MAX-PLANCK-INSTITUT FÜR DEMOGRAFISCHE FORSCHUNG
MAX PLANCK INSTITUTE FOR DEMOGRAPHIC RESEARCH

North and South: Naming practices and the hidden dimension of global disparities in knowledge production

Andrés F. Castro Torres* & **Diego Alburez-Gutierrez****

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Covenant University, Nigeria
June 21, 2022 - Summer Institutes in Computational Social Science

Contents

Introduction

Think about the last article, manuscript, working paper, you worked on…

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1. Did it include empirical data?

Yes -> pass to (2) **No** -> Thank for your participation

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1. Did it include empirical data?

Yes -> pass to (2) **No** -> Thank for your participation

2. Did you write the name of the country, region, population under study in the title?

Introduction

Think about the last article, manuscript, working paper, you worked on…

1. Did it include empirical data?

Yes -> pass to (2) **No** -> Thank for your participation

2. Did you write the name of the country, region, population under study in the title?

Yes -> raise your hand

Naming Practices

Original Articles

Demographic Transition Theory

Dudley Kirk

Pages 361-387 | Published online: 04 Jun 2010

The proximate determinants of fertility

John Bongaarts *

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Modelling the proximate determinants of fertility for Brazil: the advent of competing preferences

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Original Article | Published: 01 September 2018

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RESEARCH ARTICLE

Tracking the reach of COVID-19 kin loss with a bereavement multiplier applied to the United States

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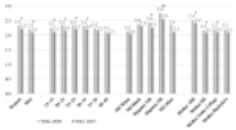
Motivation

Preferences, Partners, and Parenthood: Linking Early Fertility Desires, Marriage Timing, and Achieved Fertility
Natalie Nitsche & Sarah R. Hayford
OriginalPaper | Open Access | Published: 12 November 2020 | Pages: 1975 - 2001

The Dynamics of Intimate Relationships and Contraceptive Use During Early ing Adulthood
Yasamin Kusunoki & Jennifer S. Barber
OriginalPaper | Published: 08 September 2020 | Pages: 2003 - 2034

U.S.

Recent Trends in U.S. Childbearing Intentions
Caroline Sten Hartnett & Alison Gemmill
OriginalPaper | Published: 09 November 2020 | Pages: 2035 - 2045

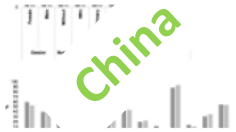


The Enduring Case for Fertility Desires
Sara Yeatman, Jenny Trinitapoli & Sarah Garver
OriginalPaper | Published: 01 October 2020 | Pages: 2047 - 2056

Material Hardship and Contraceptive Use During the Transition to Adul
Elly Field
OriginalPaper | Published: 30 November 2020 | Pages: 2057 - 2084

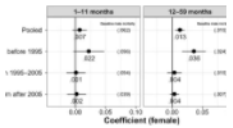
U.S.

Parental Investment After the Birth of a Sibling: The Effect of Family Size in Low-Fertility China
Shuang Chen
OriginalPaper | Published: 29 October 2020 | Pages: 2085 - 2111

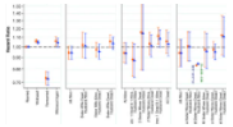


Exposure to Armed Conflict and Fertility in Sub-Saharan Africa
Brian C. Thiede, Matthew Hancock ... James Piazza
OriginalPaper | Published: 16 October 2020 | Pages: 2113 - 2141

Gender Discrimination and Excess Female Under-5 Mortality in India: A New Perspective Using Mixed-Sex Twins
Rohini Pande & Julia Behrman
OriginalPaper | Open Access | Published: 25 September 2020 | Pages: 2143 - 2167



The Effects of Marital Status, Fertility, and Bereavement on Adult Mortality in Polygamous and Monogamous Households: Evidence From the Utah Population Database
Kieron J. Barclay, Robyn Donrovich Thorén ... Rafael Grow
OriginalPaper | Open Access | Published: 15 September 2020 | Pages: 2169 - 2198



Landfall After the Perfect Storm: Cohort Differences in the Relationship Between Debt and Risk of Heart Attack
Angela M. O'Rand & Jenifer Hamil-Luker
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Young Adults' Migration to Cities in Sweden: Do Siblings Pave the Way?
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Janne Mikkonen, Hanna Remes ... Pekka Martikainen
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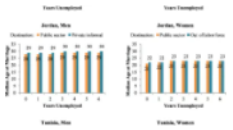
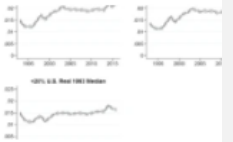
Historical Trends in Children Living in Multigenerational Households in the United States: 1870–2018
Natasha V. Pilkauskas, Mariana Amorim & Rachel E. Dunifon
OriginalPaper | Published: 01 October 2020 | Pages: 2269 - 2296

Employment's Role in Enabling and Constraining Marriage in the Middle East and North Africa
Caroline Krafft & Ragui Assaad
OriginalPaper | Published: 29 October 2020 | Pages: 2297 - 2325



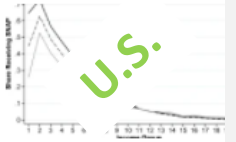
The Association Between Legal Status and Poverty Among Immigrants: A Methodological Caution
Cody Spence, James D. Bachmeier ... Christal Hamilton
OriginalPaper | Published: 29 October 2020 | Pages: 2327 - 2335

The Levels and Trends in Deep and Extreme Poverty in the United States, 1993–2016
David Brady & Zachary Parolin
OriginalPaper | Published: 15 October 2020 | Pages: 2337 - 2360



A Cautionary Tale of Using Data From the Tail
James X. Sullivan
Commentary | Published: 15 October 2020 | Pages: 2361 - 2368

Further Analyses Reinforce Our Conclusions About Extreme Poverty
David Brady & Zachary Parolin
Commentary | Published: 15 October 2020 | Pages: 2369 - 2376



Another Plea for Caution When Using Survey Income Data From the Fa
James X. Sullivan
Commentary | Published: 19 November 2020 | Pages: 2377 - 2381

U.S.

Acknowledgment of Reviewers
Acknowledgments | Published: 30 September 2020 | Pages: 2383 - 2388

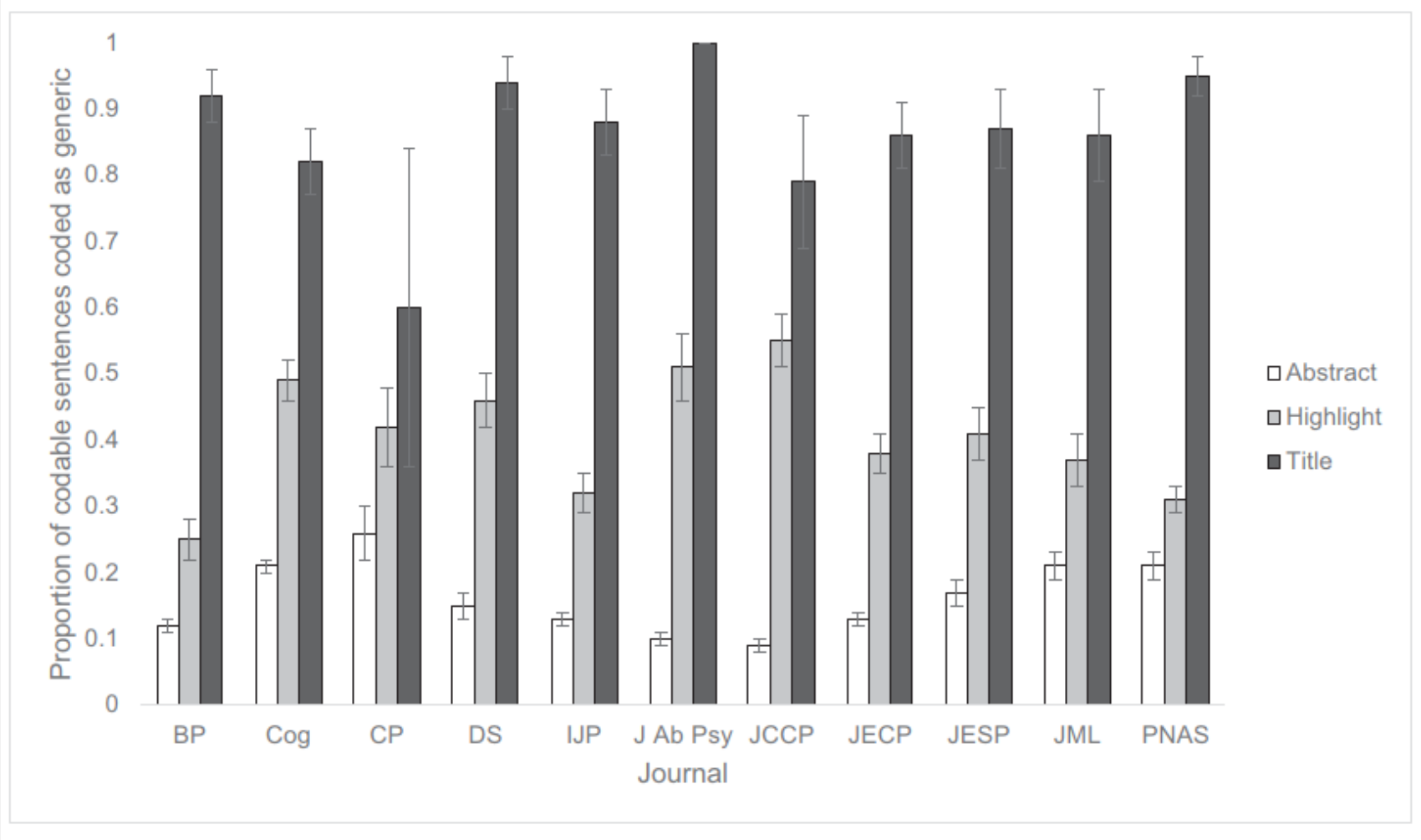
Demography, December 2020, issue 6.

Why focus on country names in titles?

- Most visible part of article: summarize and attract readers
- Titles with no geographical references offer less information
- Delocalized titles are more generic than localized titles
- Generic statements can be misleading (e.g., “boys are different than girls”)
- Presumption of universality!

Generic language more common in titles

Proportion of sentences in titles, highlights, and abstracts coded as generic (number of generic sentences divided by the number of codable sentences for that component, to derive a percentage), separately by journal.



Source: DeJesus, J. M., Callanan, M. A., Solis, G. & Gelman, S. A. Generic language in scientific communication. *Proc Natl Acad Sci USA* **116**, 18370–18377 (2019).

vodafone.de 16:06 50%

Tweet

André Vereta-Nahoum
@AndreNahoum

Replying to @pardoguerra and @jelena3121

And we then are back to methodological nationalism - of course if you study the North Atlantic shores you're not localist or nationalist, it's just Sociology. Otherwise, you must append a good adjective to the sociology you make

19:47 · 09 Mar 21 · Twitter for Android

2 Quote Tweets **11** Likes

vodafone.de 16:06 50%

Tweet

Robin Shields
@robinshields

Replying to @jelena3121

Have been thinking about this. Also, book on "education topic XY" in the United is a book on research on education. A book on "education topic XY" in China/Brazil/Namibia/Serbia is "Comparative and International Education." This needs to change.

12:54 · 01 Apr 21 · Twitter Web App

1 Retweet **3** Likes

vodafone.de 16:07 50%

Thread

Natalia Dutra
@nataliadutrapsy

Adding "in the US" automatically to any psychology paper title would make it more accurate about 50% of the time 🤦‍♀️

15:15 · 04 Apr 21 · Twitter Web App

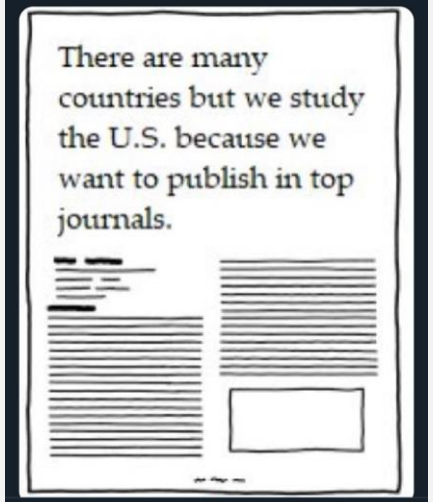
59 Retweets **5** Quote Tweets **692** Likes

vodafone.de 16:08 50%

Thread

Austin L. Wright
@austinlwright

This may be the best one so far



Tweet your reply

vodafone.de 16:06 50%

Thread

Jelena Brankovic
@jelena3121

A book on XY in the United States is a book on XY.

A book on XY in Germany is a book on XY in Germany.

A book on XY in Serbia is... Why is this topic relevant outside Serbia?

vodafone.de 16:06 50%

Tweet

Rasmus Corlin Christensen
@phdskat

Replying to @jelena3121 and @chellersgaard

“Denmark is a fascinating case of XY because of it’s unique administrative data/historical welfare state/high social trust/ etc. etc. etc”

8:52 · 10 Mar 21 · Twitter for iPhone

2 Likes

vodafone.de 16:07 50%

Tweet

Ana Carmiol
@AnaCarmiol

Replying to @nataliadutrapsy

Nielsen et al. (2017) found that participant representation of non-human primates is higher than that of participants from Central/South America in dev psych journals.

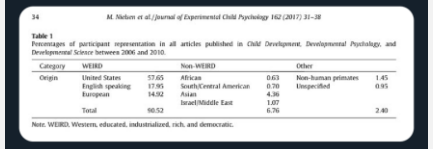

34 M. Nielsen et al. / Journal of Experimental Child Psychology 162 (2017) 31–38

Table 1
Percentages of participant representation in all articles published in *Child Development*, *Developmental Psychology*, and *Developmental Science* between 2006 and 2010.

Category	WEIRD		Non-WEIRD		Other	
Origin	United States	57.65	African	0.63	Non-human primates	1.45
	English speaking	17.95	South/Central American	0.70	Unspecified	0.95
	European	14.92	Asian	4.36		
			Israel/Middle East	1.07		
	Total	90.52		6.76		2.40

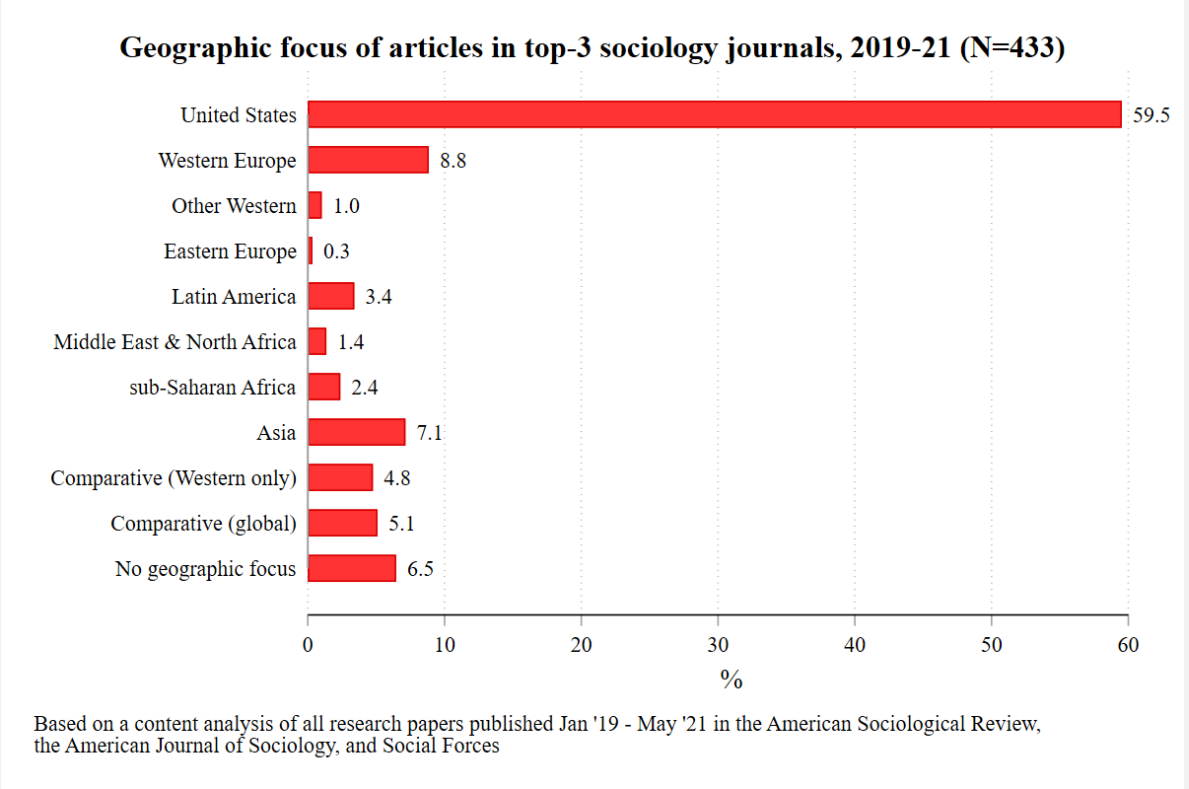
Note. WEIRD, Western, educated, industrialized, rich, and democratic.

20:29 · 04 Apr 21 · Twitter Web App

2 Retweets **1** Quote Tweet **12** Likes

Eurocentrism in Social Sciences

"Social Science has been Eurocentric throughout its institutional history, […]. Social science is a product of the modern world-system, and Eurocentrism is constitutive of the geoculture of the modern world"



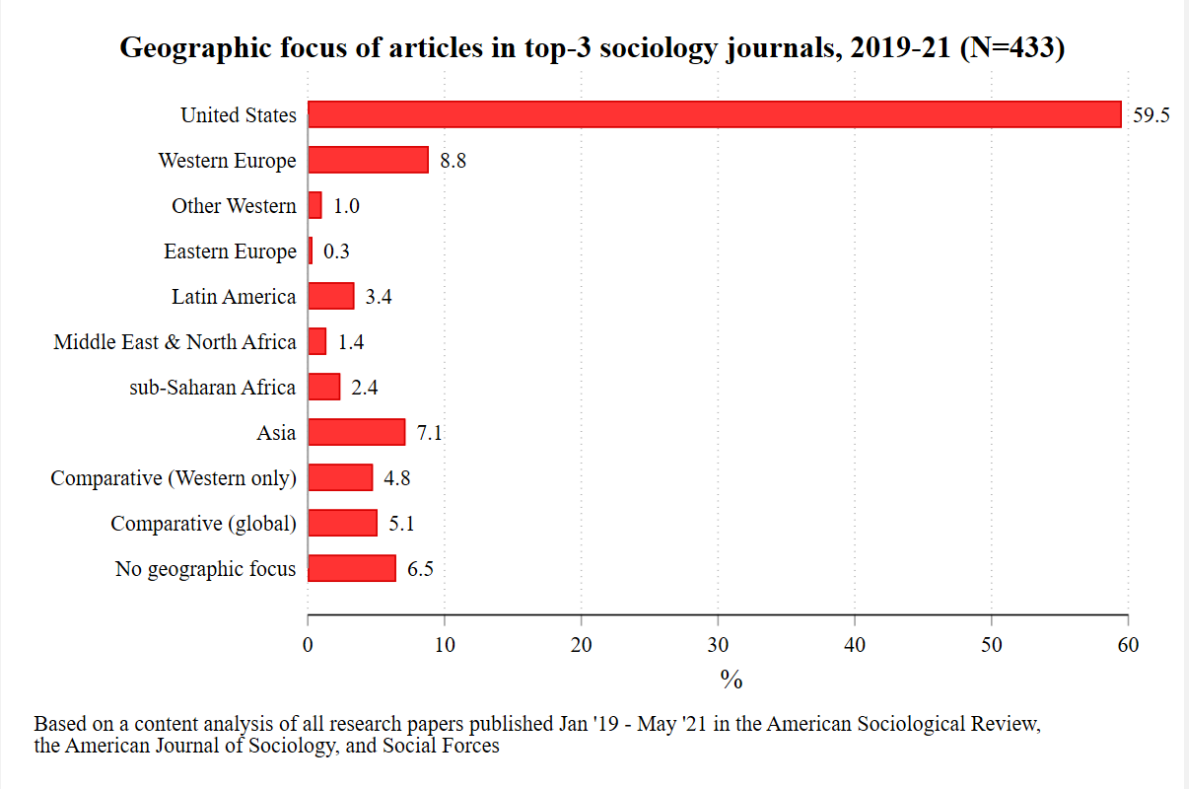
Taken from Rob Gruijters' Twitter account

Wallerstein I (1997) Eurocentrism and its Avatars: The Dilemmas of Social Science. *Sociological Bulletin* 46(1): 21–39. DOI: 10.1177/0038022919970102.

The West as the reference case

"The unsaid privileging of Western countries and Western institutions as **reference cases** is reinforced via Anglo-American journals, which allow some cases in as the default and ask those writing on other cases to explain themselves un much more details."

Krause M (2016) 'Western hegemony' in the social sciences: fields and model systems: 'Western hegemony' in the social sciences: fields and model systems. *The Sociological Review Monographs* 64(2): 194–211. DOI: 10.1002/2059-7932.12008.



Taken from Rob Gruijters' Twitter account

PNAS

RESEARCH ARTICLE | SOCIAL SCIENCES |

North and South: Naming practices and the hidden dimension of global disparities in knowledge production

Andrés F. Castro Torres and Diego Alburez-Gutierrez Authors Info & Affiliations

Edited by Susan Fiske, Princeton University, Princeton, NJ; received October 27, 2021; accepted January 23, 2022

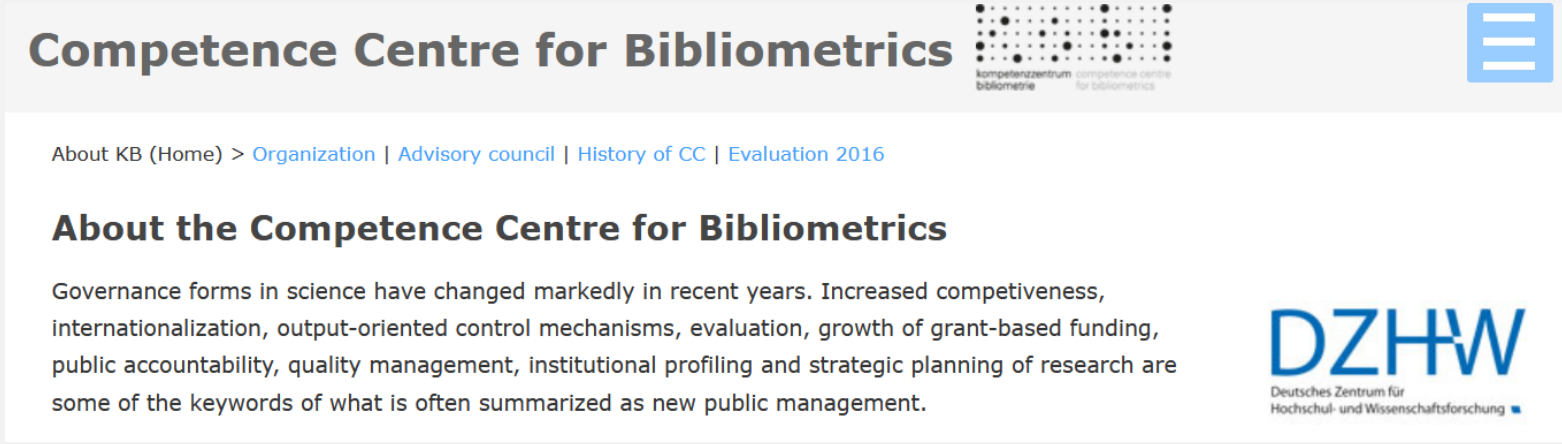
March 1, 2022 | 119 (10) e2119373119 | https://doi.org/10.1073/pnas.2119373119

Data and Methods

Data

- Scopus-indexed publication records (ca. 80 million)
- SQL relational database
- Title, abstract, classification, authors, year, journal, affiliation, etc.

- Competence Centre for Bibliometrics



Sample selection

- Empirical studies only (remove “chapter,” “editorial,” “book review,”, “erratum”, etc.)
- Published between 1996 to 2020
- In “Social Sciences and Humanities” (27 subfields of ACJS category)
- Have an abstract
- Mention at least one country in the abstract

Sample size:

Social science subfields

Code	Field
1212	Religious Studies
1410	Industrial Relations
2000	General Economics, Econometrics and Finance
2001	Economics, Econometrics and Finance (miscellaneous)
2002	Economics and Econometrics
3200	General Psychology
3201	Psychology (miscellaneous)
3202	Applied Psychology
3203	Clinical Psychology
3204	Developmental and Educational Psychology
3205	Experimental and Cognitive Psychology
3207	Social Psychology
3300	General Social Sciences
3301	Social Sciences (miscellaneous)
3303	Development
3304	Education
3305	Geography, Planning and Development
3306	Health (social science)
3312	Sociology and Political Science
3314	Anthropology
3316	Cultural Studies
3317	Demography
3318	Gender Studies
3319	Life-span and Life-course Studies
3320	Political Science and International Relations
3321	Public Administration
3322	Urban Studies

Code	Field
1200	General Arts and Humanities
1201	Arts and Humanities (miscellaneous)
1202	History
1203	Language and Linguistics
1204	Archeology (arts and humanities)
1205	Classics
1206	Conservation
1207	History and Philosophy of Science
1208	Literature and Literary Theory
1209	Museology
1210	Music
1211	Philosophy
1213	Visual Arts and Performing Arts
1400	General Business, Management and Accounting
1401	Business, Management and Accounting (miscellaneous)
1402	Accounting
1403	Business and International Management
1404	Management Information Systems
1405	Management of Technology and Innovation
1406	Marketing
1407	Organizational Behavior and Human Resource Management
1408	Strategy and Management
1409	Tourism, Leisure and Hospitality Management
1800	General Decision Sciences
1801	Decision Sciences (miscellaneous)
1802	Information Systems and Management
1803	Management Science and Operations Research
1804	Statistics, Probability and Uncertainty
2003	Finance
3206	Neuropsychology and Physiological Psychology
3302	Archeology
3307	Human Factors and Ergonomics
3308	Law
3309	Library and Information Sciences
3310	Linguistics and Language
3311	Safety Research
3313	Transportation

Measure of interest

$$Localization\ Rate\ (LR) = \frac{n\ (\text{title includes a country}\ |abstract\ includes\ a\ country)}{n(abstract\ includes\ a\ country)}$$

Sample

We classify articles according to the inclusion (or lack thereof) of a country name or country demonym (e.g., Colombian) in the title and abstract. We focus on papers with at least one country mentioned in the abstract.

At least one country mentioned in:			
Article's abstract	**Article's title**		Total
	No	Yes	
No	656,235	30,652	686,887
Yes	324,217	331,520	655,737
No abstract	201,949	39,386	241,335
Total	1,182,401	401,558	1,583,959

Note: The data include articles from 27 fields of the "Social Sciences & Humanities" category, indexed by the Web of Science and SCOPUS, only publications in English are included.

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Total	1,182,401	401,558	1,583,959

Localized papers

Note: The data include articles from 27 fields of the "Social Sciences & Humanities" category, indexed by the Web of Science and SCOPUS, only publications in English are included.

Sample

We classify articles according to the inclusion (or lack thereof) of a country name or country demonym (e.g., Colombian) in the title and abstract. We focus on papers with at least one country mentioned in the abstract.

At least one country mentioned in:			
Article's abstract	**Article's title**		Total
	No	Yes	
No	656,235	30,652	686,887
Yes	324,217	331,520	655,737
	49%	51%	100%
No abstract	201,949	39,386	241,335
Total	1,182,401	401,558	1,583,959

Localization Rate (LR)

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Sample

We classify articles according to the inclusion (or lack thereof) of a country name or country demonym (e.g., Colombian) in the title and abstract. We focus on papers with at least one country mentioned in the abstract.

At least one country mentioned in:			
Article's abstract	**Article's title**		Total
	No	Yes	
No	656,235	30,652	686,887
	96%	4%	100%
Yes	324,217	331,520	655,737
	49%	51%	100%
No abstract	201,949	39,386	241,335
	84%	16%	100%
Total	1,182,401	401,558	1,583,959
	75%	25%	100%

Note: The data include articles from 27 fields of the "Social Sciences & Humanities" category, indexed by the Web of Science and SCOPUS, only publications in English are included.

Country name extraction

- Assume that country name reflects geographical focus of paper
- Locate country name in title and abstract
- Exclude subnational or supranational entities (e.g., cities, continents)
- Exclude copyright statements (e.g., “© Akademiai Kiado, Budapest, Hungary 2014”).

Some examples from our data set

Localized papers

```
[1] "Demographic transition, demographic dividend and economic growth in Nigeria"
[2] "The meeting of myths and realities: The \"homecoming\" of second-generation exiles in post-apartheid South Africa"
[3] "Untraditional caring arrangements among parents living apart: The case of Norway"
[4] "Human Rights, Positive Obligations, and Measures to Prevent Human Trafficking in the United Kingdom"
[5] "A new projection of the number of recipients of the care allowance to the year 2030 in the Czech Republic"
[6] "Fertility and education among British Asian women: A success story of social mobility?"
```

Non-localized papers

```
[1] "International labor visits and knowledge transfers"
[2] "Cohort change, diffusion, and support for gender egalitarianism in cross-national perspective"
[3] "Adoption quarterly special double issue: Using data from the national survey of adoptive parents"
[4] "HOW DOES THE WELFARE STATE INFLUENCE INDIVIDUALS' SOCIAL CAPITAL?: Eurobarometer evidence on individuals' access to informal help"
[5] "The making and unmaking of precarious, ideal subjectsâ€“migration brokerage in the Global South"
[6] "Intermediaries and destination reputations: explaining flows of skilled migration"
> |
```

Regular expression

- ISO 3166–1 country names, abbreviations and demonyms (“countrycode” R package)

```
\bnigeria\b|\bnigerian\b
```

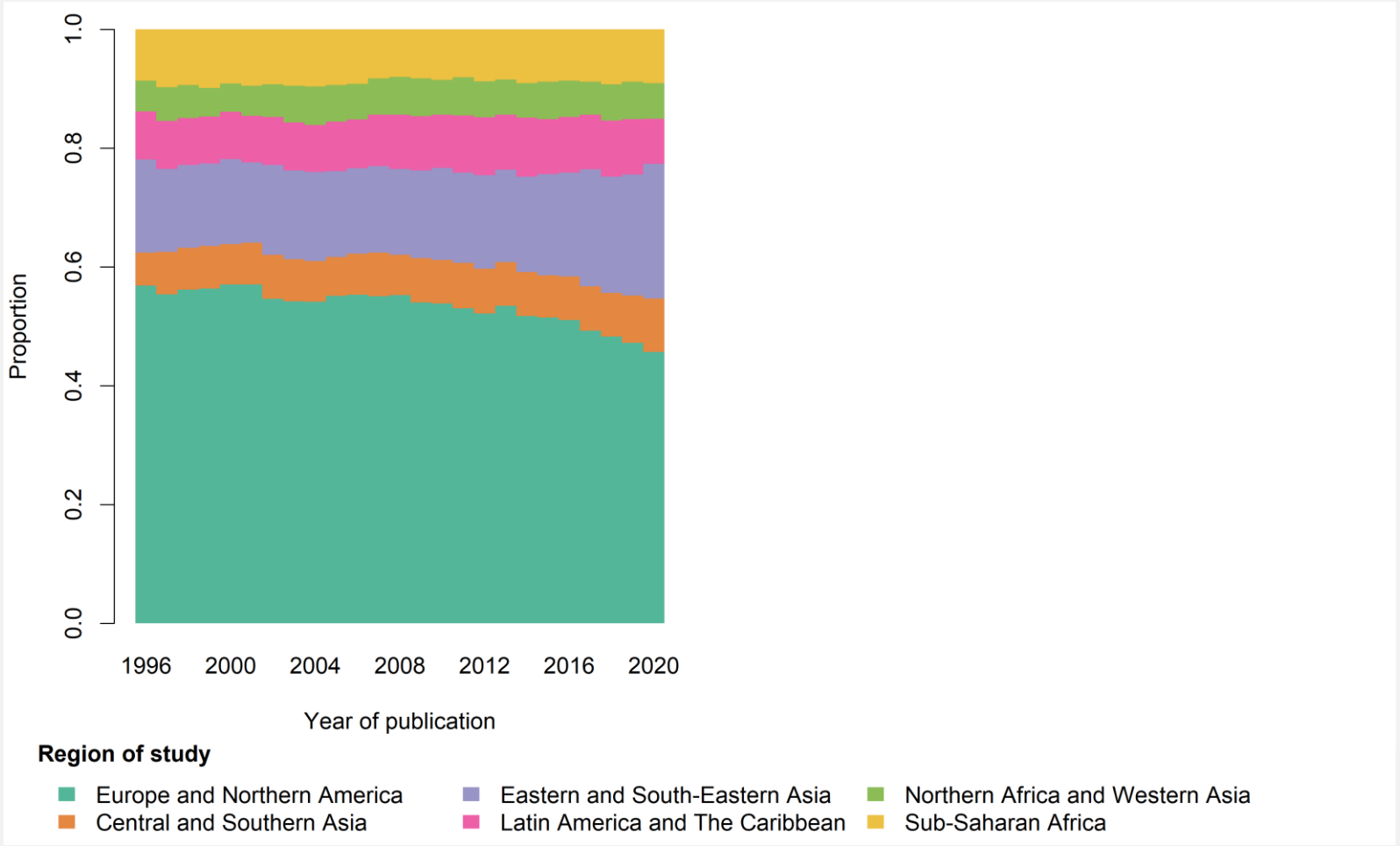
```
\bhungary\b|\bhungarian\b|\bmagyar\b
```

```
^(?!.*\bdem)(?!.*\bd[\.]?r)(?!.*kinshasa)(?!.*zaire)(?!.*belg)(?!.*l.opoldville)(?!.*free).*\bcongo
```

Results

Science production by region

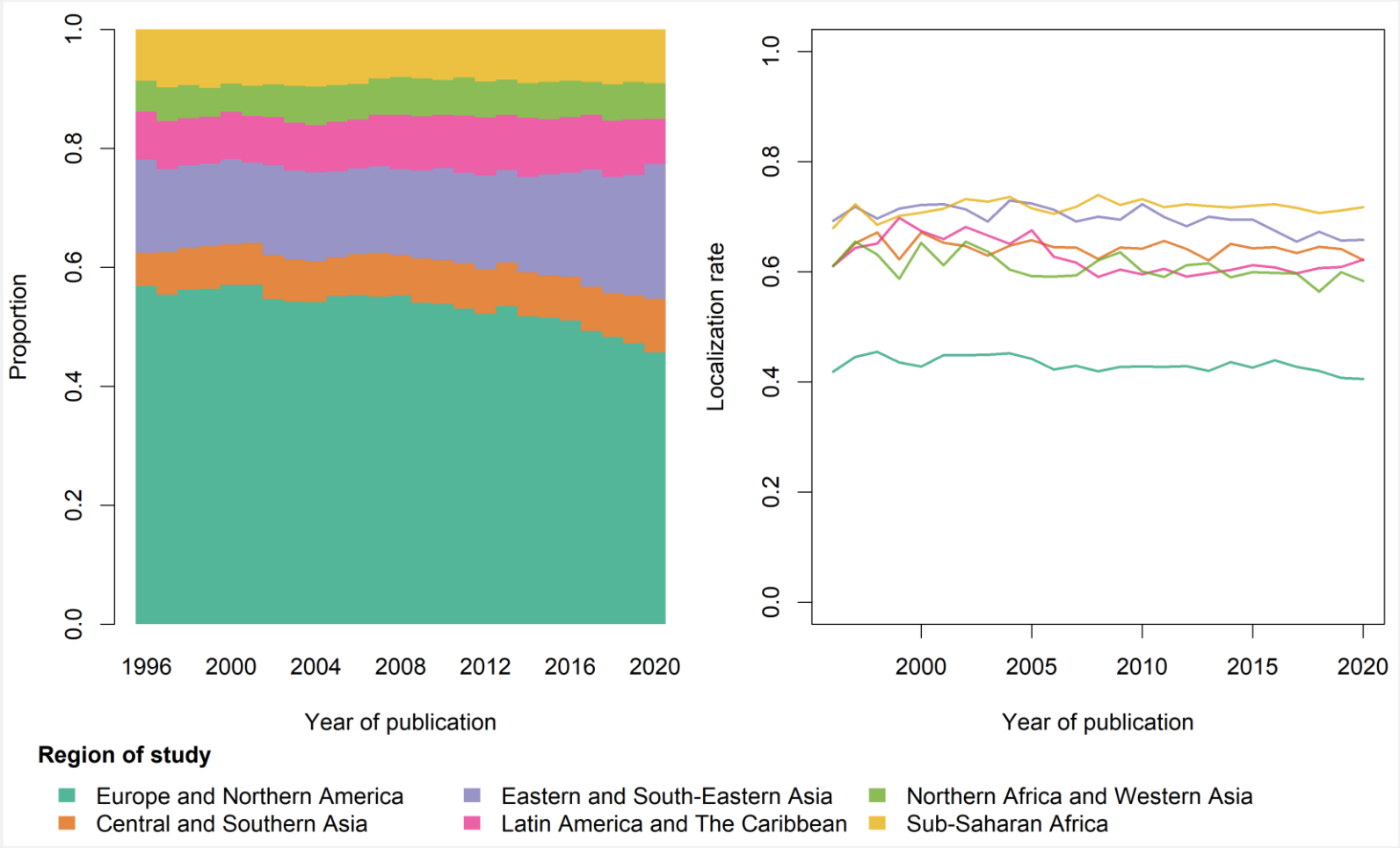
Fig. 2. Distribution of the region of focus of articles in the analytical sample (left) and localization rate by region of study (right), 1996-2020 (n = 560,893).



Note: The regional classification of countries is taken from the United Nations. The category “Europe and North America” includes Australia and New Zealand. Papers about Oceania are excluded from the analysis due to the small sample size (n = 1,583).

Science production AND localization rates

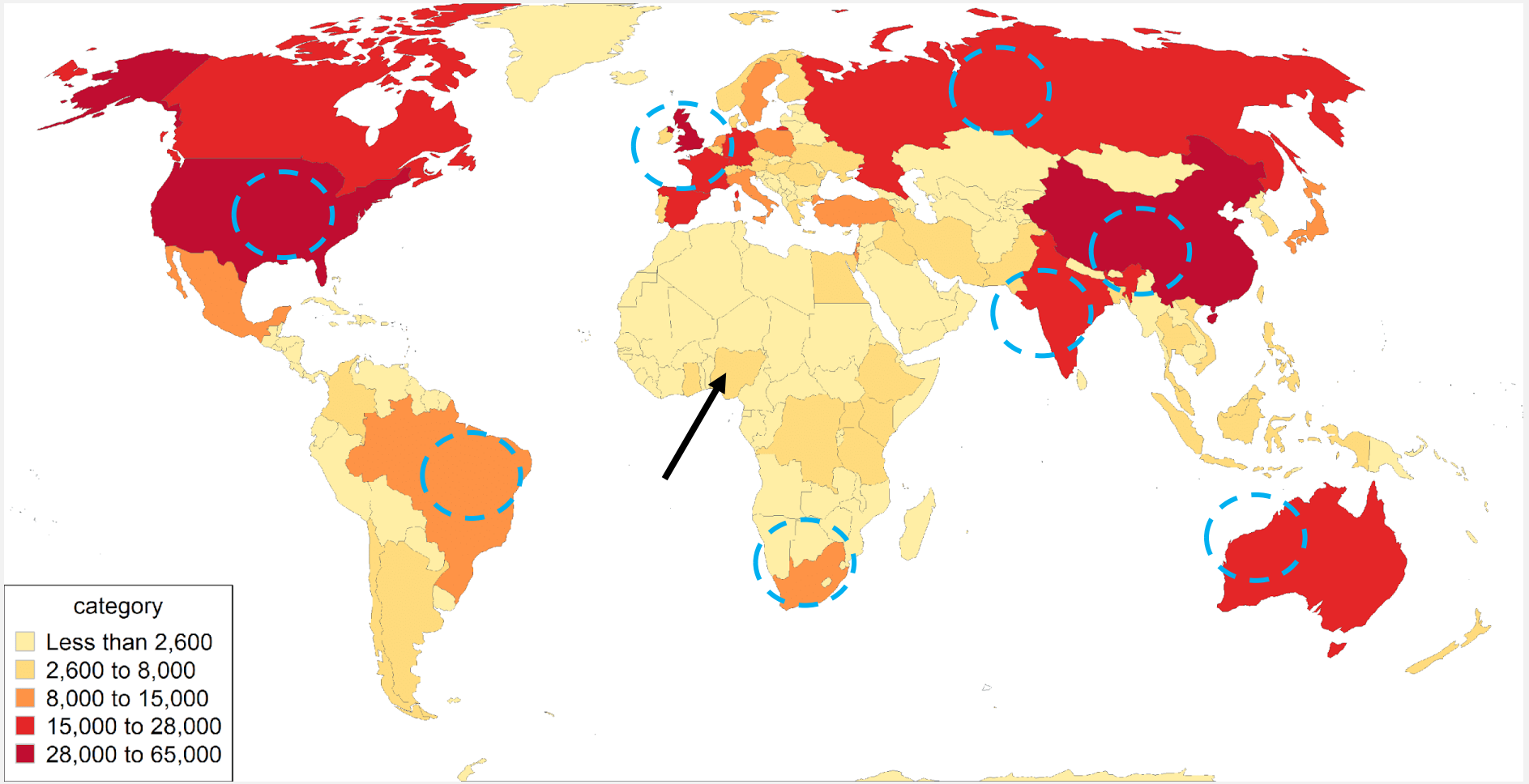
Fig. 2. Distribution of the region of focus of articles in the analytical sample (left) and localization rate by region of study (right), 1996-2020 (n = 560,893).



Note: The regional classification of countries is taken from the United Nations. The category “Europe and North America” includes Australia and New Zealand. Papers about Oceania are excluded from the analysis due to the small sample size (n = 1,583).

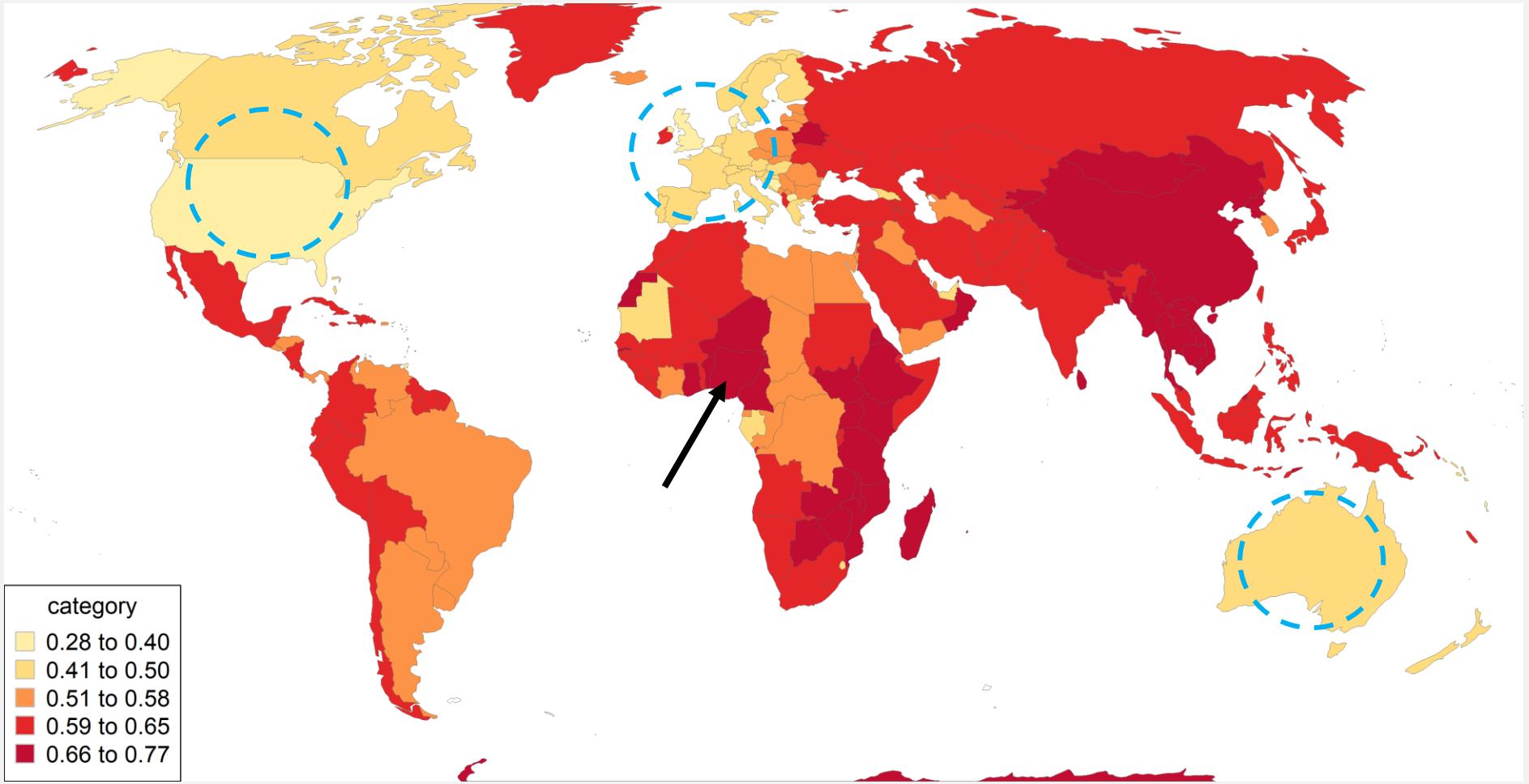
Distribution of science production

Number of mentions in articles' abstract in Social Sciences and Humanities, 1996-2020



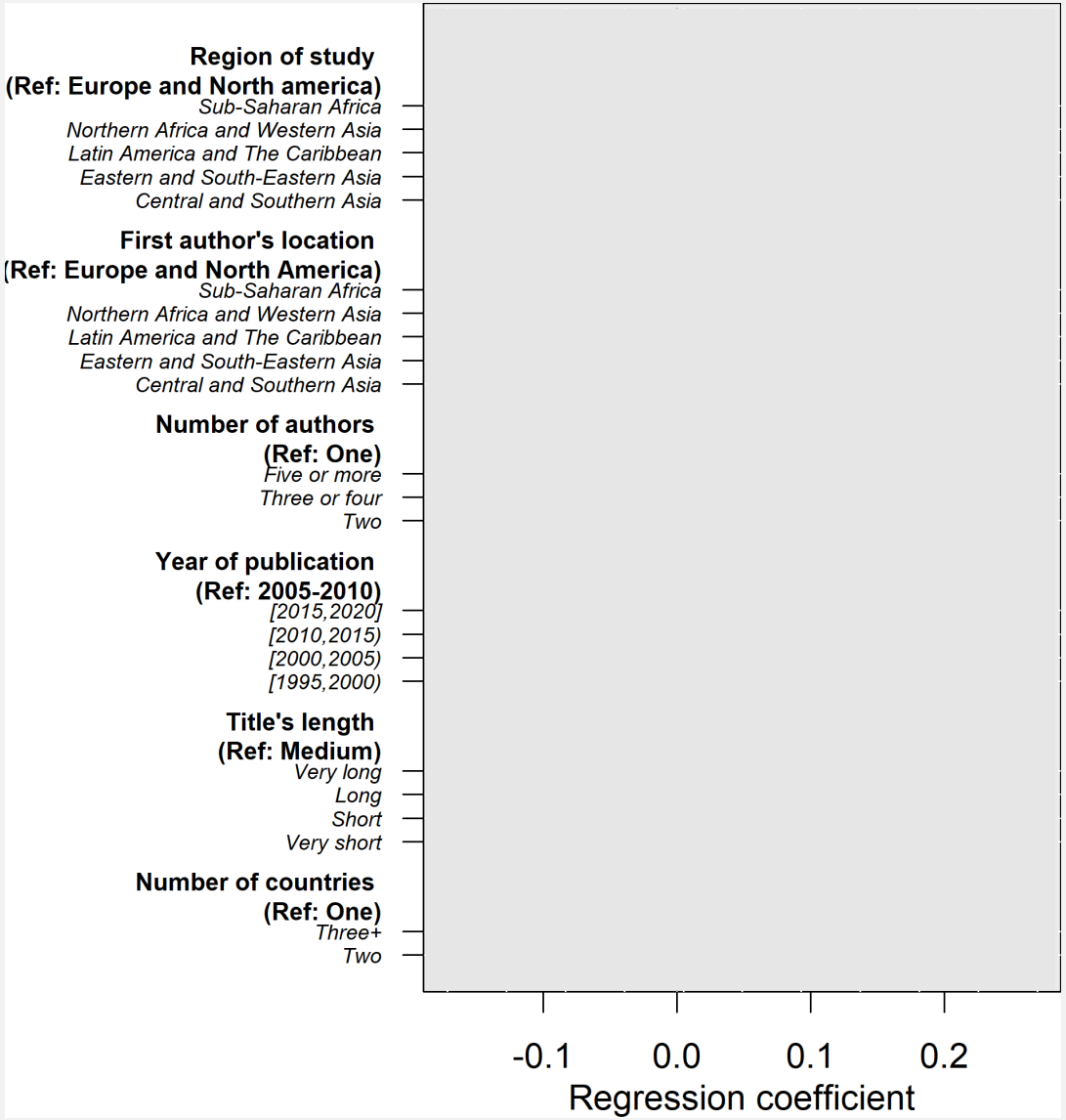
Note: The data include articles from 27 fields of the "Social Sciences & Humanities" category, indexed by SCOPUS, only publications in English are included.

Country-level localization rates

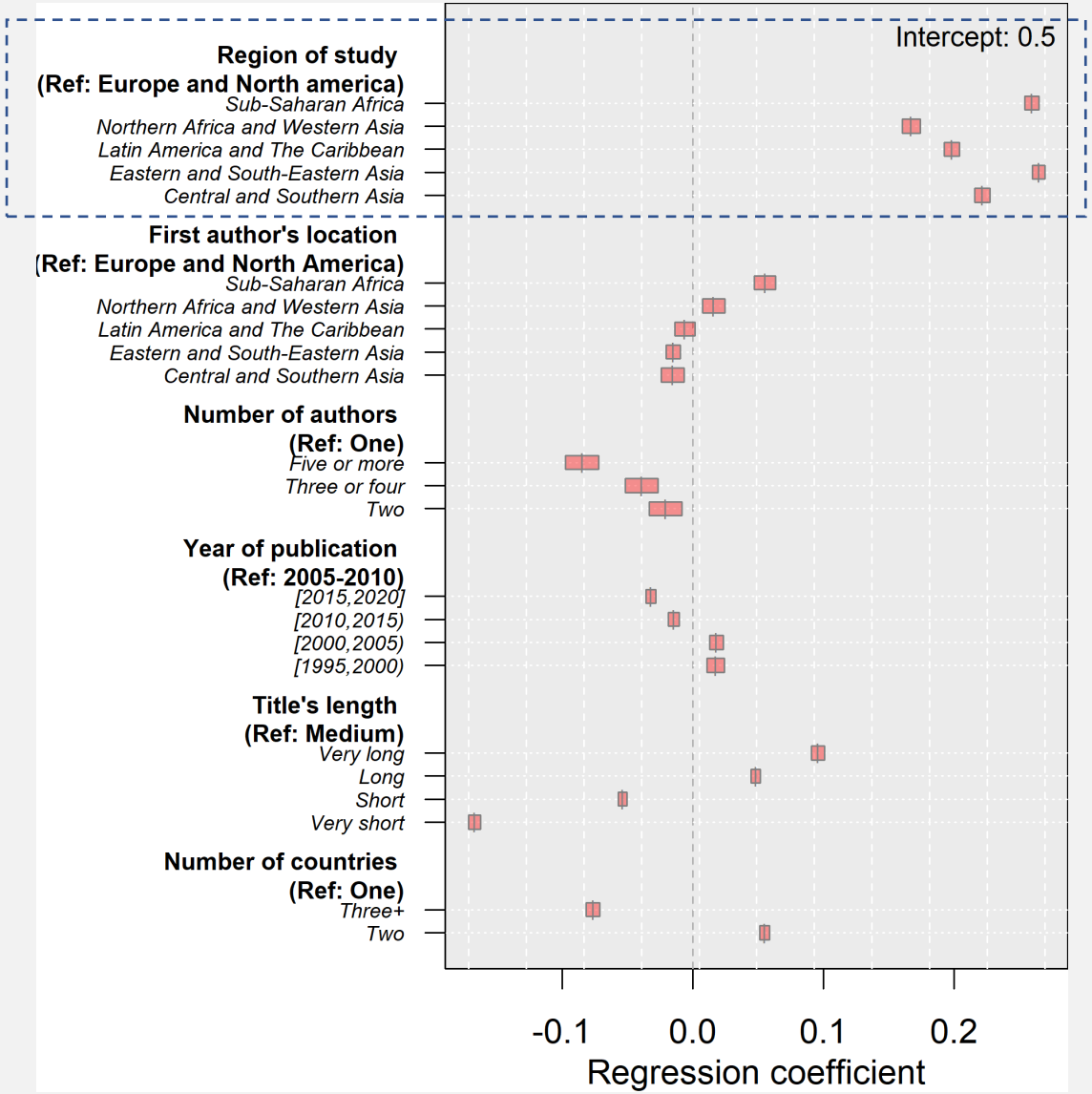


Note: The data include articles from 27 fields of the "Social Sciences & Humanities" category, indexed by the Web of Science and SCOPUS, only publications in English are included.

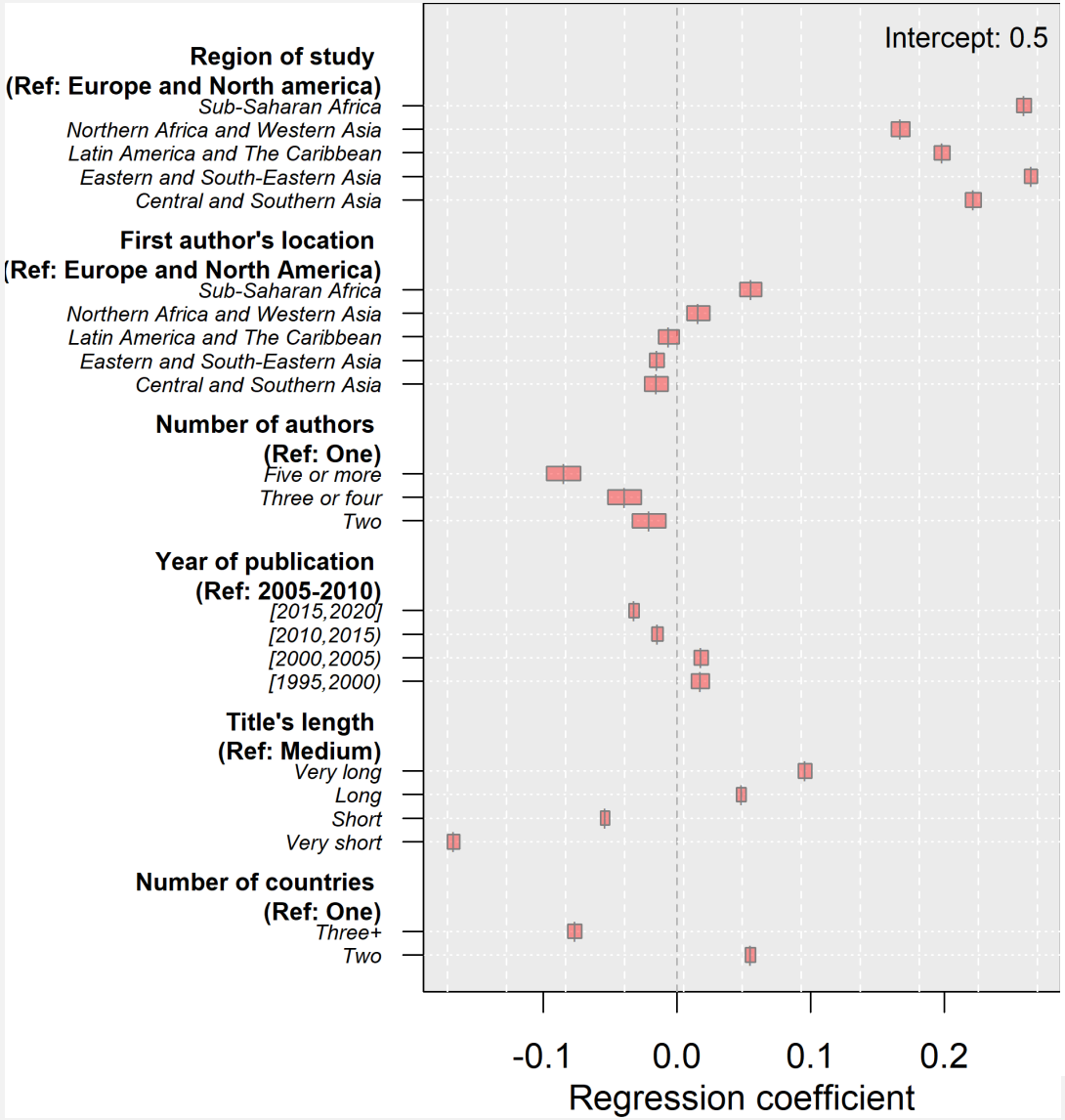
Regression analysis

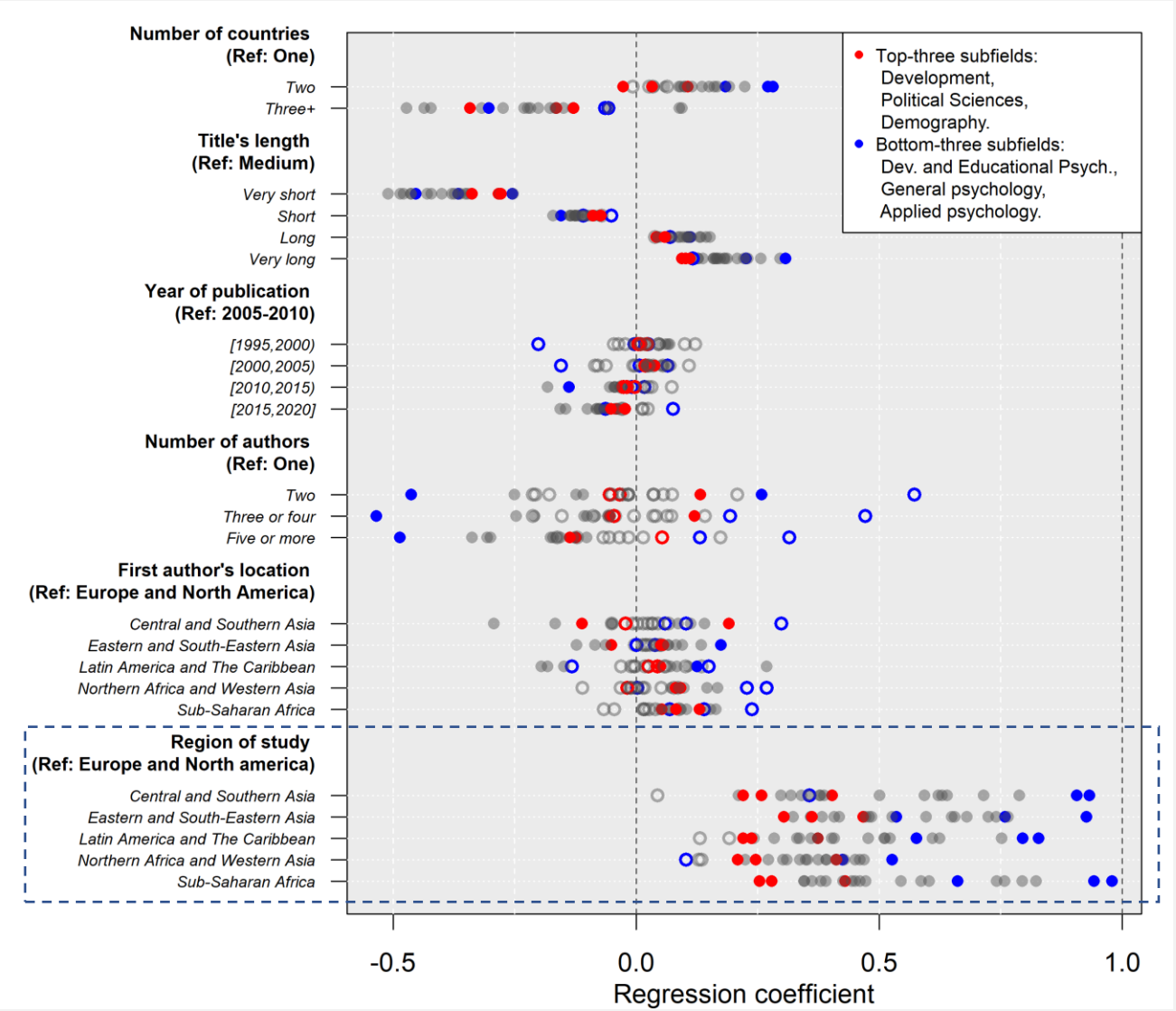


Countries outside Global North more likely to localize

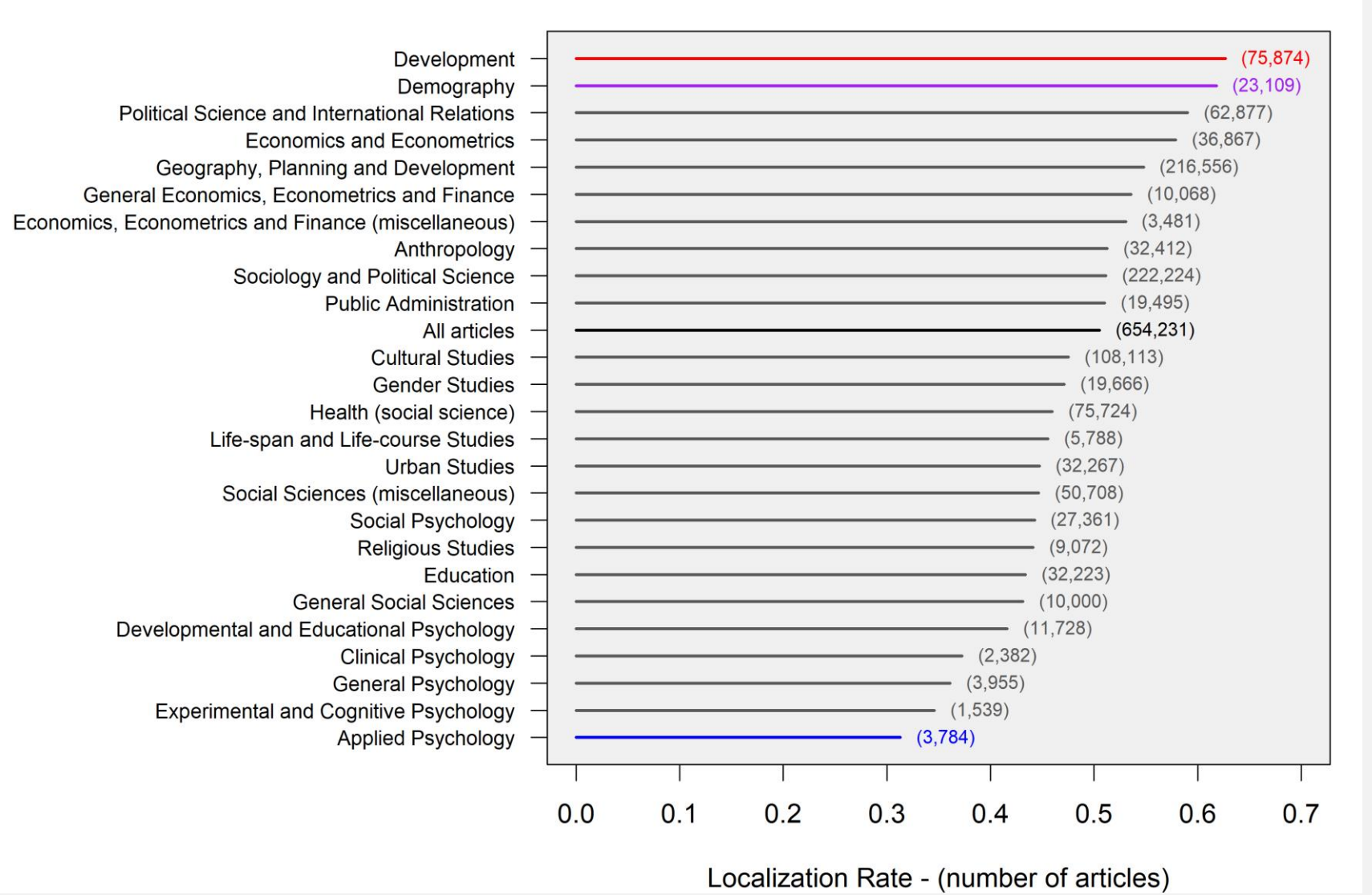


Results hold for all subdisciplines





Localization rate by subdiscipline



Additional analyses

Robustness I

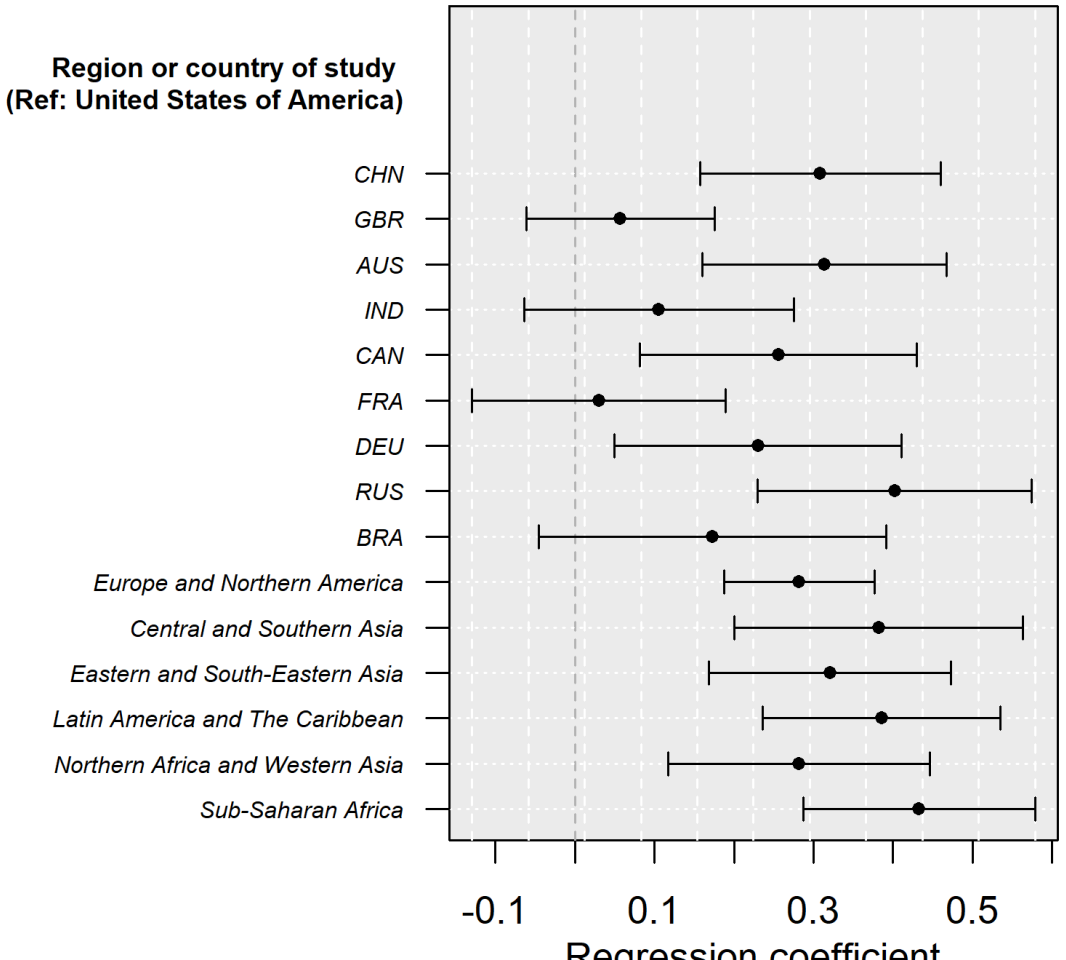
- Two RAs hand coded stratified representative random sample of Scopus data (n = 2,510).
- Research items' titles includes a reference to
  - a national entity (i.e., a country name or demonym)?
  - a subnational entity (e.g., a region or city within a country),
  - or a supranational entity (e.g., a continent)?

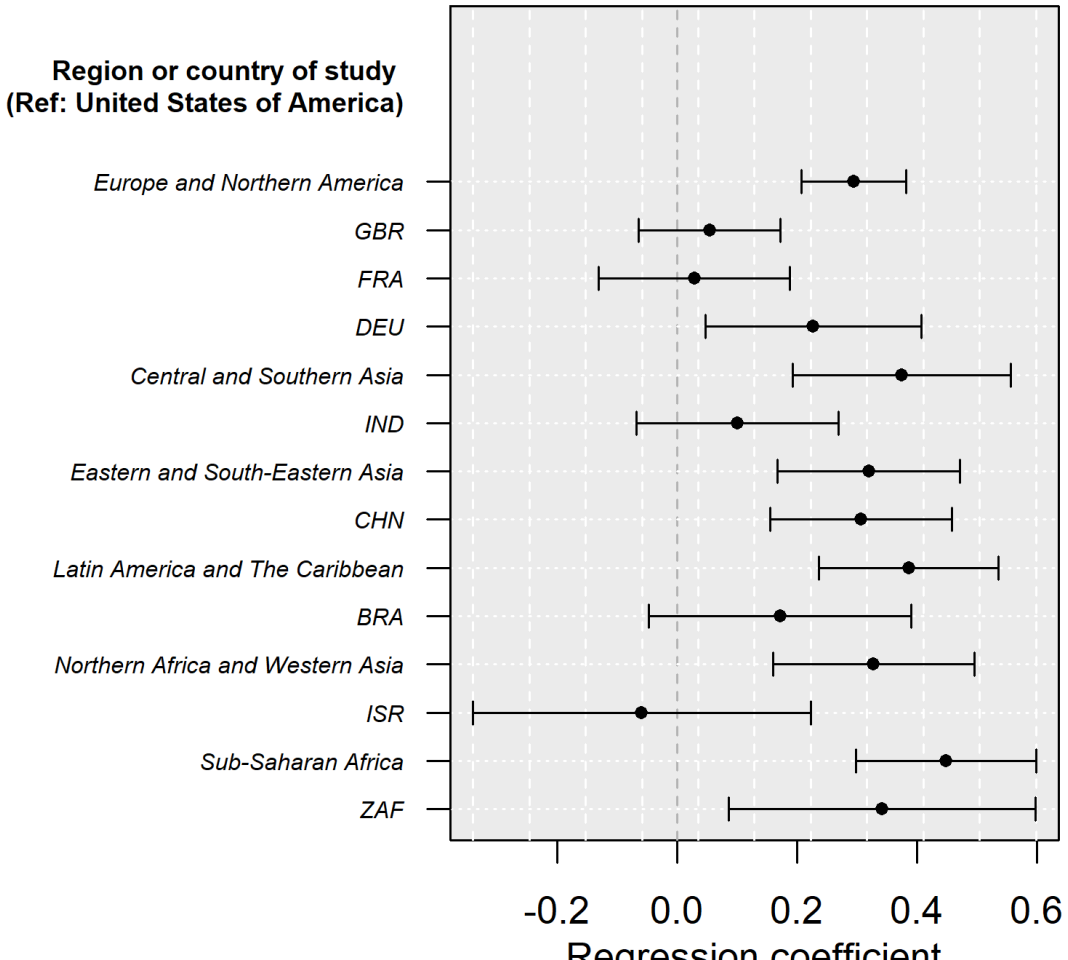
Robustness I

- Algorithms successfully identified 94.3% (SE =0.39) of localized articles.
- Algorithms missed 5.2% (SE =0.42) of subnational and 4.5% (SE =0.39) of supranational units
- 9.3% (s.e. = 0.53) of articles misclassified as being social science publications.

Robustness II

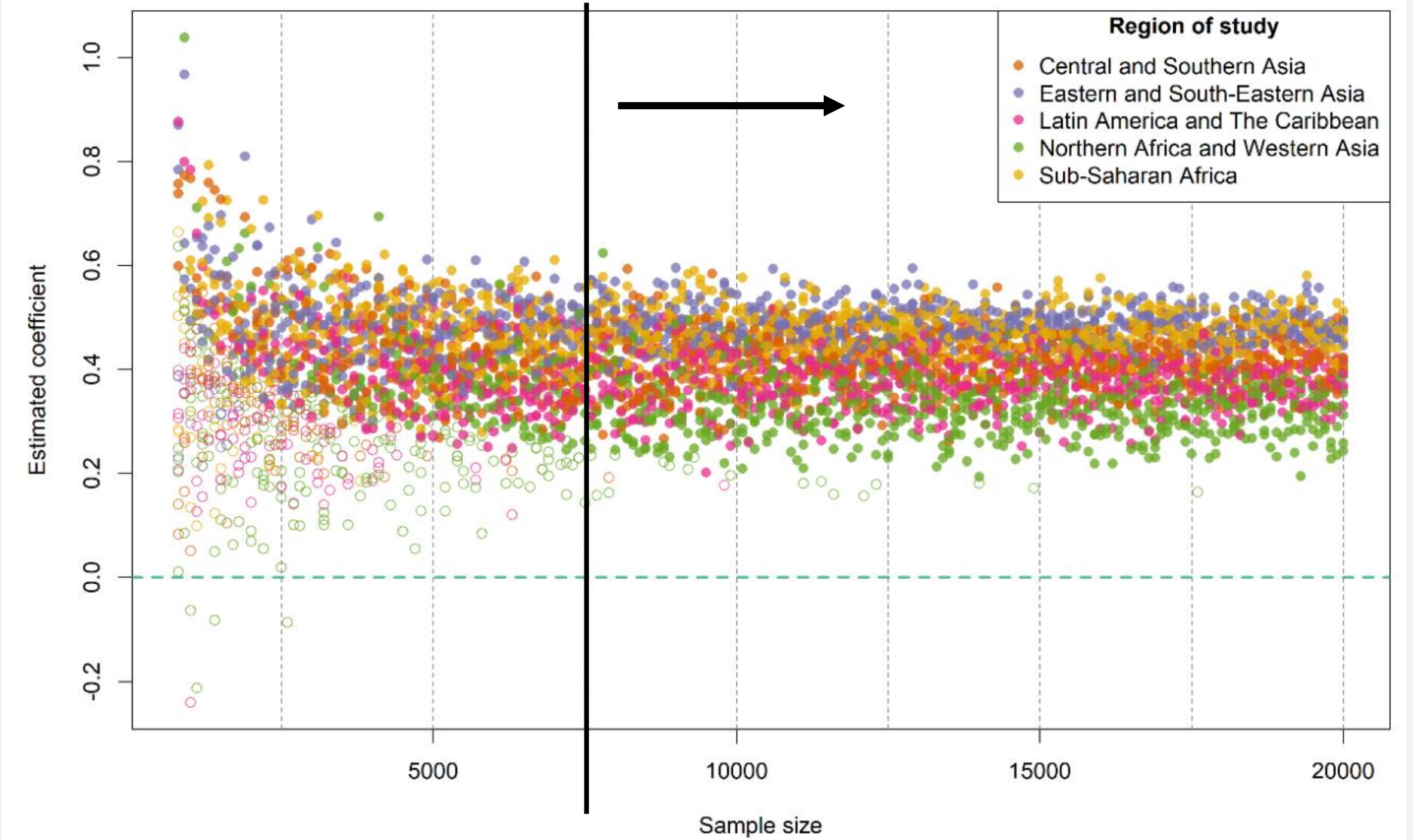
- Replicated results using hand-coded sample (1,195 papers)





Replicating results with smaller samples

- Extracted 1,000 random samples between 800-20,000 papers
- 2,500-5,000articles: all regions except for Northern Africa, Western Asia, Latin America, and the Caribbean.
- 5,000-7,500 articles: all except Northern Africa and Western Asia.
- 7,500 articles: replicate results for all regions


Region of study
Central and Southern Asia
Eastern and South-Eastern Asia
Latin America and The Caribbean
Northern Africa and Western Asia
Sub-Saharan Africa
Estimated coefficient
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
5000
10000
15000
20000
Sample size

Conclusions

Conclusions

1. Large and consistent gaps in localization rates between global North and South

2. Region-specific hegemons (with lower localization rates than neighbors)

3. Robust findings across 23 subfields

Conclusions

1. Knowledge production affected by North/South power imbalances

2. Evidence produced in (and refers to) global North countries more generalizable

3. Essentialist understanding of social processes?

Implications

“[…] generic language in scientific articles may lead readers to reach exaggerated conclusions. […] generic sentences implied that a property was broadly true and conceptually central, and that the category expressed was stable with inherent properties”

DeJesus JM, Callanan MA, Solis G, et al. (2019) Generic language in scientific communication. *Proceedings of the National Academy of Sciences* 116(37): 18370–18377. DOI: 10.1073/pnas.1817706116.

Implications

→ Essentialist understanding of social processes
→ Differentials in the readability and citations
→ Transplantation/imposition of Western problems
→ Non-Western societies, individuals and institutions as exotic

Thank you!

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Number of countries in the abstract