

Politicians from 12 countries rarely engage with researchers on social media, but this can change when expertise gains salience

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Background

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Research evidence can be valuable in informing and shaping policy decisions by equipping policymakers with data and information to create and execute policies to address societal problems (e.g., [Bavel et al. 2020](#); [Berger et al. 2021](#); [Geddes 2021](#))

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The endeavor to understand how academic research insights are integrated into policymaking has a long tradition in the social sciences (e.g., [Weiss 1979](#); [Caplan 1979](#); [Huberman 1994](#))

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Individual inclination to engage with researchers

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The structure of online social networks can be revealing of individuals' latent features (e.g., Barberá 2015; He and Tsvetkova 2023)

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Social media, specifically Twitter, are increasingly important for political and scientific communities ([Brainard 2022](#); [Castanho Silva and Proksch 2022](#); [Jungherr, 2016](#)).

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These accounts operate within the same framework of platform-imposed behaviors and are embedded in a broader social network. Also meaning that the different available behaviors on social media have unique properties, such as their potential time demands, privacy, cognitive engagement, and capacity to deliver messages to constituents ([Metaxas et al., 2015](#); [Wojcieszak et al., 2022](#)).

Materials and Methods

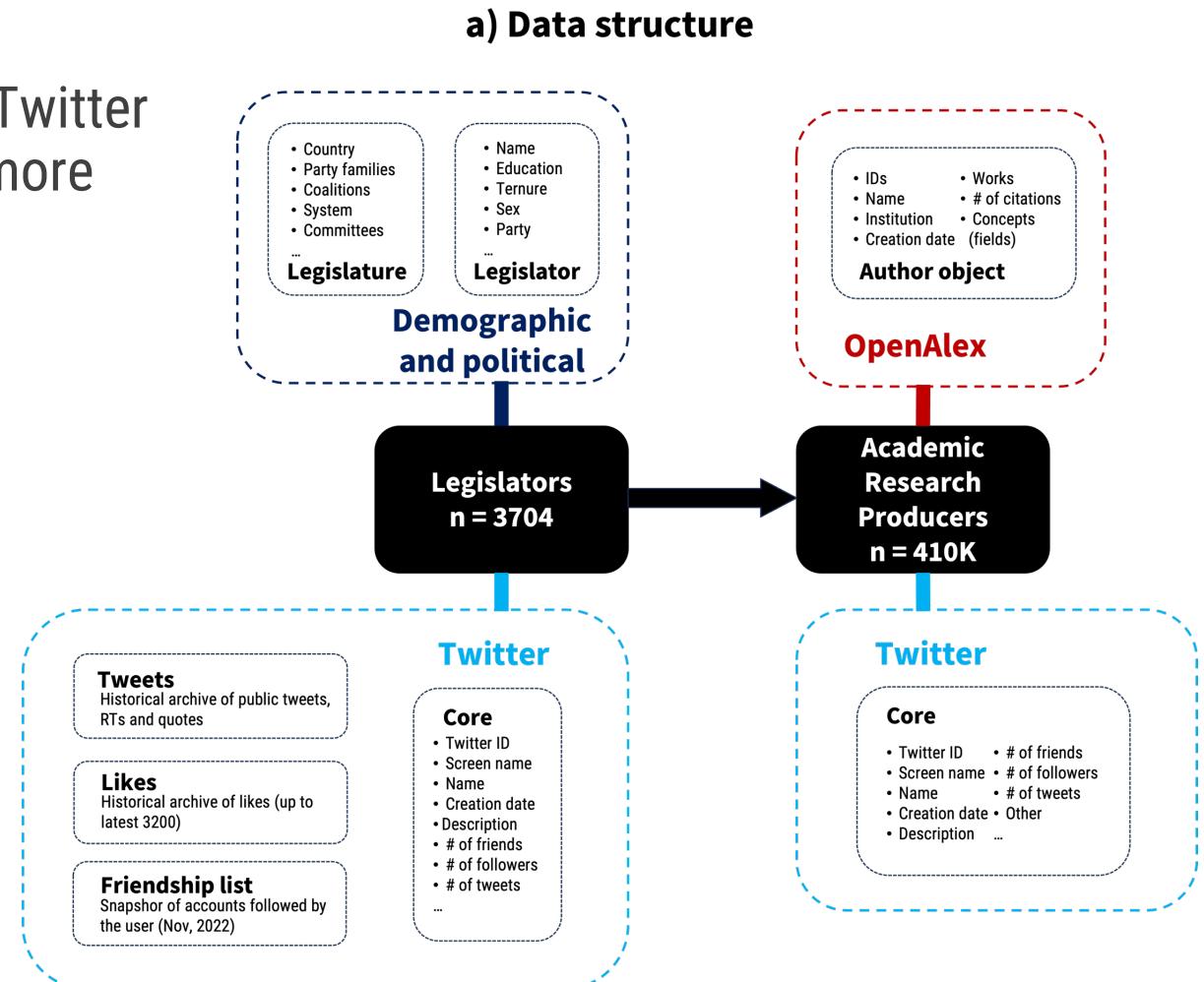
Materials and Methods

I employ digital trace data from legislators' Twitter profiles

COUNTRY	SEATS	ON TWITTER
Pooled	4134	3704
Ireland	160	154
UK	650	590
Spain	349	314
Colombia	108	104
Canada	338	325
Argentina	72	61
Germany	736	597
US Senate	100	100
US House	435	431
Italy	400	286
Mexico	128	114
France	577	552
Brazil	81	76

Materials and Methods

I employ digital trace data from legislators' Twitter profiles and map it onto a novel dataset of more than 410K researcher producers.



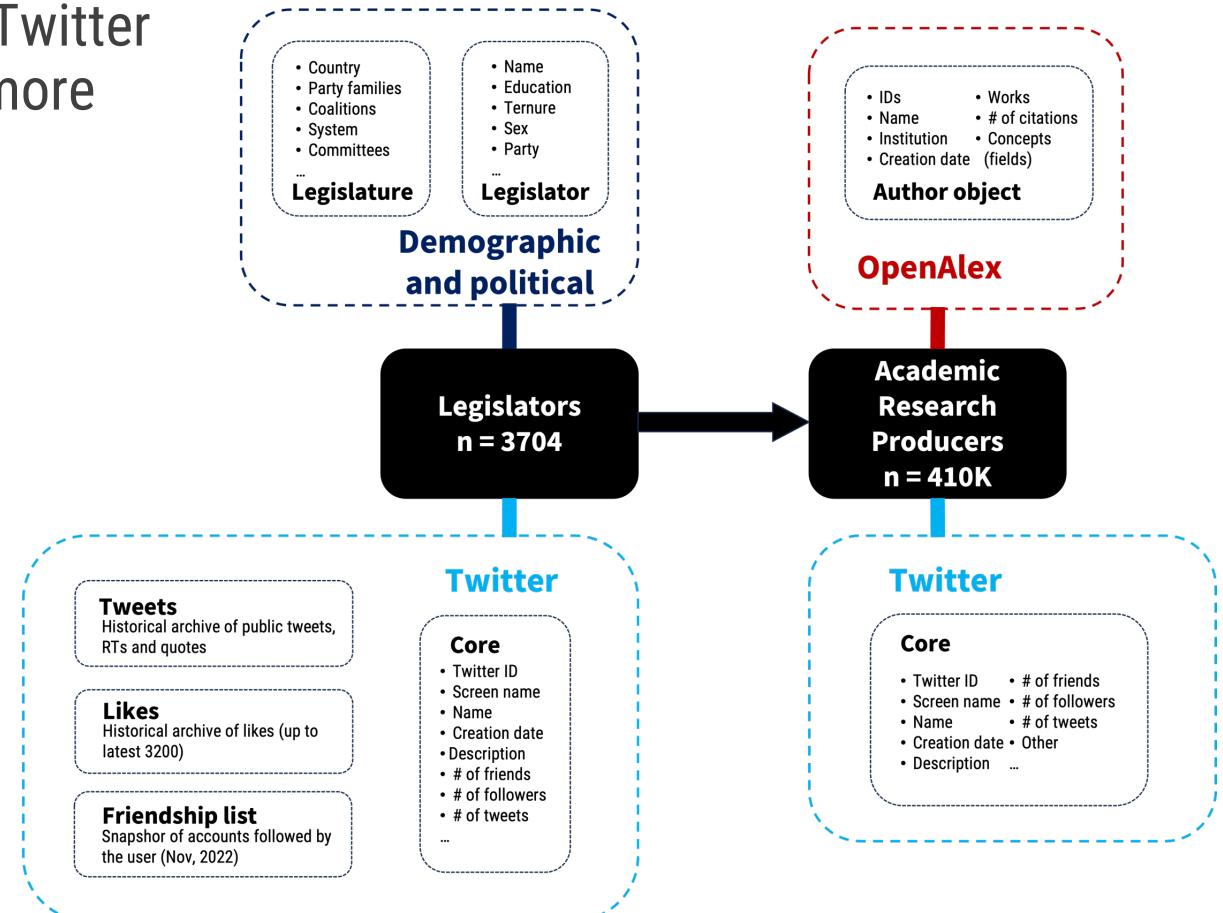
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Legislators' data:

- historical archive of all their public posts ($\approx 20M$)
- followed accounts ($\approx 2.6M$)
- liked posts ($\approx 6.5M$)
- demographic and political auxiliary information

a) Data structure



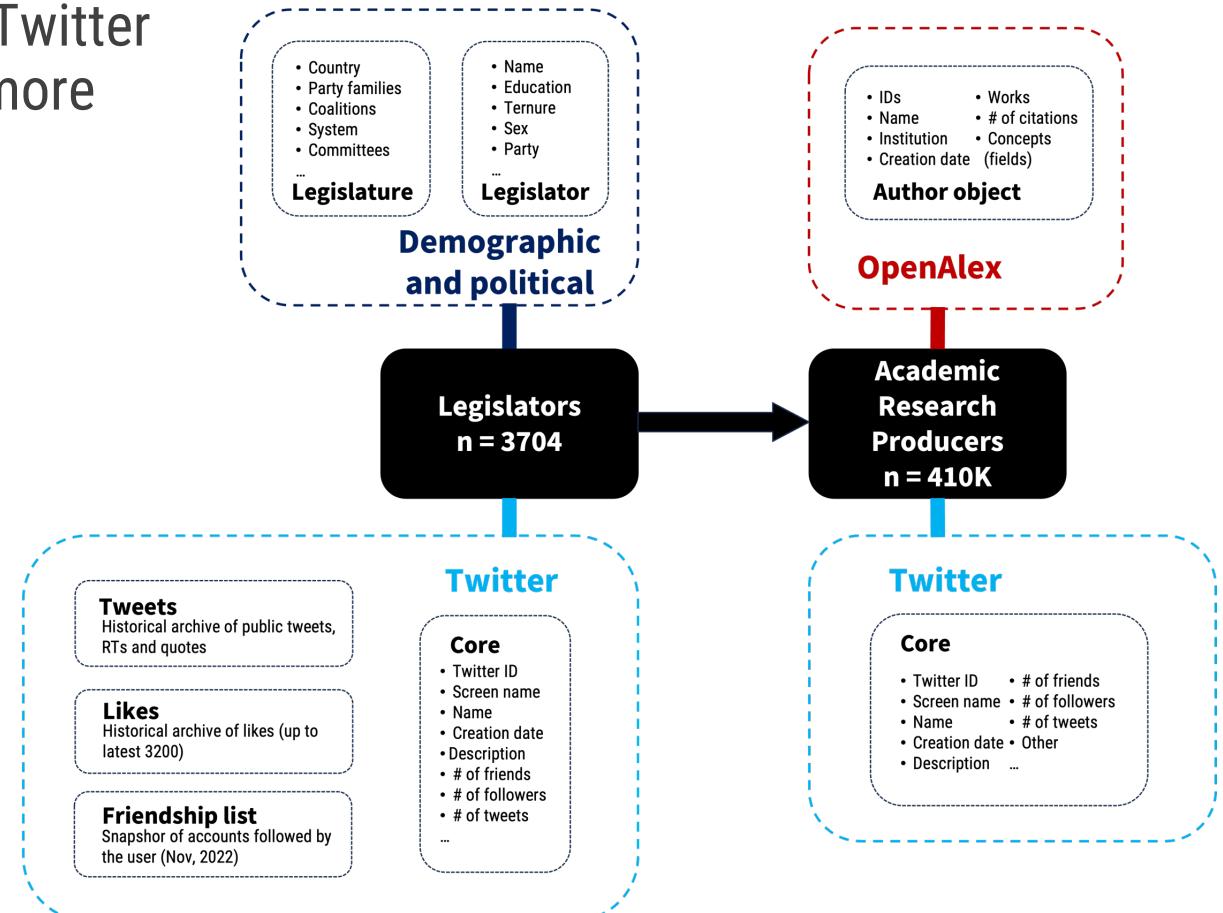
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Researchers' data:

- twitter “core”
- papers
- fields of research
- institutional affiliations
- auxiliary research profile data

a) Data structure

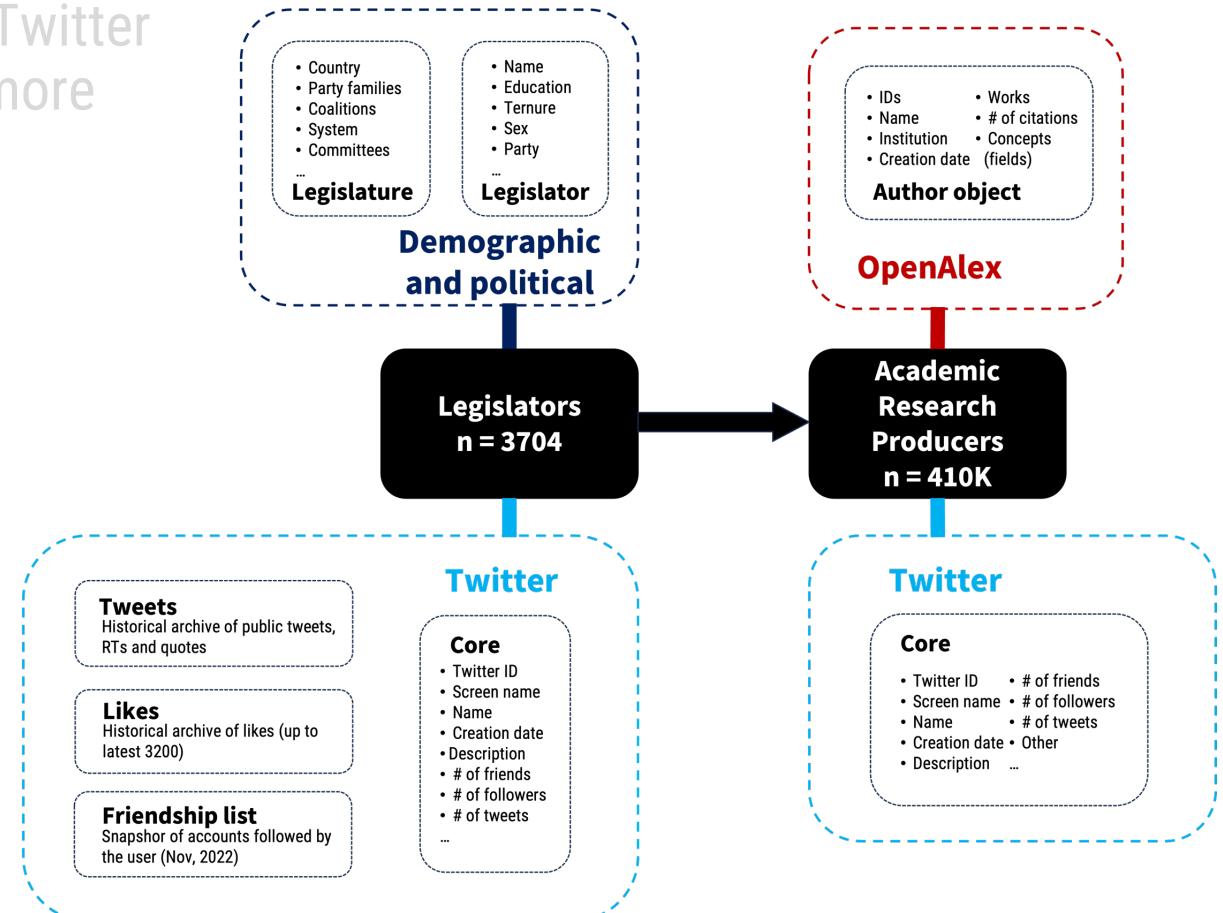


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1. Do we observe lawmakers following and engaging with researchers 'in the wild'?

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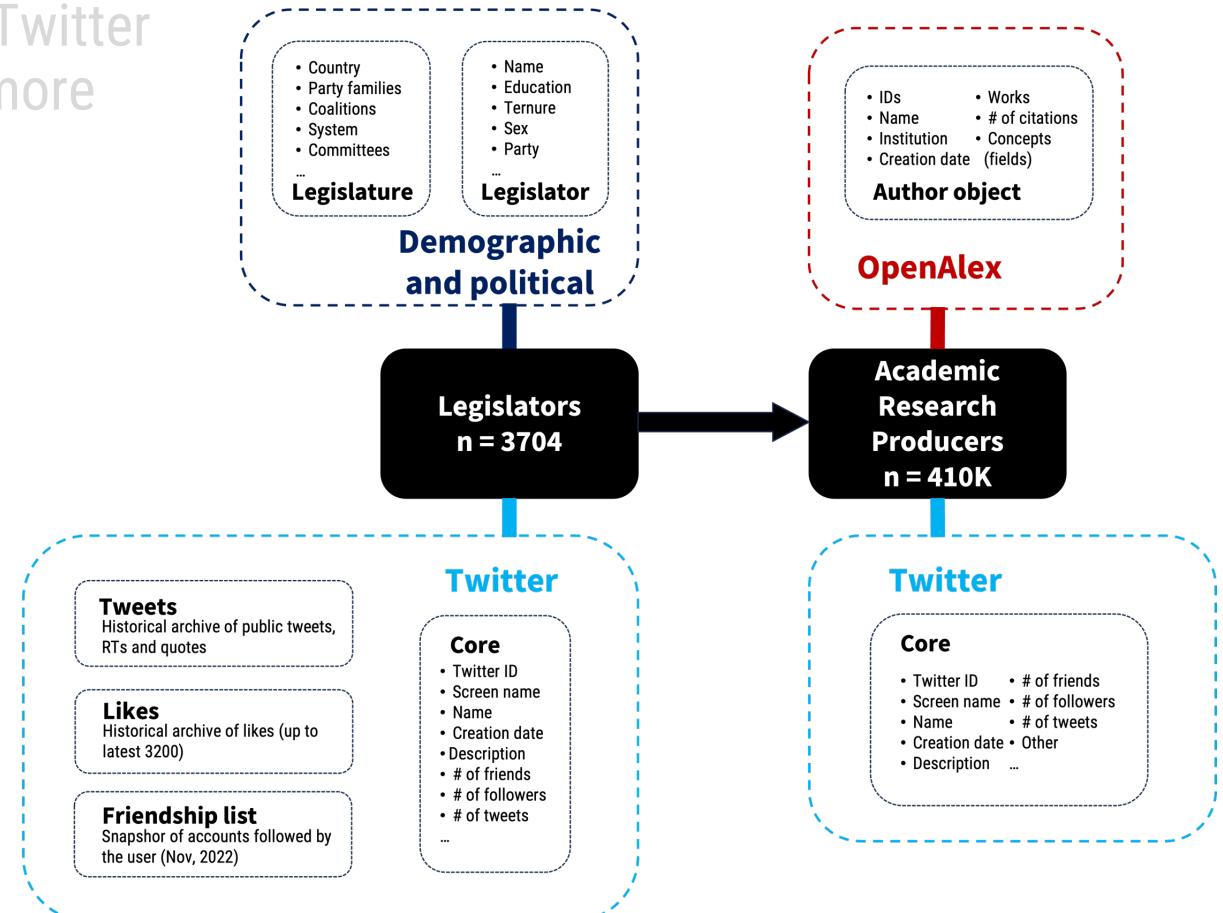


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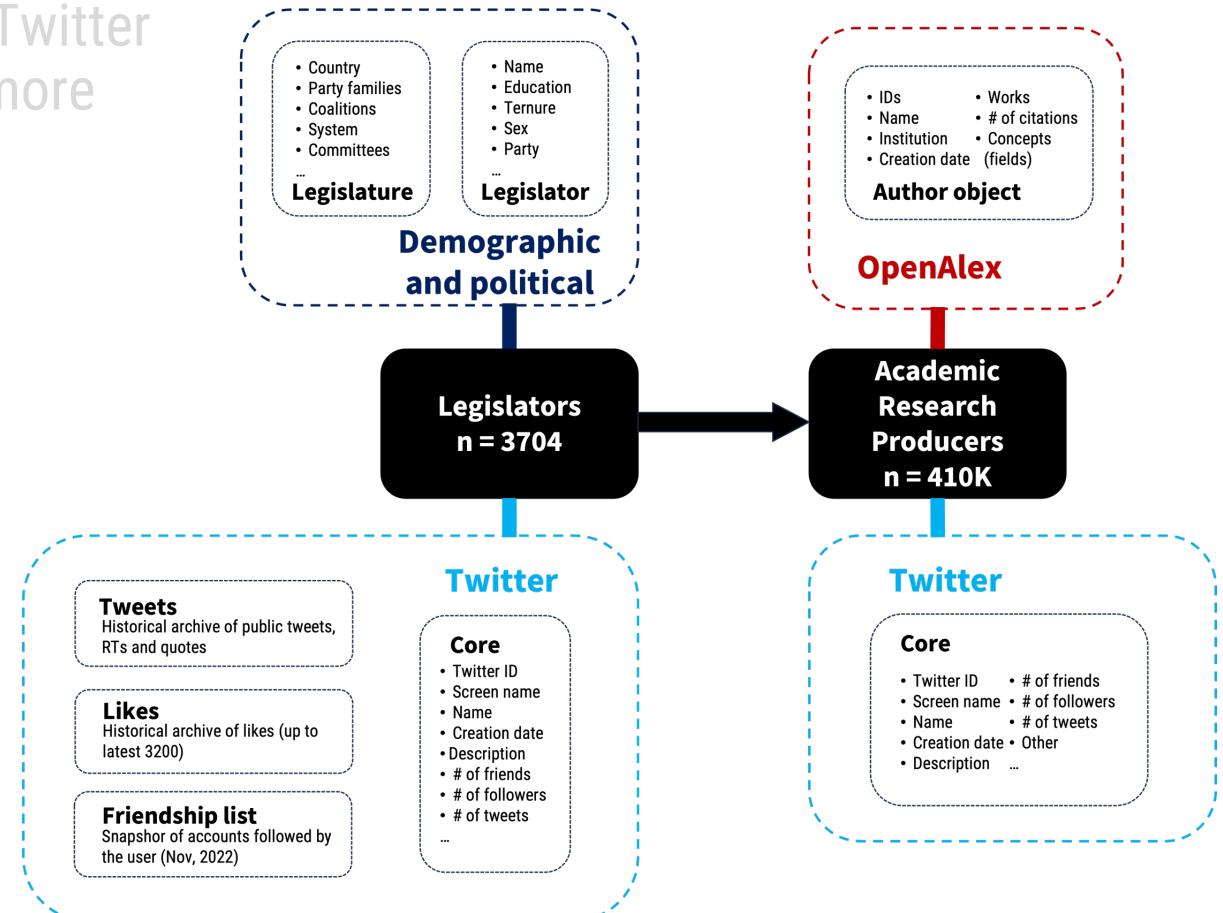


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1. Do we observe lawmakers following and engaging with researchers 'in the wild'?
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3. Do legislators adapt their behaviors to exogenous shocks to the salience of expertise?

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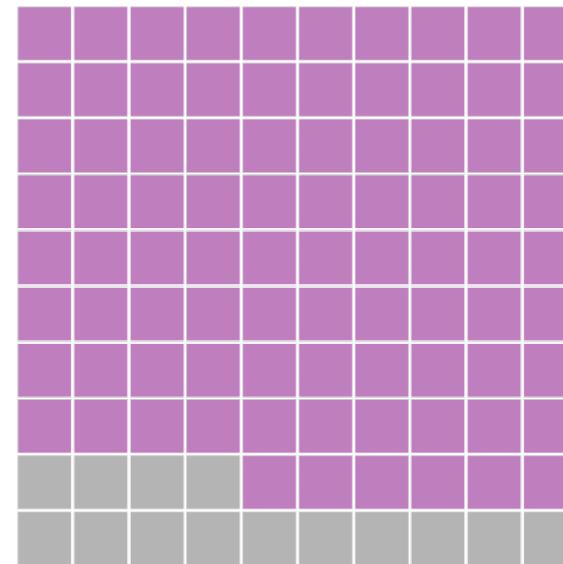
Results

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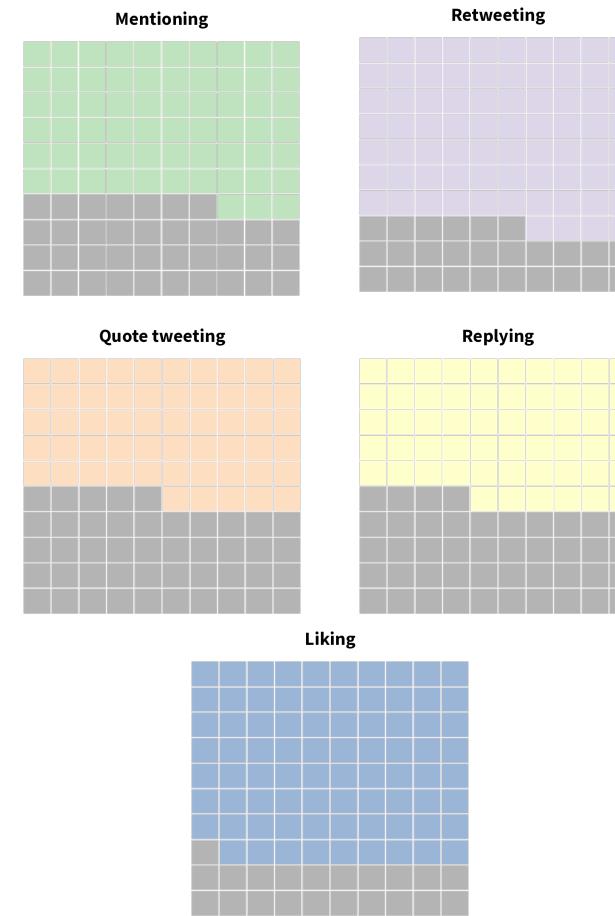
Following



86% of legislators follow at least one of the researchers 'in the wild'

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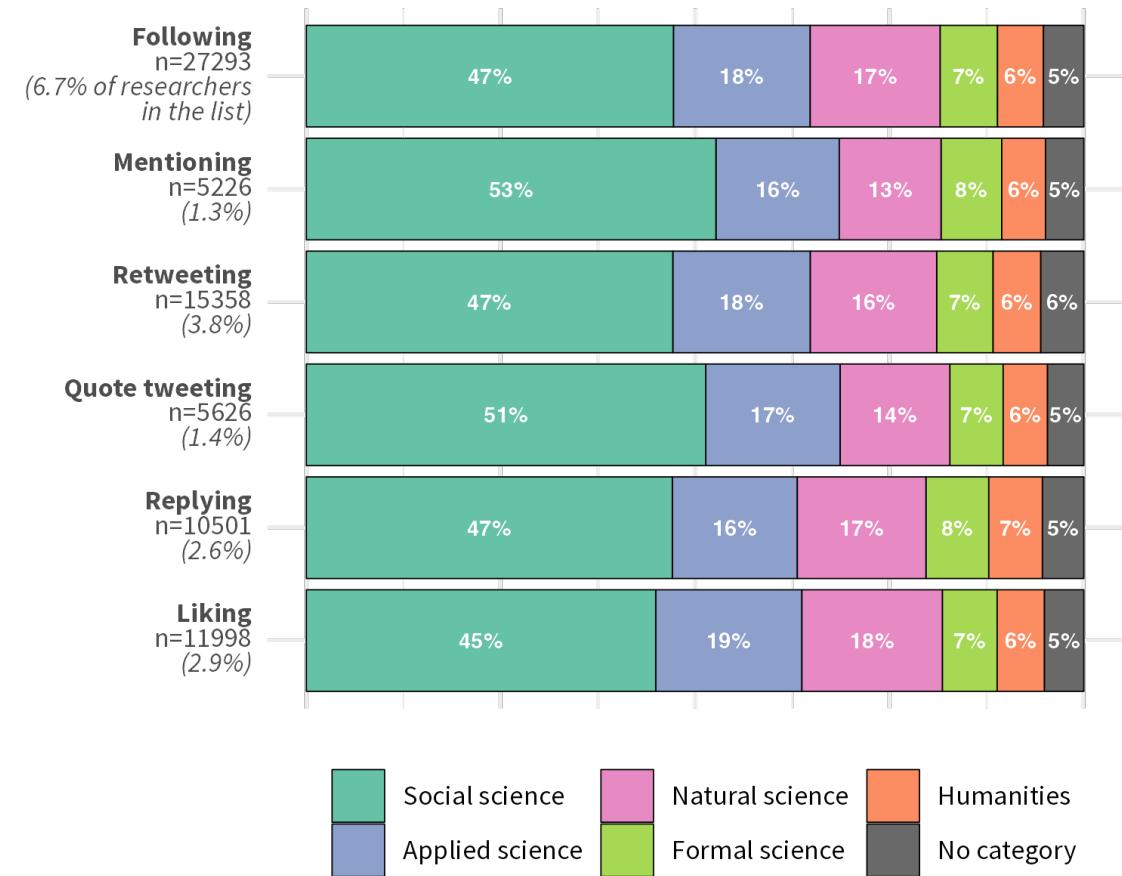


The **majority** legislators also **engages** in more “expensive” behaviors

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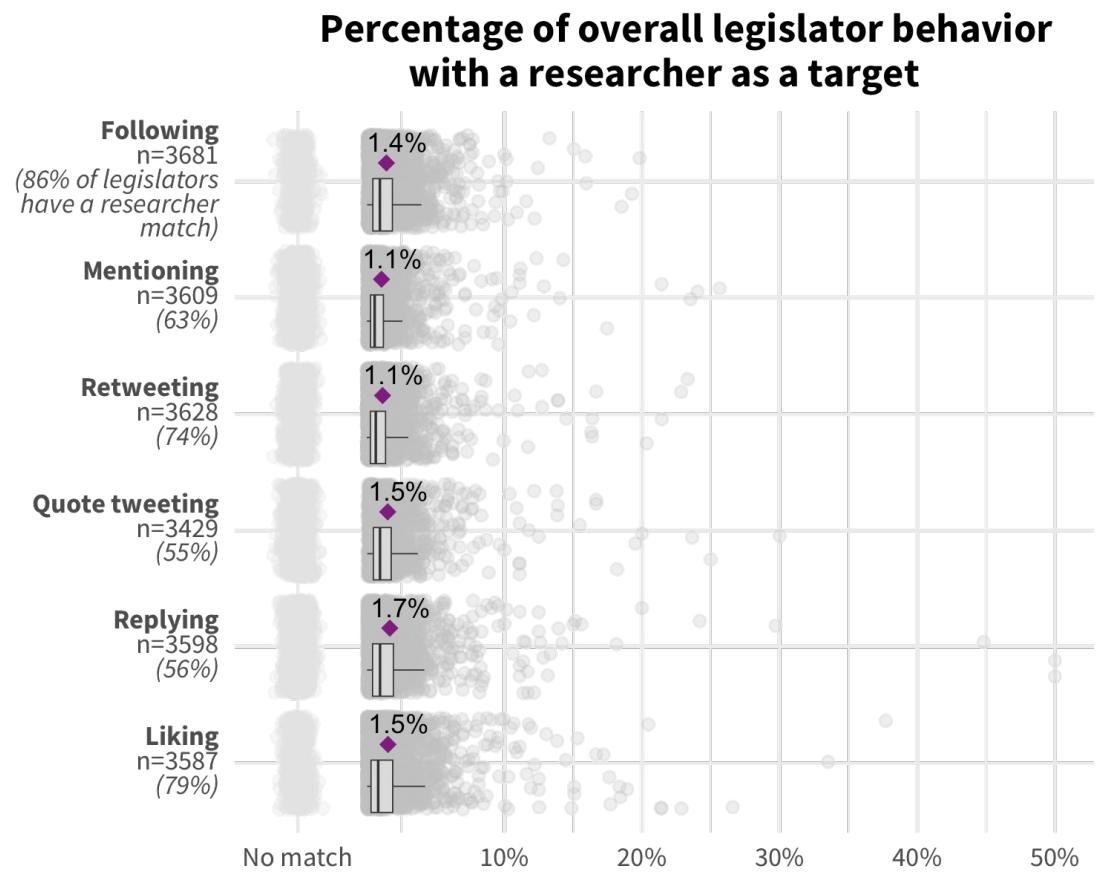
Distribution of the scientific fields of the matched academic researchers



Most of legislators' "attention" goes to social scientists

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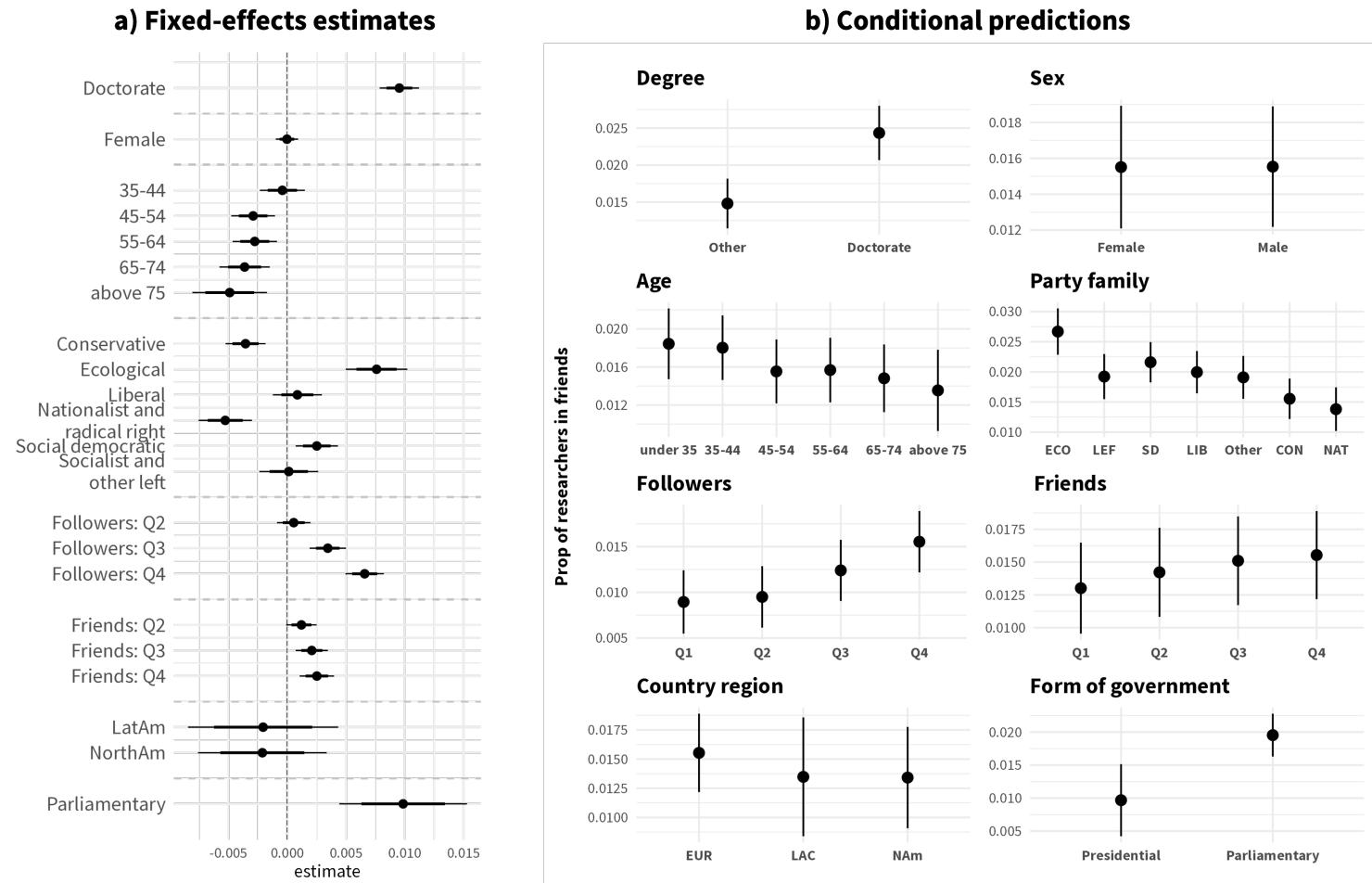
There are **some differences**, but for the most part these researchers represent a **small fraction** of whom lawmakers follow and engage with on social media

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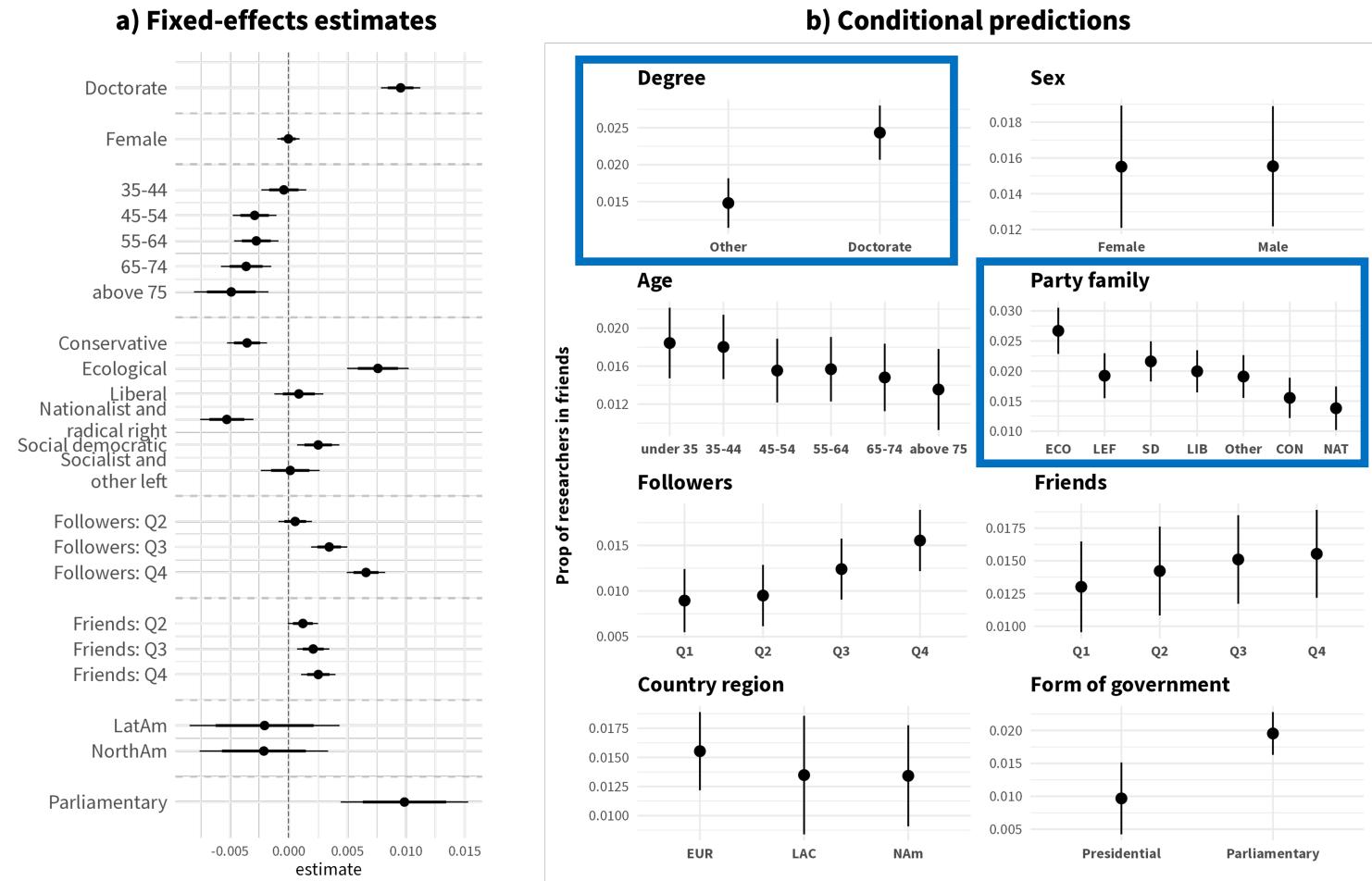


Estimated effects of legislator and legislature characteristics on the proportion of researchers in their networks. Estimated effects of legislator and legislature characteristics on the proportion of researchers in their networks. Results from a linear mixed-effects model with legislature random effects with age (under 35), party family (other), country region (Europe), system (presidential), and Q1 for followers and friends as references for categorical variables. Number of observations: 3,247. Panel a presents the coefficients with 80% and 95% confidence intervals. The conditional predictions are computed with numeric covariates are held at their means and the other covariates at their modes: no research degree, presidential, European, male, 45-54, Q1, and Conservative party..

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Legislators' **research background** and **political ideology** are strong predictors across behaviors

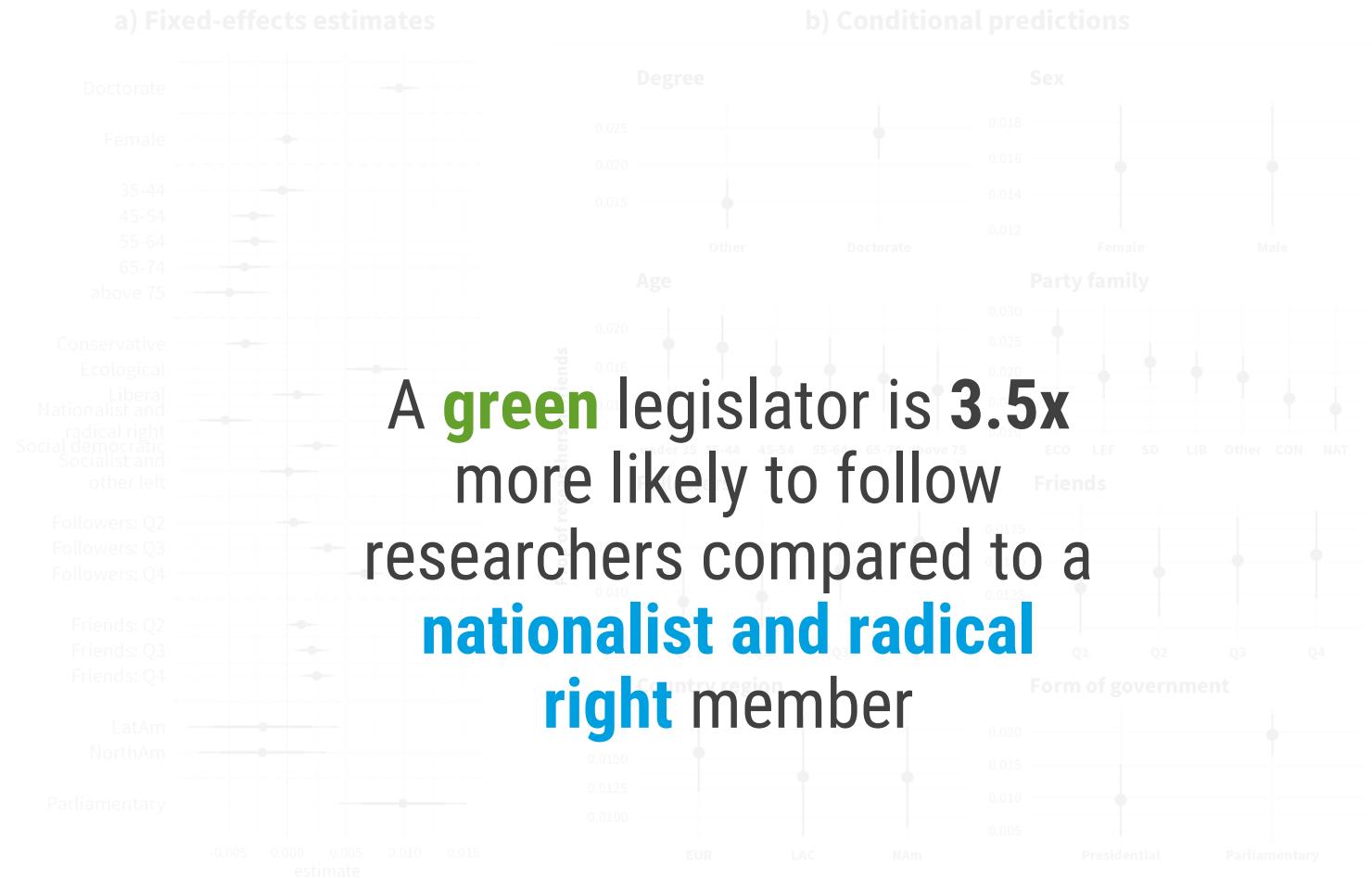


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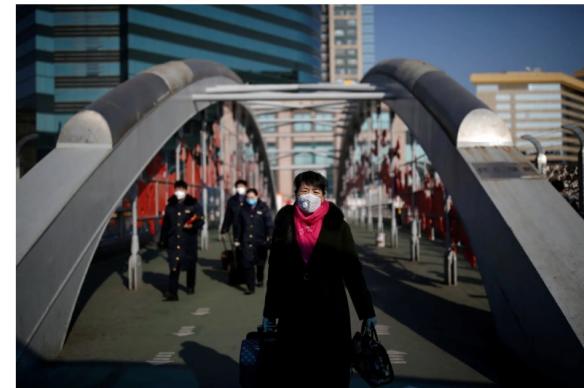
The New York Times

Covid-19 > New Shots The New Variants Testing Mask Guidance Covid Fatigue Reinfections Paxlovid Rebounds

W.H.O. Declares Global Emergency as Wuhan Coronavirus Spreads

The announcement came as nearly 10,000 cases have been reported worldwide.

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People outside the Beijing Railway Station on Thursday. The vast majority of coronavirus infections have occurred in China. Carlos Garcia Rawlins/Reuters



By Sui-Lee Wee, Donald G. McNeil Jr. and Javier C. Hernández

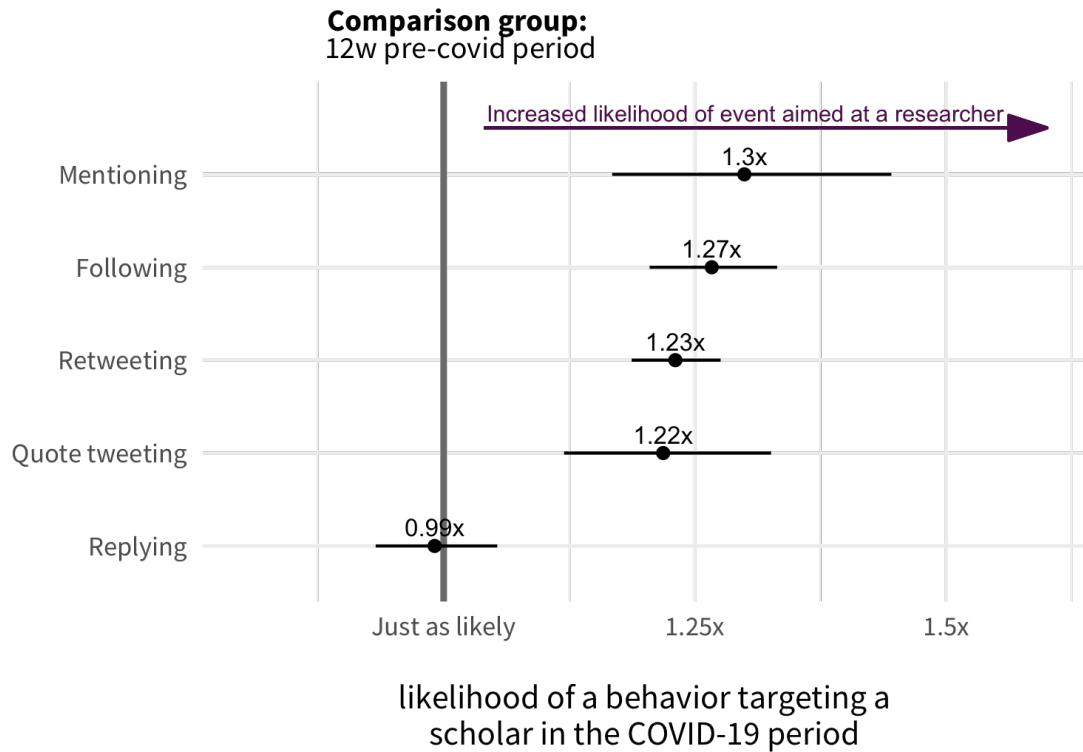
Published Jan. 30, 2020

The World Health Organization declared a global health emergency on Thursday as the [coronavirus](#) outbreak spread well

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Pooled scholars

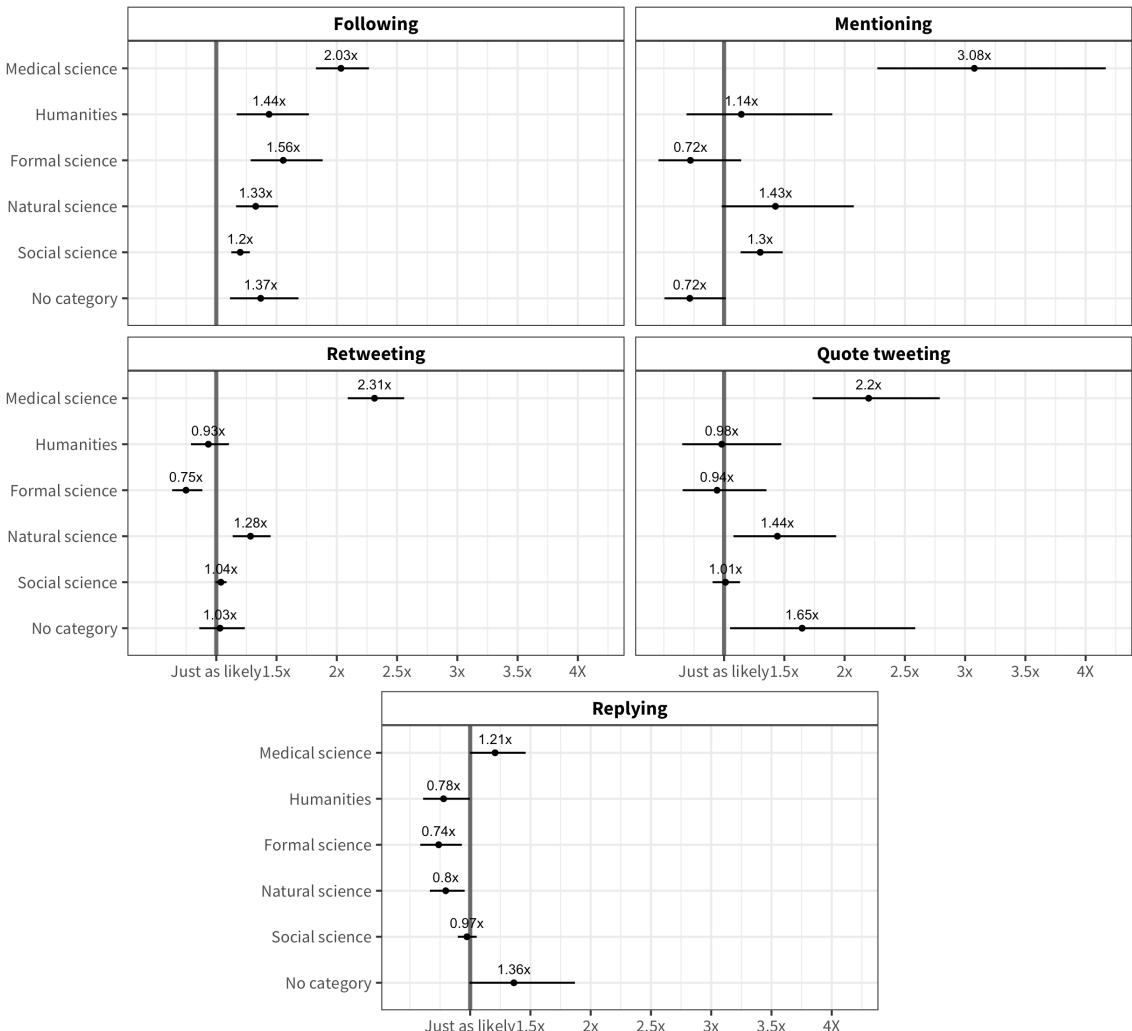


Marginal effects of public health crisis on following and engagement with academic researchers during the COVID versus pre-COVID periods with a ±12 week bandwidth. Results from a logistic mixed-effects models with legislature random effects. The estimates in the figure are relative risks representing the ratio of the probability of an event in the COVID period to the probability of an outcome in a pre-COVID period.

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Scholars by branch



likelihood of a behavior targeting a scholar from scientific branch in the COVID period

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3. I investigate **potential shifts in the digital engagement** behaviors of legislators with research producers in times when the demand for evidence should be pronounced

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2. Legislators' **research background** and **political ideology** are predictors across behaviors
3. Legislators' digital behaviors seem to be **responsive to exogenous shocks** to the **salience of expertise**



Here is a [link](#) to the draft. I would really appreciate your feedback!

Thank you!



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Auxiliary material

Overview of academic research producers

PREDICTED FIELD	TWITTER ACCOUNTS	FOLLOWED BY LEGS
POOLED	409192	27295 6.7%
POLITICAL SCIENCE (Social science)	39172	7418 18.9%
ECONOMICS (Social science)	8389	1404 16.7%
ART (Humanities)	2054	317 15.4%
HISTORY (Humanities)	3373	475 14.1%
PHILOSOPHY (Humanities)	6179	820 13.3%
SOCIOLOGY (Social science)	4292	541 12.6%

PREDICTED FIELD	TWITTER ACCOUNTS	FOLLOWED BY LEGS
BUSINESS (Applied science)	3690	362 9.8%
GEOGRAPHY (Natural science)	4241	276 6.5%
PSYCHOLOGY (Social science)	56815	3524 6.2%
COMPUTER SCIENCE (Formal science)	29013	1527 5.3%
ENVIRONMENTAL SCIENCE (Natural science)	6493	345 5.3%
GEOLGY (Natural science)	5005	257 5.1%
ENGINEERING (Formal science)	3346	167 5%
MEDICINE (Applied science)	94718	4439 4.7%
MATHEMATICS (Formal science)	7482	325 4.3%
PHYSICS (Natural science)	15217	555 3.6%
BIOLOGY (Natural science)	83120	2814 3.4%
CHEMISTRY (Natural science)	12176	255 2.1%
MATERIALS SCIENCE (Natural science)	2759	56 2%
NOT CATEGORIZED (No category)	21658	1418 6.5%

Auxiliary material

RESEARCH ARTICLE

1. Extract Twitter entities from the Crossref Event Data dump
2. Extract author features from the papers linked from OpenAlex's API
3. Map these features under a set of rules
4. Validate

An open data set of scholars on Twitter

Philippe Mongeon^{1,2} , Timothy D. Bowman³ , and Rodrigo Costas^{4,5} 

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²Centre interuniversitaire de recherche sur la science et la technologie (CIRST), Université du Québec à Montréal, Montréal, Québec, Canada

³School of Information Sciences, Wayne State University, Detroit, MI, USA

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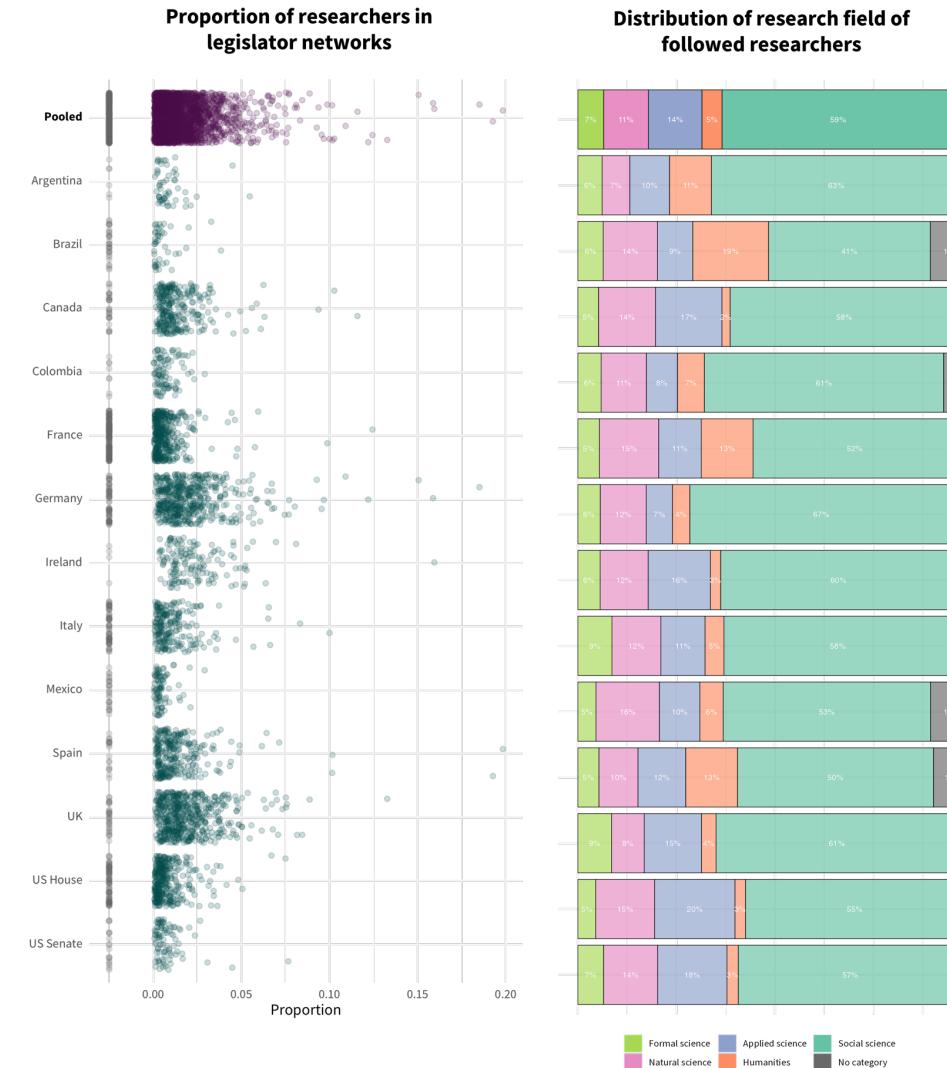
⁵DSI-NRF Centre of Excellence in Scientometrics and Science, Technology and Innovation Policy (SciSTIP), Stellenbosch University, Stellenbosch, South Africa

Keywords: altmetrics, bibliometrics, open data, social media metrics, Twitter

ABSTRACT

The role played by research scholars in the dissemination of scientific knowledge on social media has always been a central topic in social media metrics (altmetrics) research. Different approaches have been implemented to identify and characterize active scholars on social media platforms like Twitter. Some limitations of past approaches were their complexity and, most importantly, their reliance on licensed scientometric and altmetric data. The emergence of new open data sources such as OpenAlex or Crossref Event Data provides opportunities to identify scholars on social media using only open data. This paper presents a novel and simple approach to match authors from OpenAlex with Twitter users identified in Crossref Event Data. The matching procedure is described and validated with ORCID data. The new approach matches nearly 500,000 matched scholars with their Twitter accounts with a level of high precision and moderate recall. The data set of matched scholars is described and made openly available to the scientific community to empower more advanced studies of the interactions of research scholars on Twitter.

Auxiliary material



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Overview of behaviors by country

COUNTRY	SEATS	ON TWITTER	FOLLOW	MENTION	RETWEET	QUOTE	REPLY	LIKE
Pooled	4134	3704	86%	63%	74%	55%	56%	79%
Argentina	72	61	90%	87%	67%	37%	30%	77%
Brazil	81	76	59%	35%	32%	25%	36%	50%
Canada	338	325	91%	64%	83%	65%	61%	90%
Colombia	108	104	92%	86%	75%	49%	43%	82%
France	577	552	73%	48%	55%	32%	35%	64%
Germany	736	597	90%	58%	75%	60%	66%	87%
Ireland	160	154	97%	73%	94%	67%	81%	95%
Italy	400	286	78%	41%	52%	22%	41%	62%
Mexico	128	114	78%	60%	54%	32%	39%	65%
Spain	349	314	94%	72%	91%	58%	69%	85%
UK	650	590	95%	79%	94%	79%	85%	92%
US House	435	431	82%	67%	70%	65%	42%	76%
US Senate	100	100	83%	81%	72%	66%	35%	70%