writing—but is it supported by empirical evidence? To answer this question, we conducted a meta-analysis covering all major domains in which deliberate practice has been investigated. We found that deliberate practice explained 26% of the variance in performance for games, 21% for music, 18% for sports, 4% for education, and less than 1% for professions. We conclude that deliberate practice is important, but not as important as has been argued.

MISINTERPRETATION

Be narrative, but not too narrative

Temper expectations

Equity

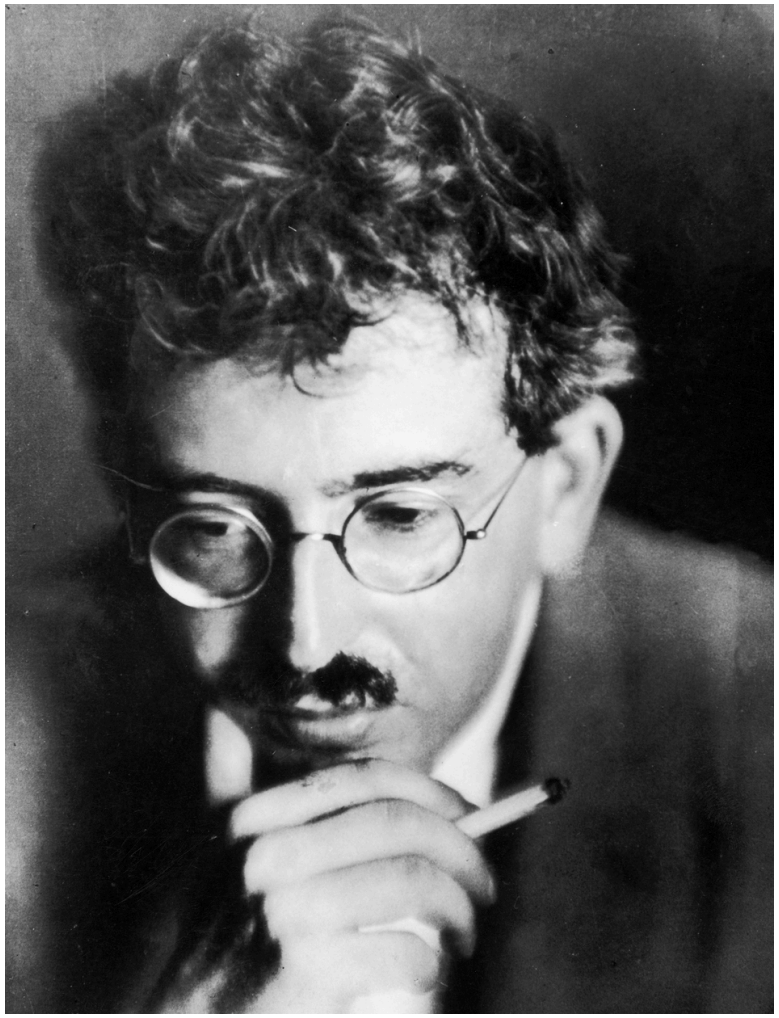
DUMBING DOWN VS. TRANSLATION

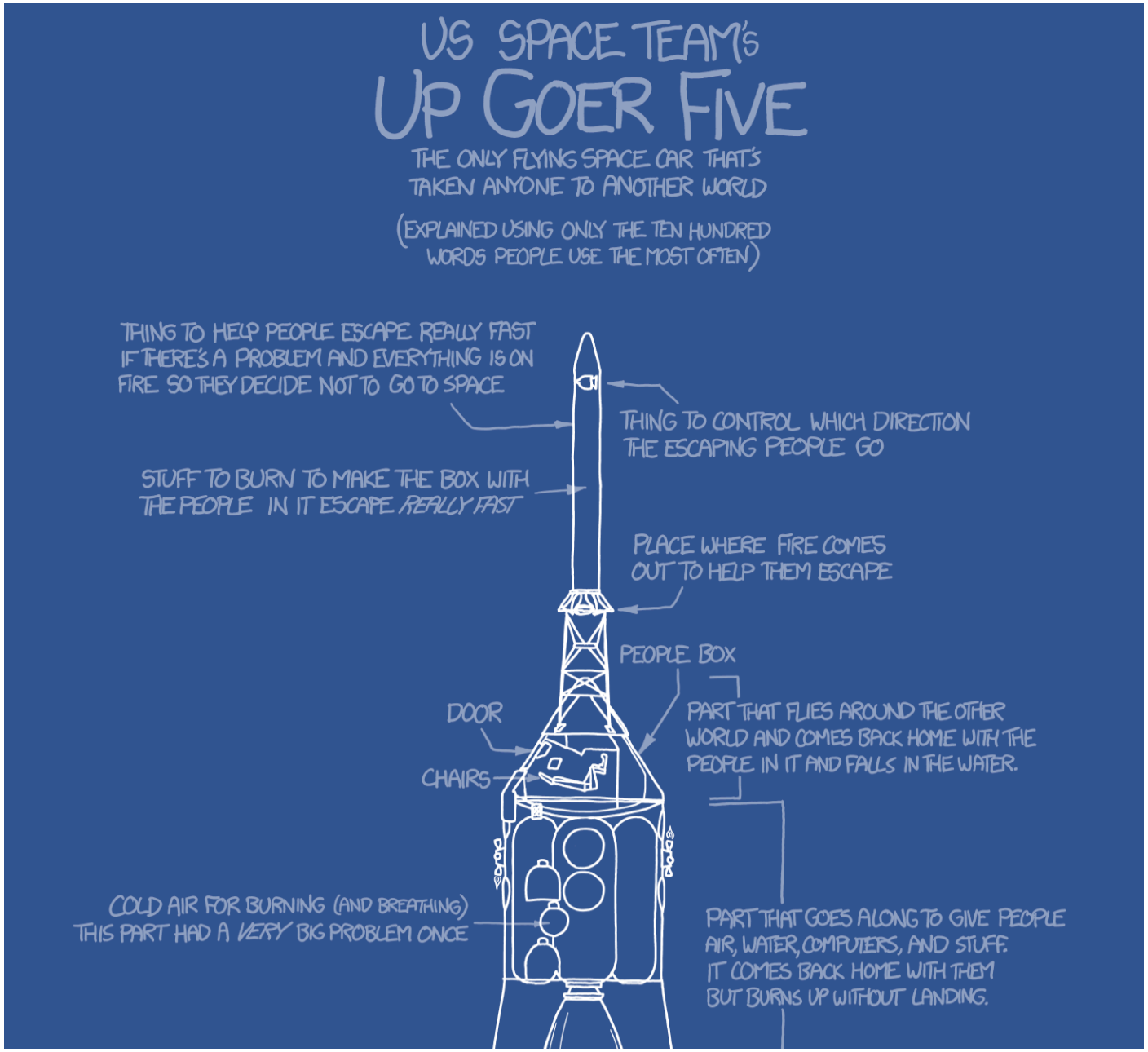
https://www.youtube.com/watch?v=opqla5Jiwuw

TRANSLATION

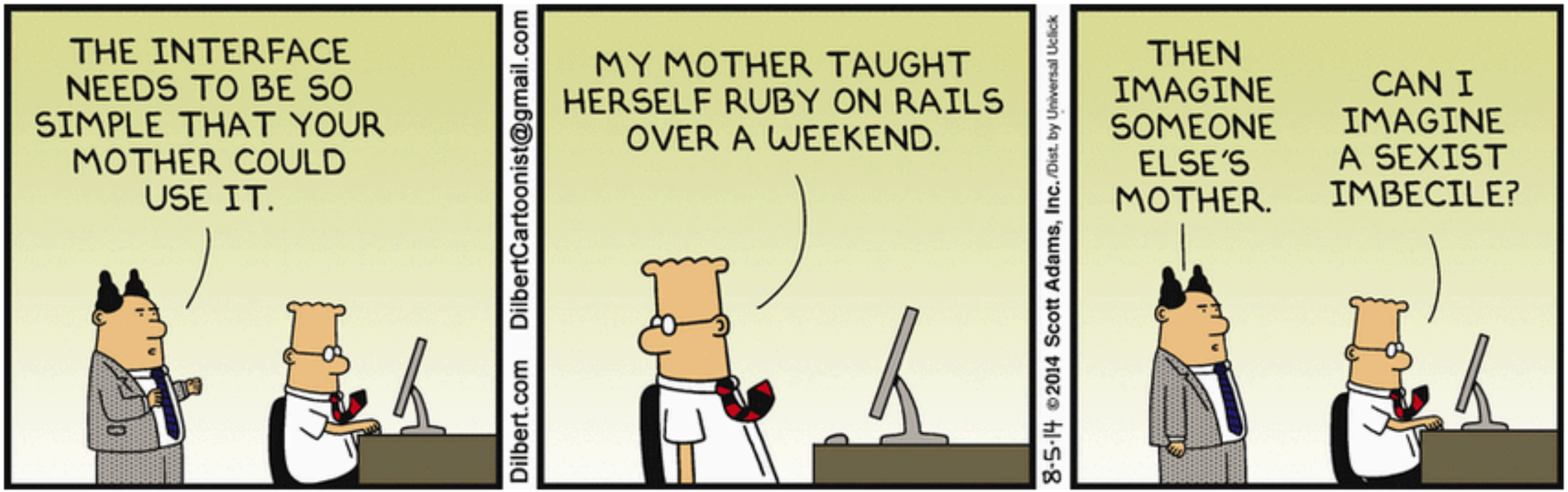
"...the task of the translator consists in finding that intended effect upon the language into which he is translating which produces in it the echo of the original"

Walter Benjamin, *The Task of the Translator*





http://splasho.com/upgoer5/


THE INTERFACE NEEDS TO BE SO SIMPLE THAT YOUR MOTHER COULD USE IT.
Dilbert.com DilbertCartoonist@gmail.com
MY MOTHER TAUGHT HERSELF RUBY ON RAILS OVER A WEEKEND.
8-5-14 ©2014 Scott Adams, Inc./Dist. by Universal Uclick
THEN IMAGINE SOMEONE ELSE'S MOTHER.
CAN I IMAGINE A SEXIST IMBECILE?

Casey Johnston @caseyjohnston · 4h
So many “solutions” to the lack of women in tech don’t get at the actual problems arstechnica.com/business/2014/…
8
16
View summary
Tomas Sancio @tsancio · 2h
@caseyjohnston read the full article. There's a chicken and egg problem w/ female tech role models. Men want to be the next Jobs/Gates/etc.
View conversation
Casey Johnston @caseyjohnston · 45m
@tsancio I wrote the article
3
52
View conversation

Quantitative evaluation of gender bias in astronomical publications from citation counts

Neven Caplar, Sandro Tacchella & Simon Birrer

Nature Astronomy **1**, Article number: 0141
(2017)
doi:10.1038/s41550-017-0141

The Gender Citation Gap in International Relations

Daniel Maliniak, Ryan Powers and Barbara F. Walter

International Organization / *FirstView* Article / August 2013, pp 1 - 34
DOI: 10.1017/S0020818313000209, Published online: 28 August 2013

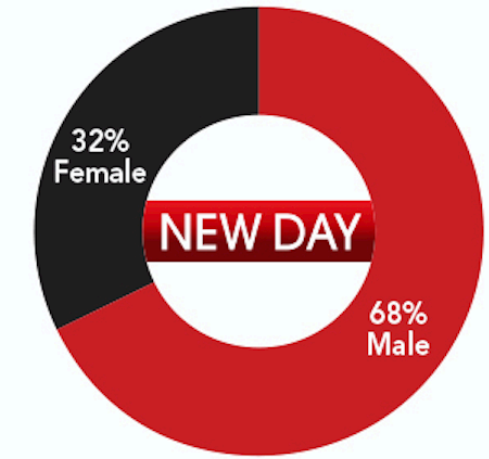
OPEN ACCESS PEER-REVIEWE

RESEARCH ARTICLE

On the Compliance of Women Engineers with a Gendered Scientific System

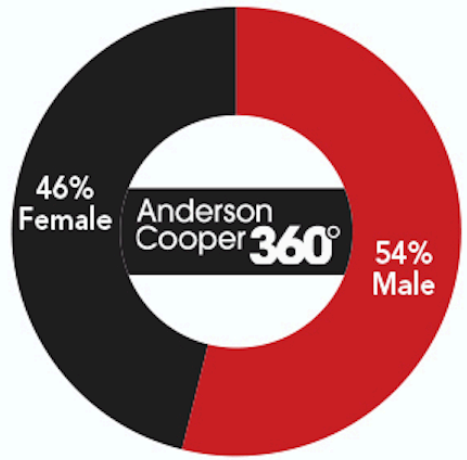
Gita Ghiasi, Vincent Larivière, Cassidy R. Sugimoto

Published: December 30, 2015 • https://doi.org/10.1371/journal.pone.0145931



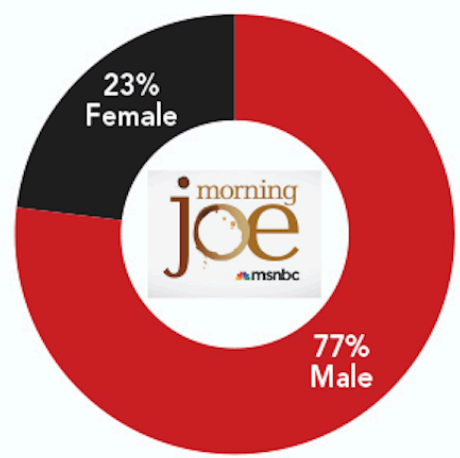
Male analysts (2486) Female analysts (1151)

CNN



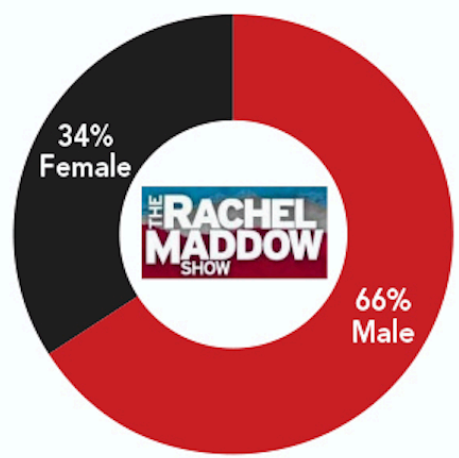
Male analysts (1216) Female analysts (1022)

CNN



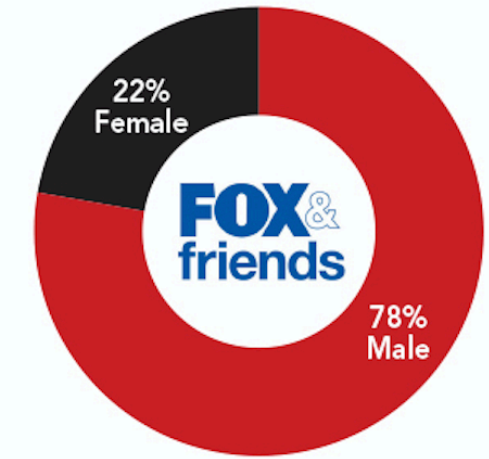
Male analysts (4121) Female analysts (1255)

msnbc



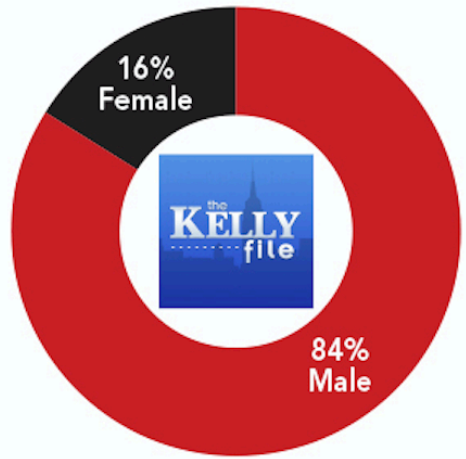
Male analysts (151) Female analysts (79)

msnbc



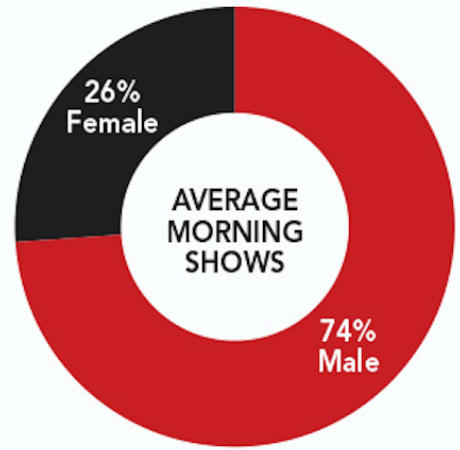
Male analysts (1313) Female analysts (373)

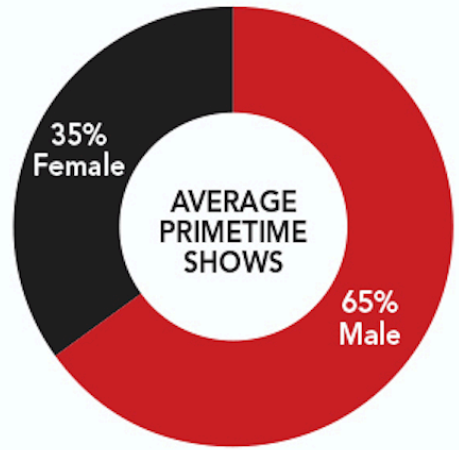
FOX



Male analysts (1019) Female analysts (201)

FOX





Women Also Know Stuff

LGBT Scholar Network

@LGBTscholars Follows you

POCAlsoKnowStuff

@POCalsoknow

People of color also know stuff! (inspired by @womenalsoknow)

Academic Women in PA

@AWPARocks

A network of women who are (or seeking to be) faculty in public administration seeking to address gender issues in the field.

Gender Balance Assessment Tool (GBAT)

Women are cited less often than men, and are also underrepresented in syllabi. Yet even well-meaning scholars may find that they have difficulty assessing how gender-balanced their bibliographies and syllabi really are. Counting is tedious and prone to human error, and scholars may not know the gender identities of all t
help with that, by automating the process of evalua
name and then providing an estimate of what perc
women.

Your assigned readings are approximately

47.43

percent woman-authored.

Race breakdown (probabilistic)

6.48% Asian, 14.39% Black, 2.74% Hispanic,

2.68% Other, 73.71% White

https://jlsumner.shinyapps.io/syllabustool/

EQUITY

Don’t dumb down your findings

You are a translator

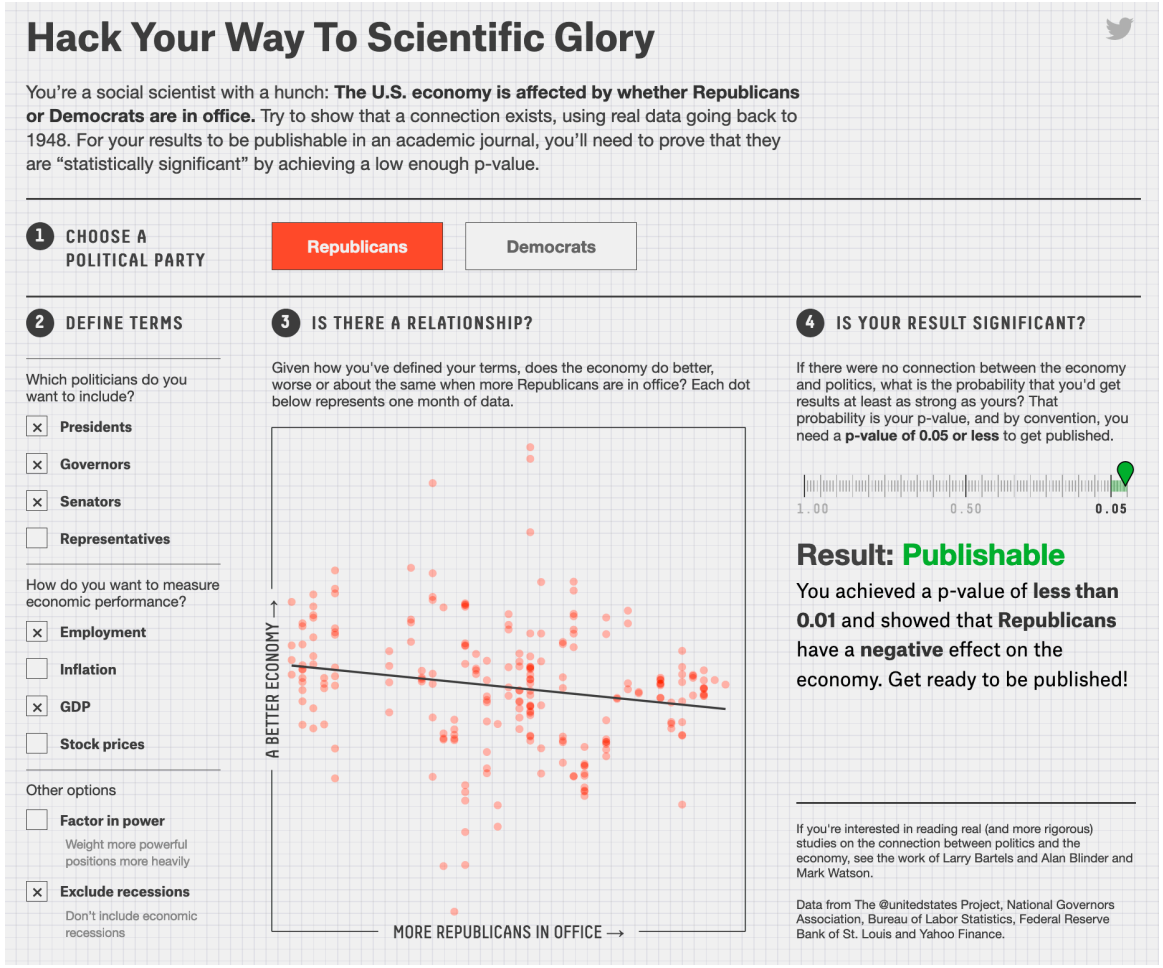
Treat audience with respect

Amplify underrepresented voices

REPRODUCIBILITY & OPEN SCIENCE

Openness

P-HACKING



https://53eig.ht/HackingScience

PREREGISTRATION

Why Donors Donate: Disentangling Organizational and Structural Heuristics for International Philanthropy

Overview
Files
Wiki
Components 0
Links 0
Analytics
Comments 0

Study Information

Title

Provide the working title of your study. It may be the same title that you submit for publication of your final manuscript, but it is not a requirement.

Why Donors Donate: Disentangling Organizational and Structural Heuristics for International Philanthropy

Authors

Andrew Heiss, Suparna Chaudhry, Marc Dotson

Description

Please give a brief description of your study, including some background, the purpose of the study, or broad research questions. (optional)

In the wake of the global crackdown on civil society, international nongovernmental organizations (INGOs) have faced worsening constraints on their ability operate and raise funds. Official aid flows

Contributors
Andrew Heiss, Suparna Chaudhry, and Marc Dotson

Registration type
OSF Preregistration

Date registered
May 13, 2019

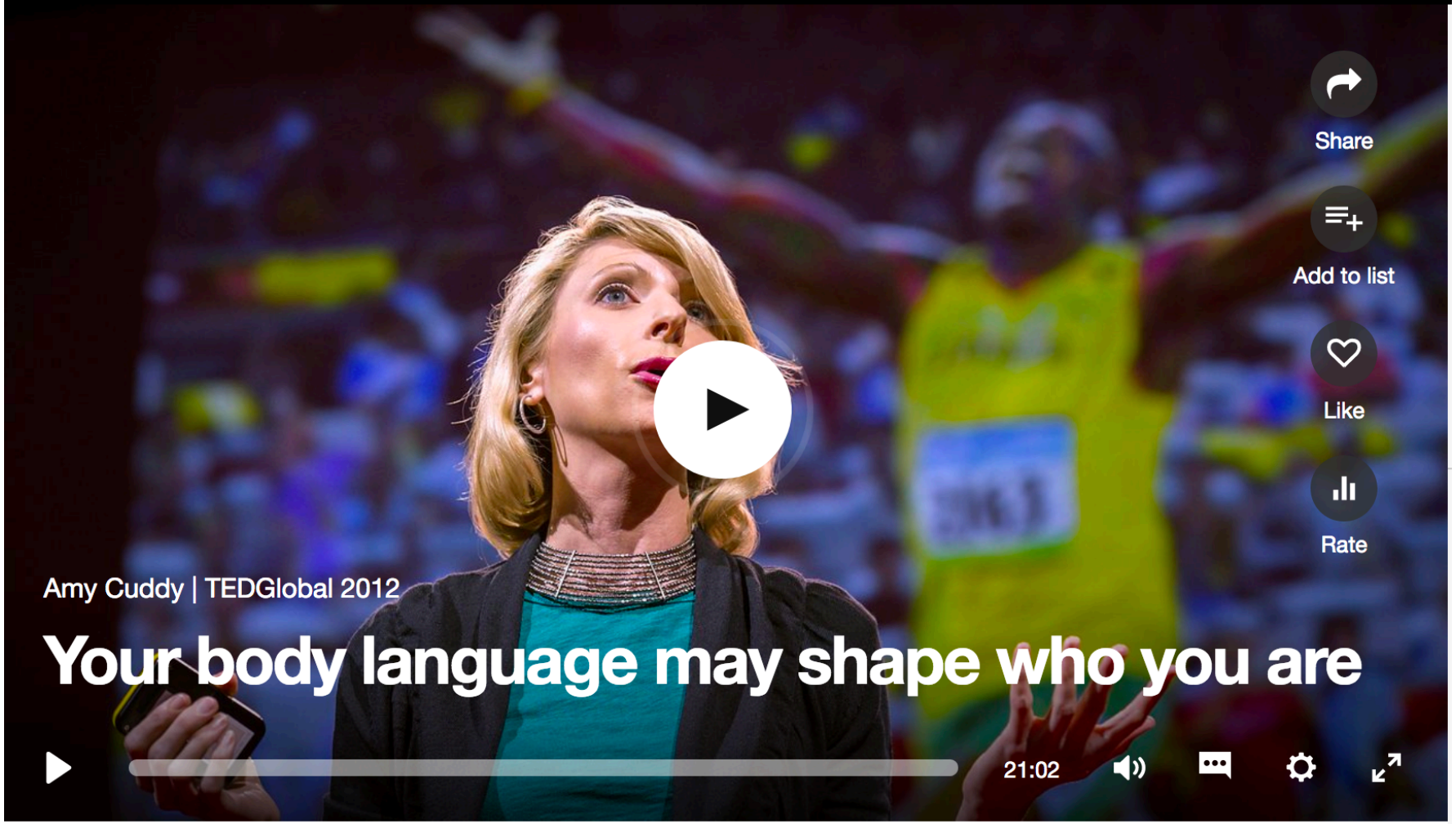
Date created
May 13, 2019

Registered from
osf.io/r59xz

Category
Project

Citation
osf.io/hsbyd

Reproducibility



Details
About the talk

Transcript
51 languages

Comments (2367)
Join the conversation

Body language affects how others see us, but it may also change how we see ourselves. Social psychologist Amy Cuddy argues that "power posing" — standing in a posture of confidence, even when we don't feel confident — can boost feelings of

49,718,157
views

POWER POSING

Increases individual perception of power

Increases testosterone and decreases cortisol

She made a guess at a population parameter and published it

This is the process of science!

RUH ROH

'Power poses' don't work, eleven new studies suggest

Date: September 11, 2017

Source: Michigan State University

Summary: The claim that holding a 'power pose' can improve your life becar
eral years ago, fueling the second most-watched TED talk ever bu
about the science behind the assertion. Now comes the most def
date suggesting that power poses do not improve your life.

Share:

RELATED TOPICS FULL STORY

HEALTH • SCIENCE

'Power Poses' Don't Actually Work. Try These Confidence-Boosting Strategies Instead

TECH & SCIENCE

‘POWER POSES’ DON’T REALLY MAKE YOU MORE POWERFUL, NINE MORE STUDIES CONFIRM

BY **MEGHAN BARTELS** ON 9/13/17 AT 12:25 PM

FEATURE

When the Revolution Came for Amy Cuddy

As a young social psychologist, she played by the rules and won big: an influential study, a viral TED talk, a prestigious job at Harvard. Then, suddenly, the rules changed.

BUT WAIT

70,286 views | Apr 3, 2018, 03:52pm

Power Posing Is Back: Amy Cuddy Successfully Refutes Criticism

EMOTION, METHODS, REPLICATIONS *March 28, 2018*

54-study analysis says power posing does affect people's emotions and is worth researching further

Increases individual perception of power

Increases testosterone and decreases cortisol

Reproducibility in public

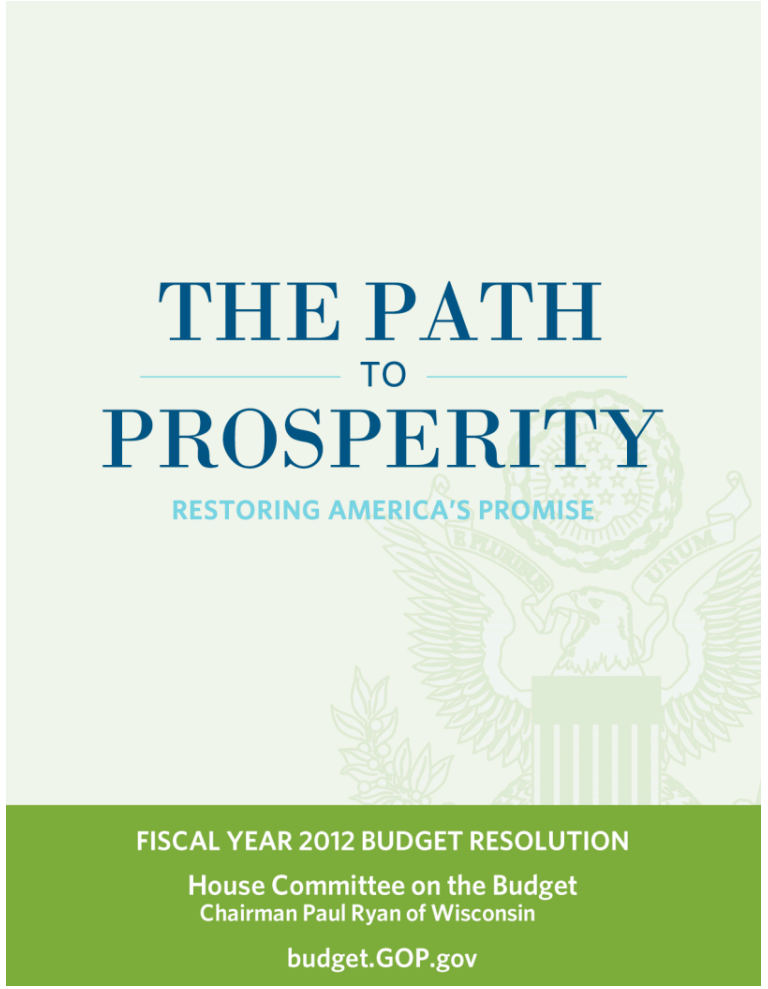
AUSTERITY AND EXCEL

Growth in a Time of Debt
Carmen M. Reinhart and Kenneth S. Rogoff
NBER Working Paper No. 15639
January 2010, Revised January 2010
JEL No. E2,E3,E6,F3,F4,N10

ABSTRACT

We study economic growth and inflation at different levels of government and external debt. Our analysis is based on new data on forty-four countries spanning about two hundred years. The dataset incorporates over 3,700 annual observations covering a wide range of political systems, institutions, exchange rate arrangements, and historic circumstances. Our main findings are: First, the relationship between government debt and real GDP growth is weak for debt/GDP ratios below a threshold of 90 percent of GDP. Above 90 percent, median growth rates fall by one percent, and average growth falls considerably more. We find that the threshold for public debt is similar in advanced and emerging economies. Second, emerging markets face lower thresholds for external debt (public and private)—which is usually denominated in a foreign currency. When external debt reaches 60 percent of GDP, annual growth declines by about two percent; for higher levels, growth rates are roughly cut in half. Third, there is no apparent contemporaneous link between inflation and public debt levels for the advanced countries as a group (some countries, such as the United States, have experienced higher inflation when debt/GDP is high). The story is entirely different for emerging markets, where inflation rises sharply as debt increases.

Debt:GDP = 90%+ → −0.1% growth



AUSTERITY AND EXCEL

Finally, Ms. Reinhart and Mr. Rogoff allowed researchers at the University of Massachusetts to look at their original spreadsheet — and the mystery of the irreproducible results was solved. First, they omitted some data; second, they used unusual and highly questionable statistical procedures; and finally, yes, they made an Excel coding error. Correct these oddities and errors, and you get what other researchers have found: some correlation between high debt and slow growth, with no indication of which is causing which, but no sign at all of that 90 percent "threshold."

AUSTERITY AND EXCEL

Table 1. Real GDP Growth as the Level of Government Debt Varies:
Selected Advanced Economies, 1790-2009
(annual percent change)

Country	Period	Central (Federal) government debt/ GDP			
		Below 30 percent	30 to 60 percent	60 to 90 percent	90 percent and above
Australia	1902-2009	3.1	4.1	2.3	4.6
Austria	1880-2009	4.3	3.0	2.3	n.a.
Belgium	1835-2009	3.0	2.6	2.1	3.3
Canada	1925-2009	2.0	4.5	3.0	2.2
Denmark	1880-2009	3.1	1.7	2.4	n.a.
Finland	1913-2009	3.2	3.0	4.3	1.9
France	1880-2009	4.9	2.7	2.8	2.3
Germany	1880-2009	3.6	0.9	n.a.	n.a.
Greece	1884-2009	4.0	***0.3***	***4.8***	2.5
Ireland	1949-2009	4.4	4.5	4.0	2.4
New Zealand	1932-2009	2.5	2.9	3.9	3.6
Norway	1880-2009	2.9	4.4	n.a.	n.a.
Portugal	1851-2009	4.8	2.5	1.4	n.a.
Spain	1850-2009	***1.6***	3.3	***1.3***	2.2
Sweden	1880-2009	2.9	2.9	2.7	n.a.
United Kingdom	1830-2009	2.5	2.2	2.1	1.8
United States	1790-2009	4.0	3.4	3.3	***-1.8***
Average		**3.7**	**3.0**	**3.4**	**1.7**
Median		**3.9**	**3.1**	**2.8**	**1.9**
Number of observations = **2,317**		866	654	445	352

Debt:GDP = 90%+ → 2.2% growth

GENES AND EXCEL

Septin 2

Membrane-Associated Ring Finger (C3HC4) 1

2310009E13

Actual value	What Excel turns it into
SEPT2	2-Sep
MARCH1	1-Mar
2310009E13	2.31E+19

20% of genetics papers between 2005–2015

GENERAL GUIDELINES

Don’t touch the raw data

If you do, explain what you did!

Use self-documenting code

R Markdown!

Ensure code is reproducible

R Markdown!

Use open formats

Use .csv, not .xlsx

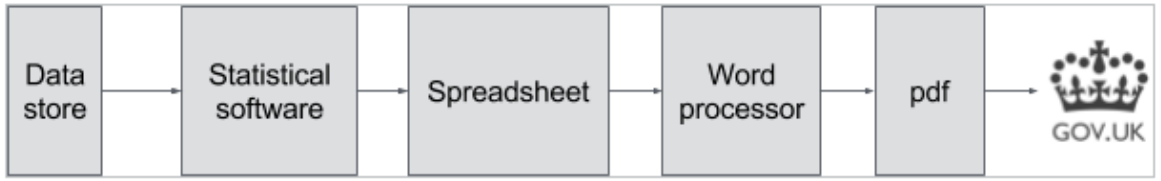
R MARKDOWN IN REAL LIFE

3.1.2 Data Visualization

We use ggplot2 as our main package to create ad-hoc exploratory graphics as well as polished-looking customized visualizations. When combined with tools to clean and transform data, ggplot2 allows analysts to quickly translate insights into high quality, compelling visualizations. In addition to the static graphics of `ggplot2`, we often make interactive visualizations or dashboards using R packages such as `plotly` (Sievert et al. 2017), `leaflet` (Cheng et al. 2017), `dygraphs` (Vanderkam et al. 2017), `DiagrammeR` (Sveidqvist et al. 2017), and `shiny` (Chang et al. 2017).

3.1.3 Reproducible Research

At Airbnb, all R analyses are documented in `rmarkdown`, where code and visualizations are combined within a single written report. Posts are carefully reviewed by experts in the content area and techniques used, both in terms of methodologies and code style, before publishing and sharing with the business partners. The peer review process is



CURIOSITY

Foundations

Data science ⇄ Graphic design

↓

Visualizing

Amounts Proportions Uncertainty

Relationships Comparisons

Time Space Text

↓

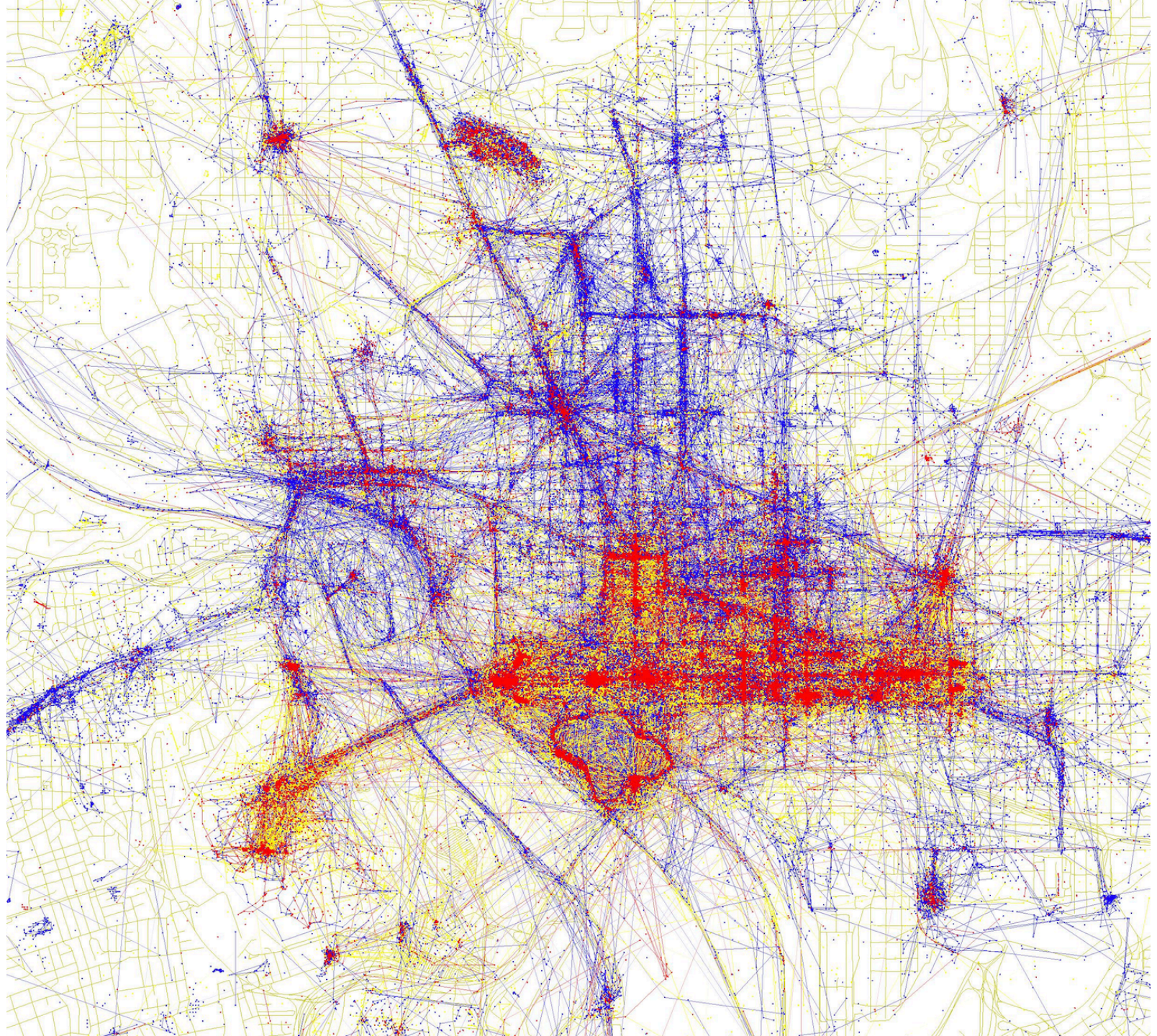
Communication

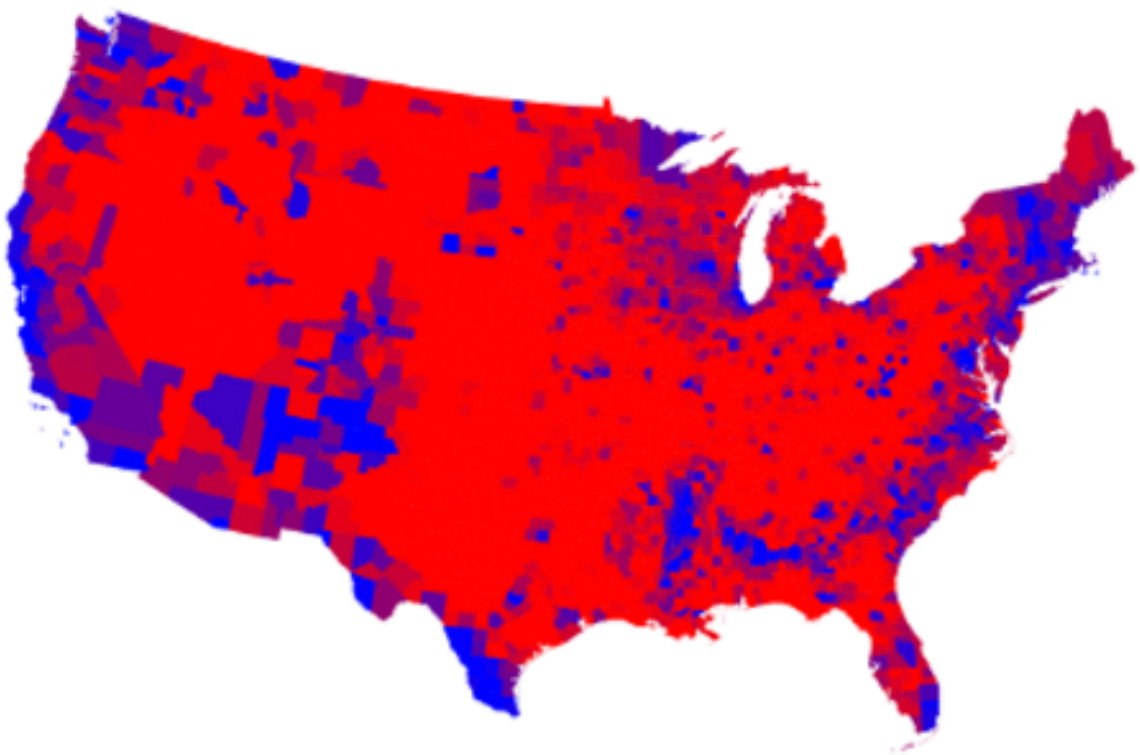
DATA VISUALIZATION

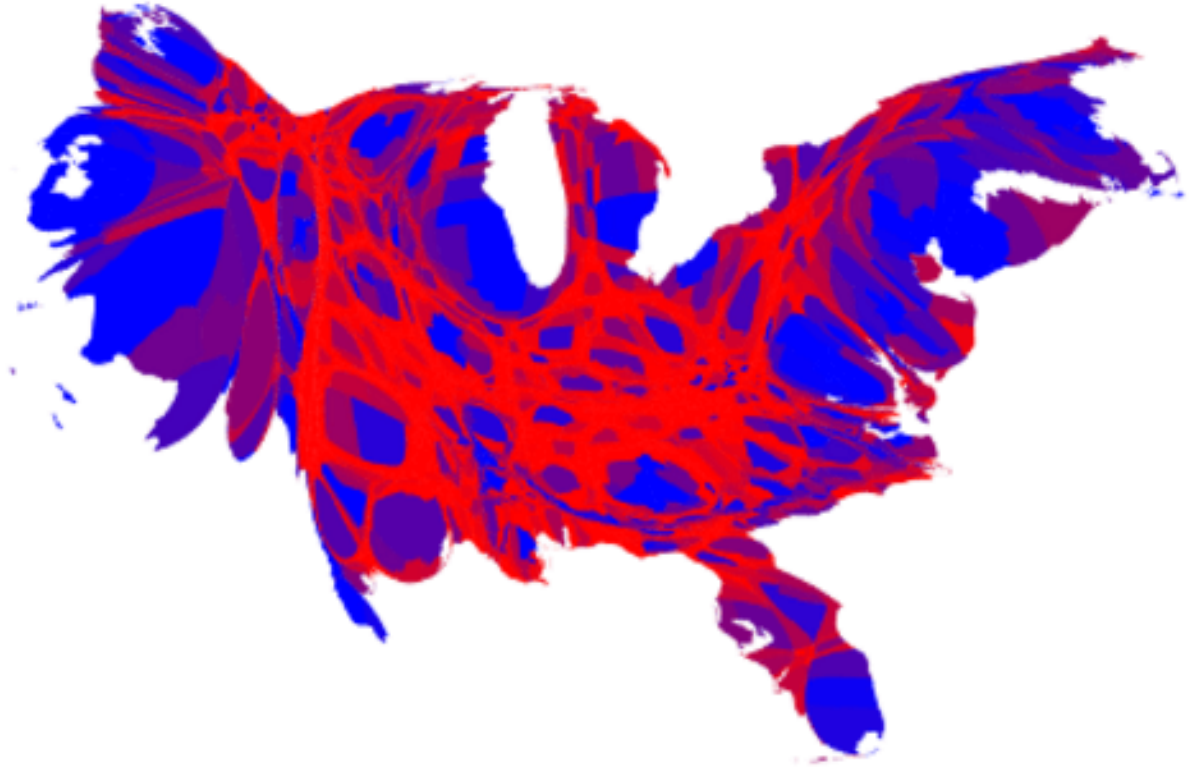
Interactivity

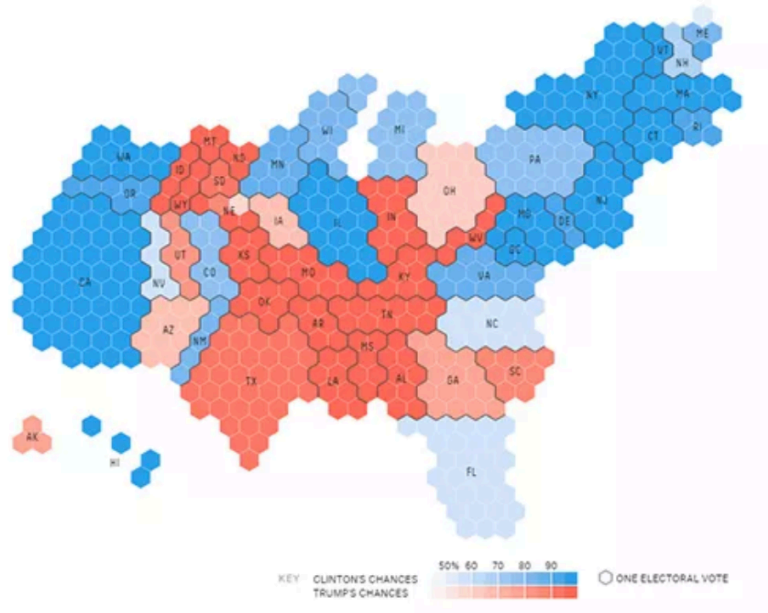
Dashboards

Sharing R Markdown





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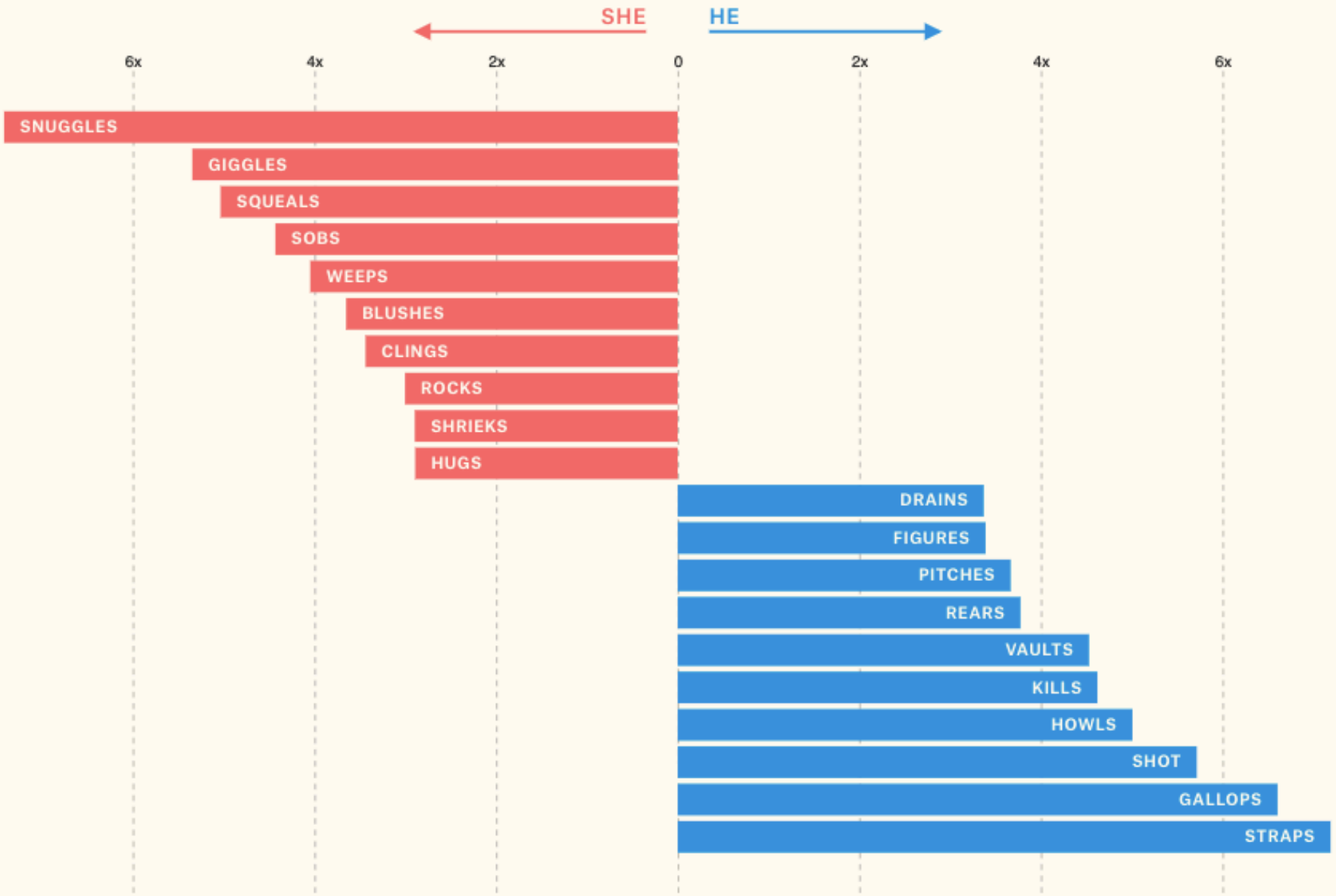
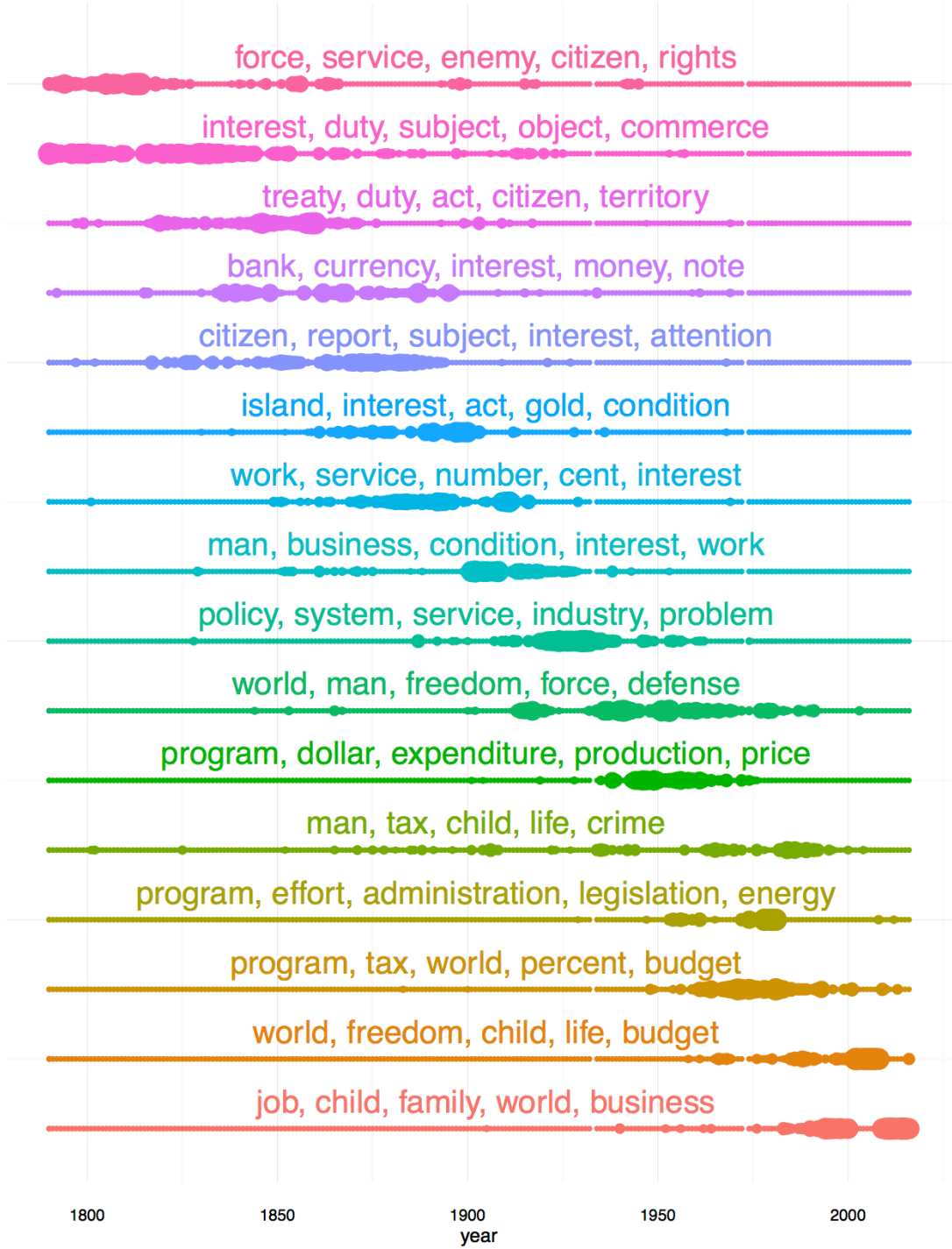
AZ
NM
MS
SC
TX
LA
AL
GA
AK
HI
FL
KEY
CLINTON'S CHANCES
TRUMP'S CHANCES
50% 60 70 80 90
ONE ELECTORAL VOTE

The most used words for women vs. men

Likelihood that certain words appear after “she” vs. “he” in screen direction.




force, service, enemy, citizen, rights
interest, duty, subject, object, commerce
treaty, duty, act, citizen, territory
bank, currency, interest, money, note
citizen, report, subject, interest, attention
island, interest, act, gold, condition
work, service, number, cent, interest
man, business, condition, interest, work
policy, system, service, industry, problem
world, man, freedom, force, defense
program, dollar, expenditure, production, price
man, tax, child, life, crime
program, effort, administration, legislation, energy
program, tax, world, percent, budget
world, freedom, child, life, budget
job, child, family, world, business
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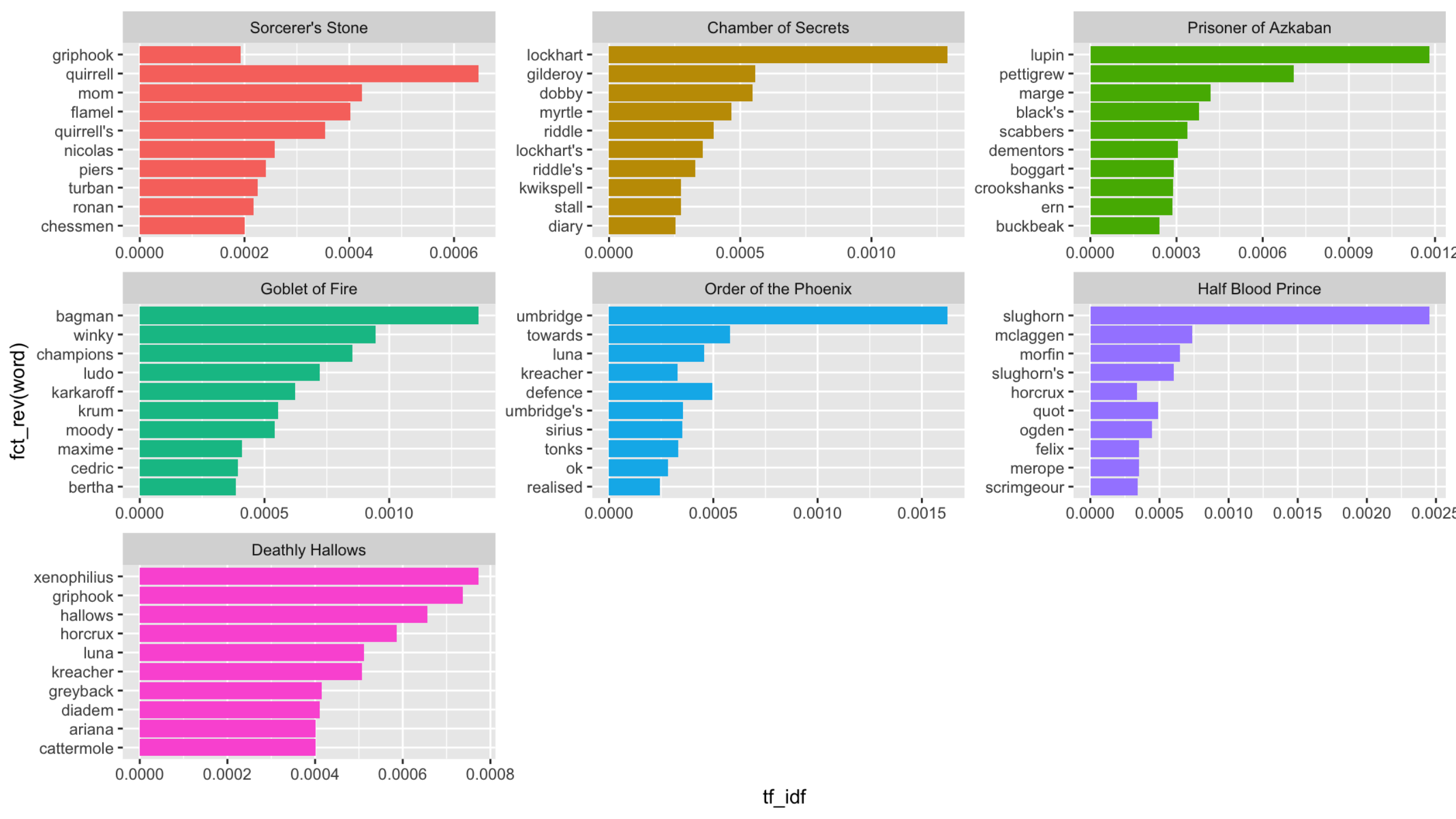
1850
1900
1950
2000
year


Sorcerer's Stone
griphook
quirrell
mom
flamel
quirrell's
nicolas
piers
turban
ronan
chessmen
0.0000
0.0002
0.0004
0.0006
Chamber of Secrets
lockhart
gilderoy
dobby
myrtle
riddle
lockhart's
riddle's
kwikspell
stall
diary
0.0000
0.0005
0.0010
Prisoner of Azkaban
lupin
pettigrew
marge
black's
scabbers
dementors
boggart
crookshanks
ern
buckbeak
0.0000
0.0003
0.0006
0.0009
0.0012
Goblet of Fire
bagman
winky
champions
ludo
karkaroff
krum
moody
maxime
cedric
bertha
0.0000
0.0005
0.0010
Order of the Phoenix
umbridge
towards
luna
kreacher
defence
umbridge's
sirius
tonks
ok
realised
0.0000
0.0005
0.0010
0.0015
Half Blood Prince
slughorn
mclaggen
morfin
slughorn's
horcrux
quot
ogden
felix
merope
scrimgeour
0.0000
0.0005
0.0010
0.0015
0.0020
0.0025
Deathly Hallows
xenophilius
griphook
hallows
horcrux
luna
kreacher
greyback
diadem
ariana
cattermole
0.0000
0.0002
0.0004
0.0006
0.0008
fct_rev(word)
tf_idf

How do I keep learning R?

What class should I take next?

What book should I read next?

You don’t learn R

You learn how to do things in R

Katie Mack

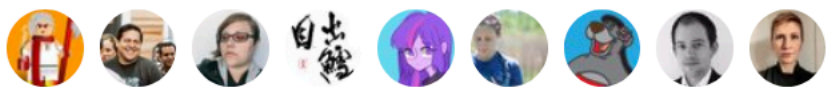
@AstroKatie

Following

A surprisingly large part of having expertise in a topic is not so much knowing everything about it but learning the language and sources well enough to be extremely efficient in google searches.

9:34 AM - 8 Dec 2018

3,607 Retweets **14,911** Likes



195 3.6K 15K

EMBRACE CURIOSITY

Find excuses to use R

(This is why I subjected you to the code-through assignment)

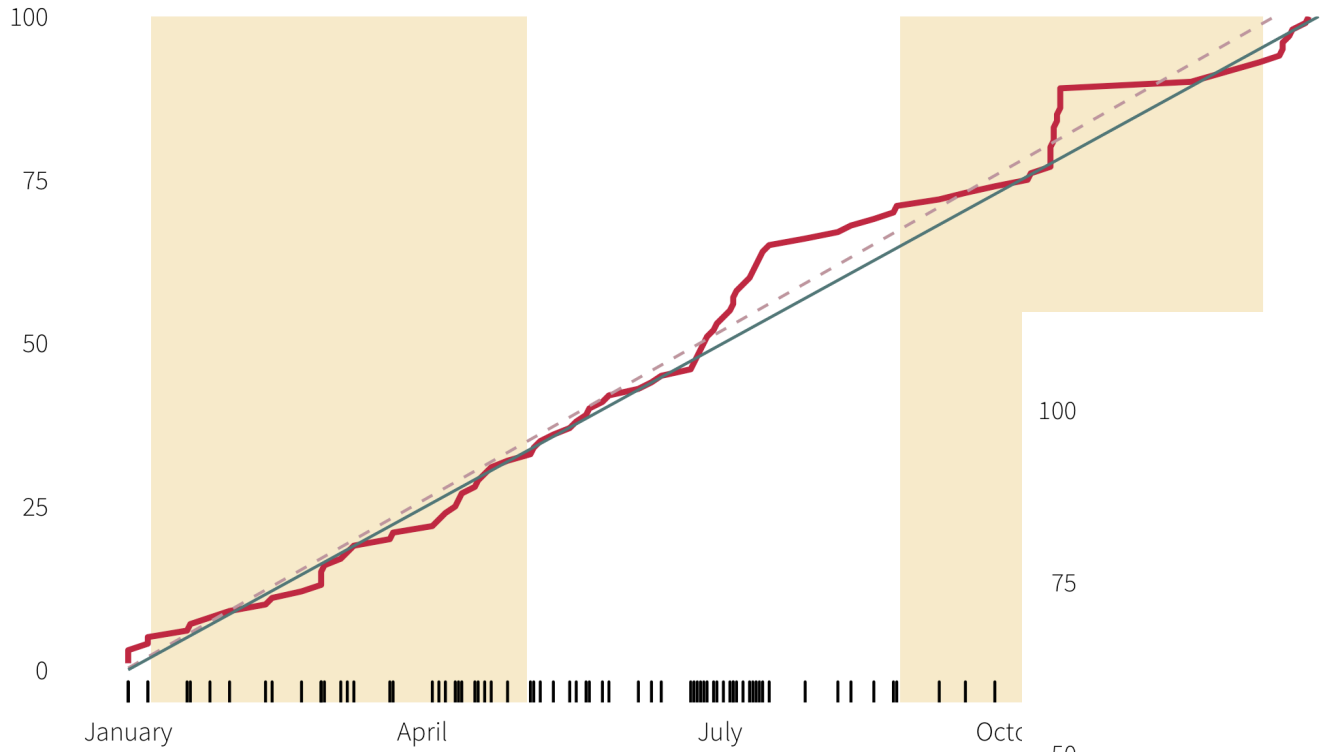
Dumb dinky projects

Data play time

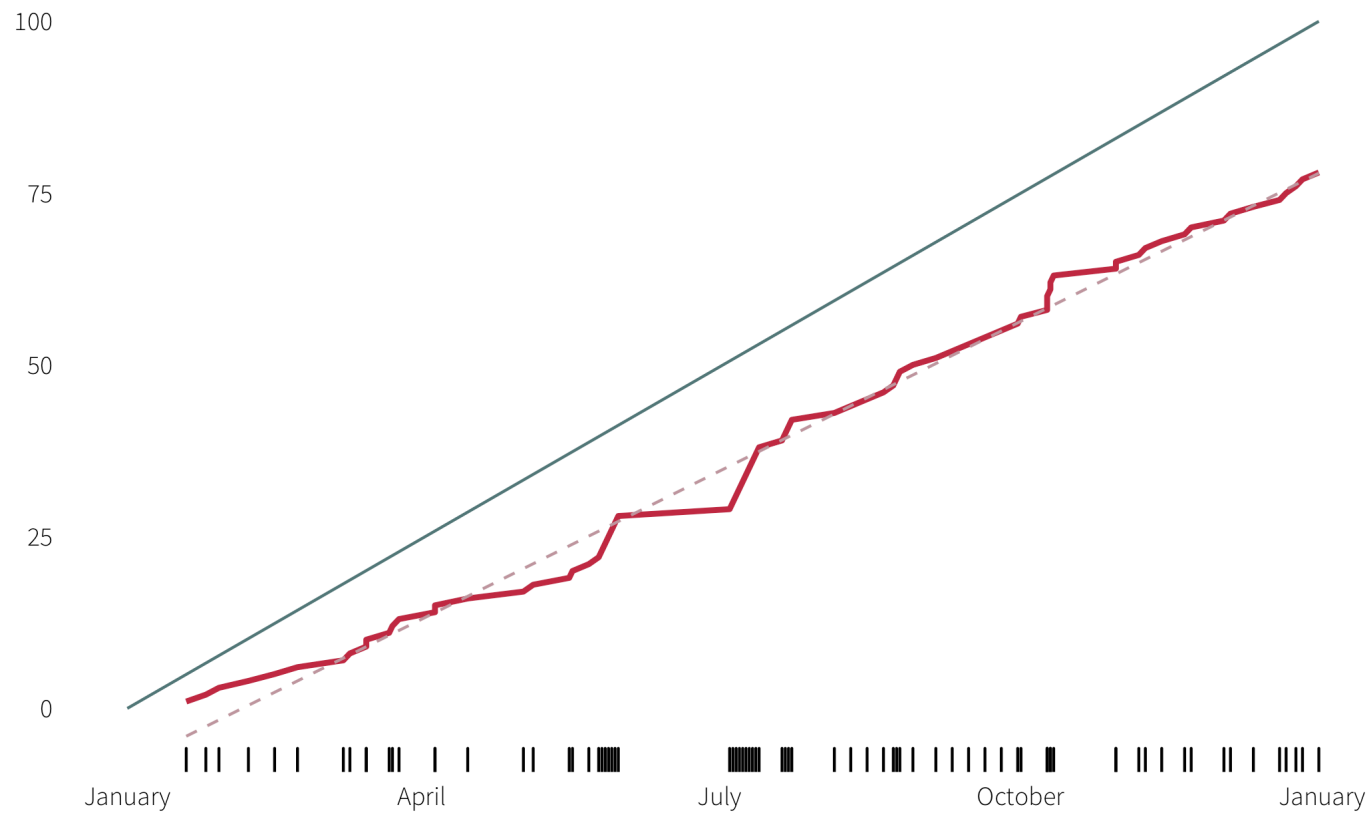
Actual projects

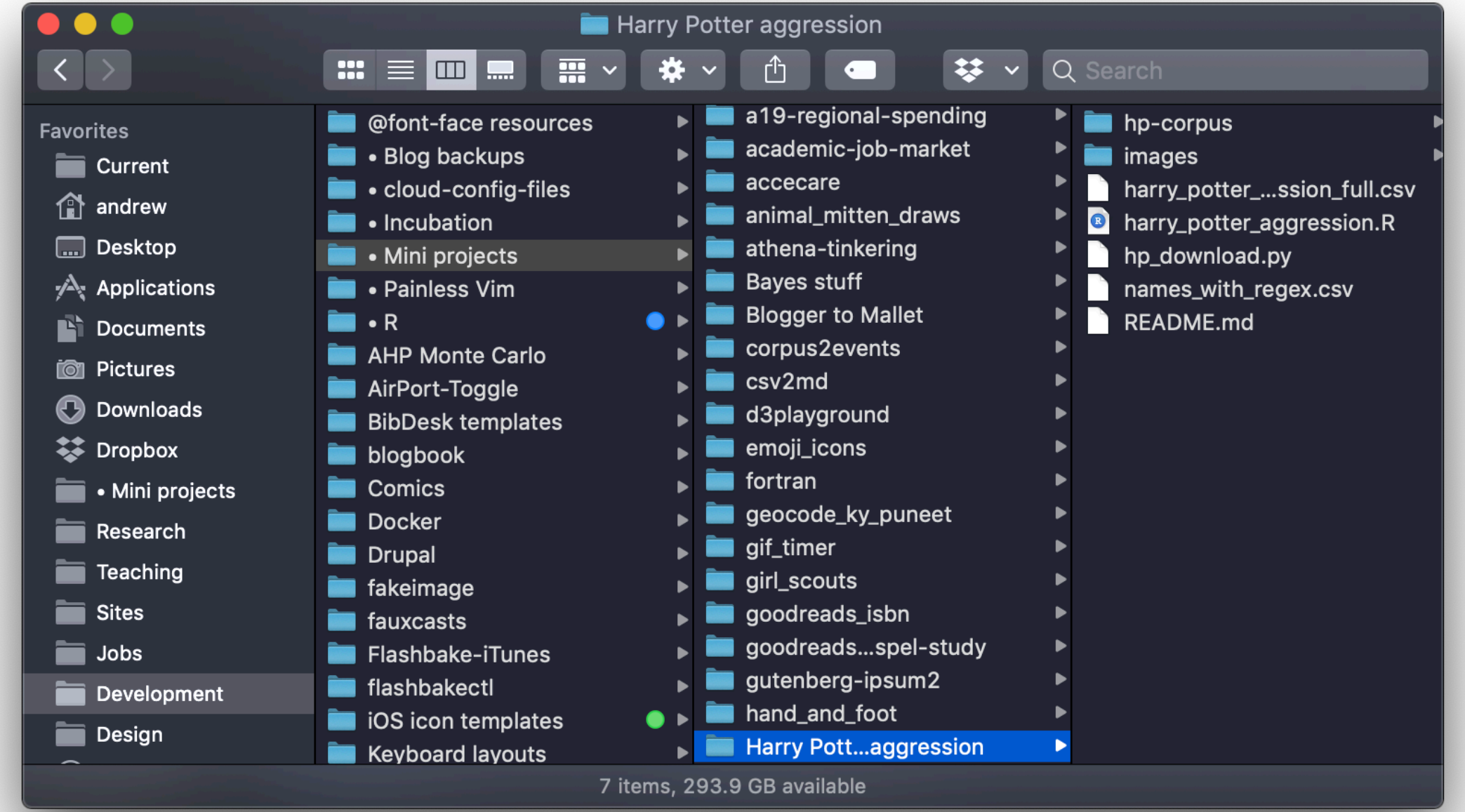
Cumulative number of family walks in 2014

Duke semesters shaded in yellow

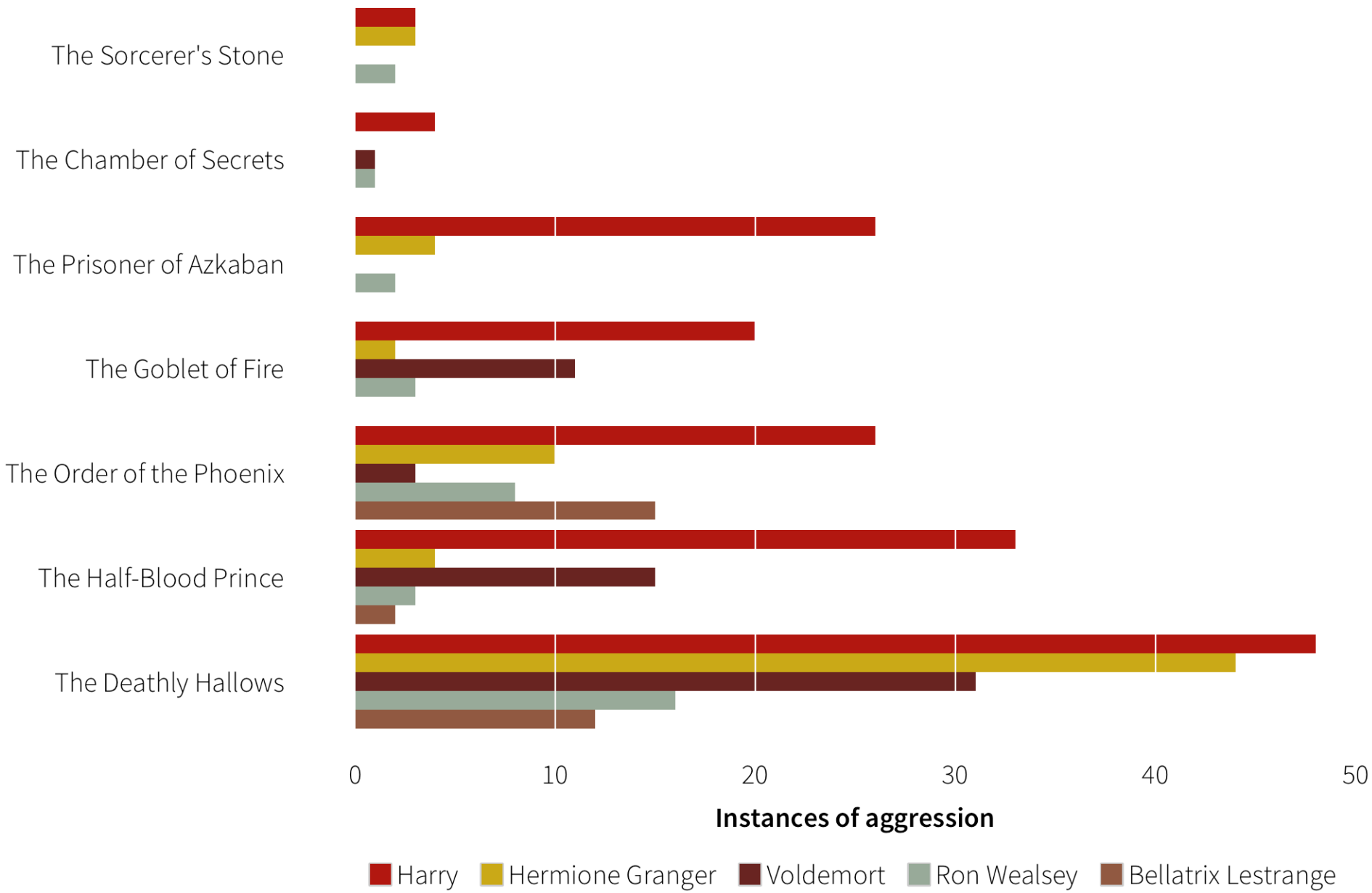


Cumulative number of family walks in 2015




Harry Potter aggression
Search
Favorites
Current
andrew
Desktop
Applications
Documents
Pictures
Downloads
Dropbox
• Mini projects
Research
Teaching
Sites
Jobs
Development
Design
@font-face resources
• Blog backups
• cloud-config-files
• Incubation
• Mini projects
• Painless Vim
• R
AHP Monte Carlo
AirPort-Toggle
BibDesk templates
blogbook
Comics
Docker
Drupal
fakeimage
fauxcasts
Flashbake-iTunes
flashbakectl
iOS icon templates
Keyboard layouts
a19-regional-spending
academic-job-market
accecare
animal_mitten_draws
athena-tinkering
Bayes stuff
Blogger to Mallet
corpus2events
csv2md
d3playground
emoji_icons
fortran
geocode_ky_puneet
gif_timer
girl_scouts
goodreads_isbn
goodreads...spel-study
gutenberg-ipsum2
hand_and_foot
Harry Pott...aggression
hp-corpus
images
harry_potter_...ssion_full.csv
harry_potter_aggression.R
hp_download.py
names_with_regex.csv
README.md
7 items, 293.9 GB available

Most aggressive characters in the Harry Potter series



2016-17

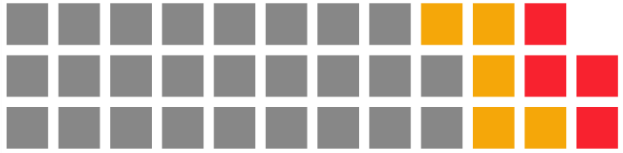
Political science (43)

Public administration and policy (41)

2017-18

Political science (11)

Public administration and policy (31)



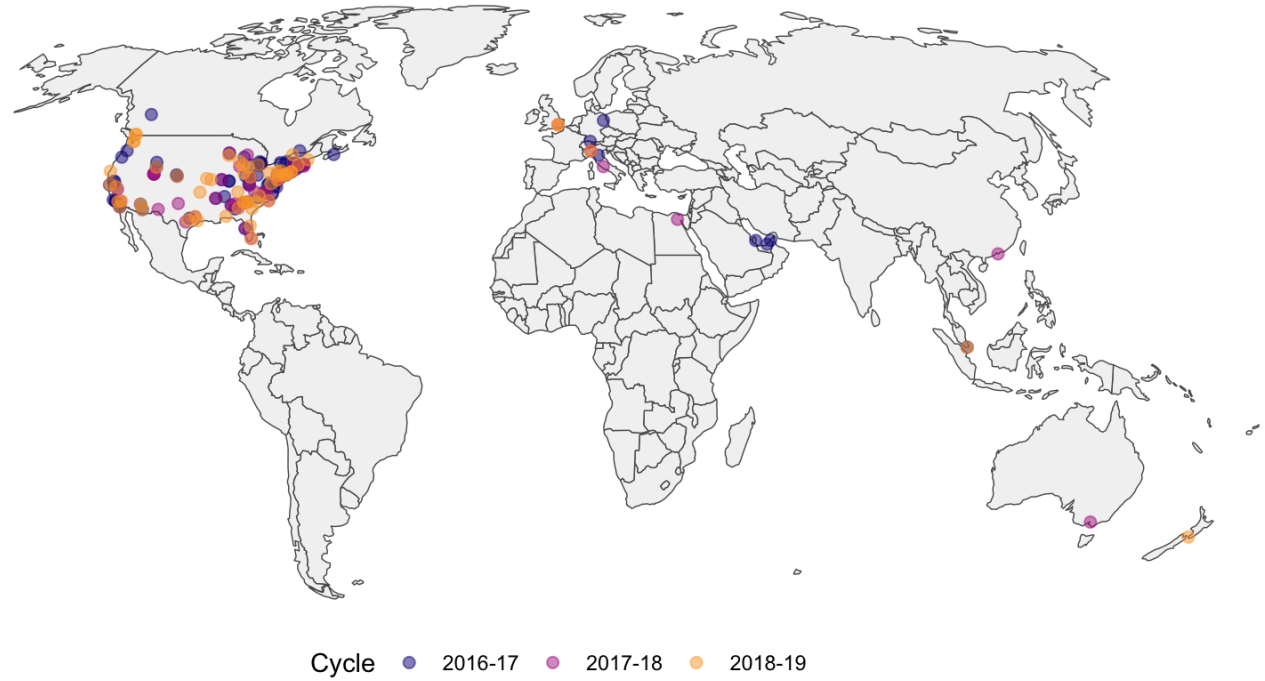
2018-19

Political science (37)

Public administration and policy (23)

Nothing Skype, no flyout Flyout, no offer Visiting offer Tenure-track offer

One box = one job posting



Andrew Heiss

International NGOs, nonprofit management, authoritarianism, data science, and R

• 2007–2019

ORCID iD: 0000-0002-3948-3914

PGP public • PGP fingerprint:
4AA2 FA83 A8B2 05A4 E30F
610D 1382 6216 9178 36AB

Monday, December 17, 2018

The academic job search finally comes to an end

I am *so beyond thrilled* to announce that I'll be joining the Andrew Young School of Policy Studies at Georgia State University in Fall 2019 as an assistant professor in the Department of Public Management and Policy. I'll be teaching classes in statistics/data science, economics, and nonprofit management in beautiful downtown Atlanta, and we'll be moving back to the South. I am so so excited about this! The Andrew Young School does amazing work in public policy, administration, and nonprofit management, and I'll be working with phenomenal colleagues and students. I still can't believe this is real.

Part of the reason I'm in shock is that for the past 2.5 years, I've been ripped apart and destroyed by the academic job market. This job market is a horrendous beast of a thing. It is soul-crushing and dream-shattering and a constant stream of rejection. While facing rejection is good and builds grit etc., etc., in reality it's awful.

In an effort to stay On Brand™, here are a bunch of fancy graphs and numbers showing what it's been like to apply for nearly 200 jobs since August 2016. Unlike many of my other blog posts, I haven't included any of the code to generate these. That code is all available in a GitHub repository (see `README.Rmd`), along with the raw data that I've collected over the past few years (for the morbidly curious).

Application count and outcomes

Between August 31, 2016 and November 18, 2018, I applied for 186 tenure-track and non-tenure-track academic jobs at R1 schools, liberal arts colleges, and teaching-focused public universities. I was offered one two-year visiting assistant professorship at the Romney

GitHub, Inc. (US) https://github.com/andrewheiss/academic-job-market/blob/master/README.Rmd 90%


```
---
title: "The academic job search finally comes to an end"
output: github_document
editor_options:
  chunk_output_type: console
---

```{r setup, include=FALSE}
knitr::opts_chunk$set(echo = FALSE, fig.retina = 2)
```

> See the [actual blog post](https://www.andrewheiss.com/blog/2018/12/17/academic-job-market-visualized/).

I am *so beyond thrilled* to announce that I'll be joining the [Andrew Young School of Policy Studies](https://aysps.gsu.edu/) a

Part of the reason I'm in shock is that for the past 2.5 years, I've been ripped apart and destroyed by the academic job market

In an effort to stay On Brand™, here are a bunch of fancy graphs and numbers showing what it's been like to apply for nearly 20

```{r load-libraries-data, warning=FALSE, message=FALSE}
library(tidyverse)
library(lubridate)
library(here)
library(sf)
library(waffle)
library(ggstance)
library(scales)
library(countrycode)
# library(mapview)  # For interactive maps!
library(units)
library(patchwork)

# Load jobs data
jobs_clean <- read_csv(here("data", "jobs_clean.csv")) %>%
  mutate_at(vars(`Skype interview`, `Flyout`, contains("ffer")),
            funs(bin = !is.na(.)))
```
```

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#rstats

R User Groups

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You are all expert enough now.

Go make stuff!