



Defending and Disrupting the Scholarly Ecosystem

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WHO PARTICIPATES IN SCIENCE?

HOW DO THEY PARTICIPATE?

HOW ARE THEY REWARDED?

.....

What is an author?

Michel Foucault (1969)



**“WHAT DOES IT MATTER
WHO IS SPEAKING?”**



.....

Functions of authorship

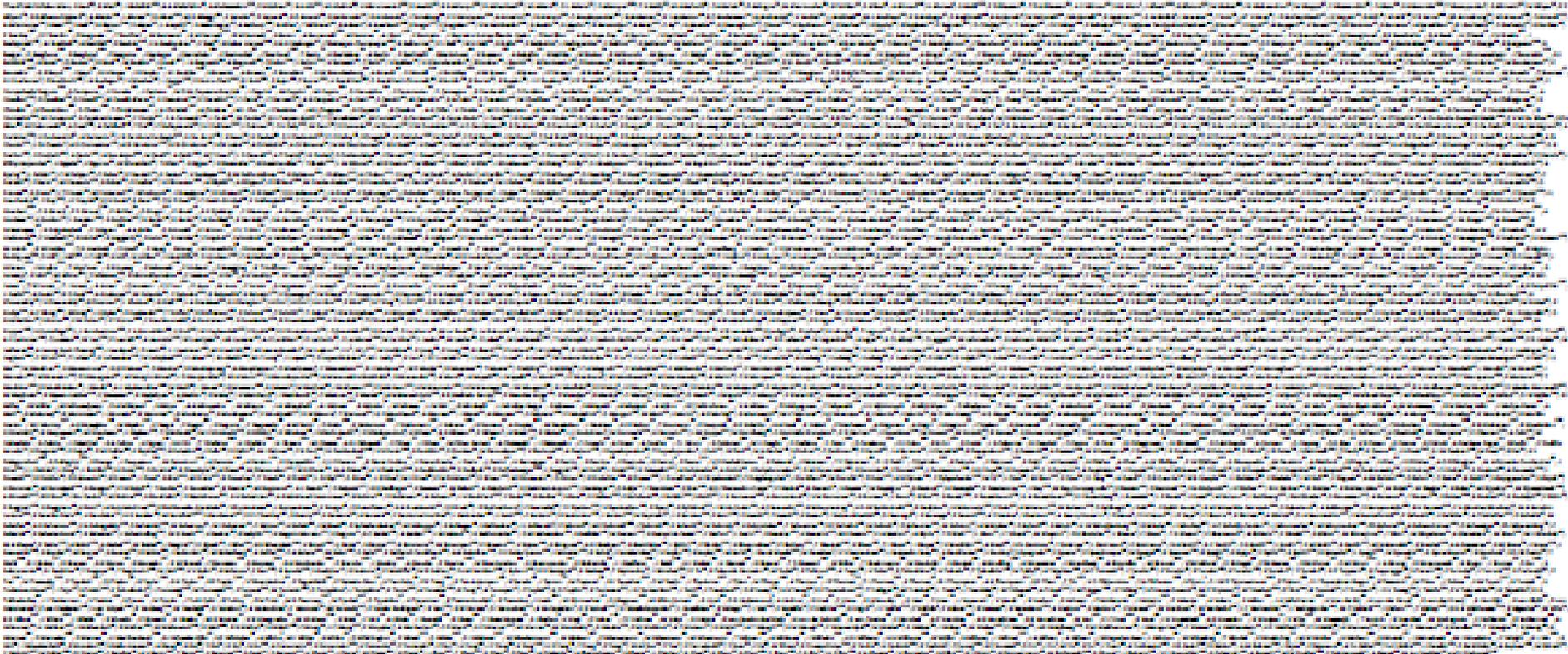
Birnholtz (2006)



.....

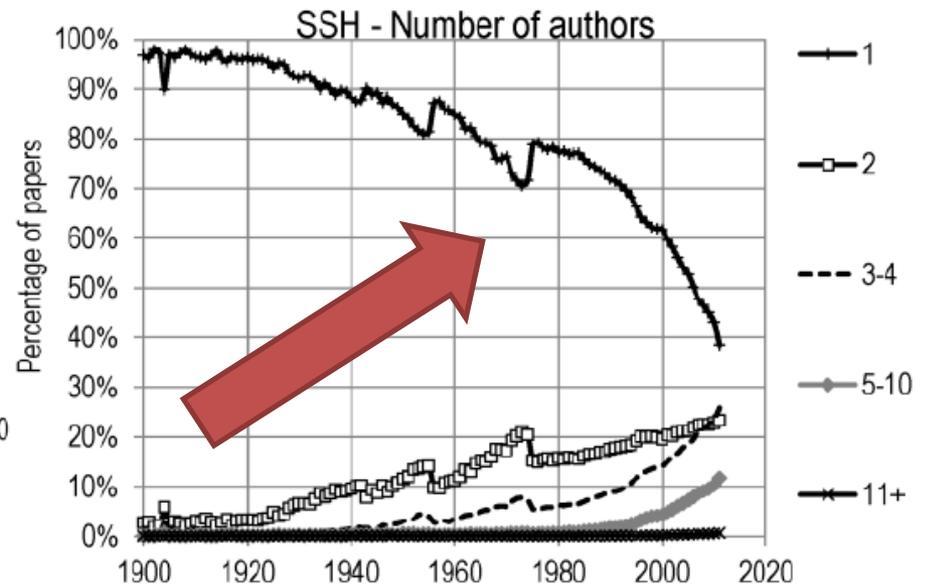
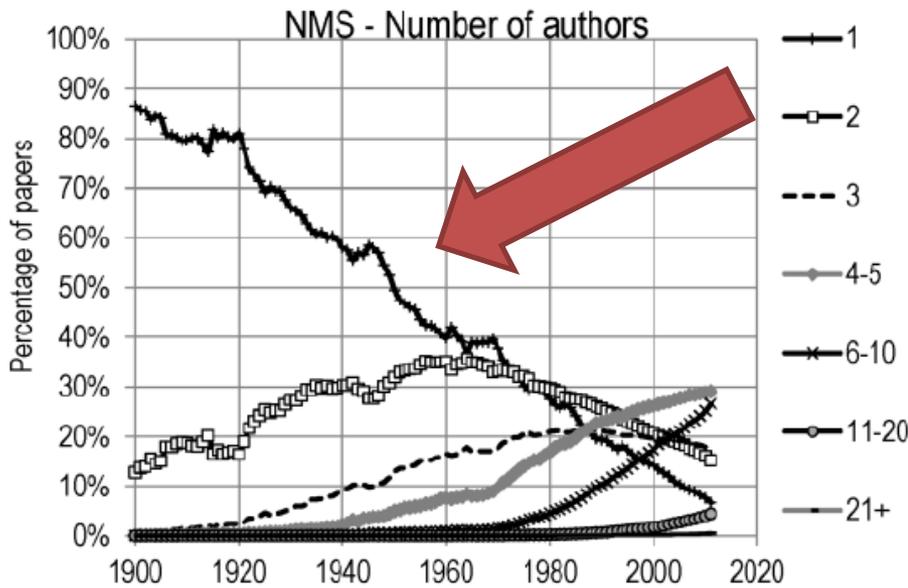
Hyperauthorship

Cronin (2001)



Demise of the single author

Lariviere, Sugimoto, Tsou, & Gingras (2015)



.....

What do we know about authorship?



There are differences by discipline.

--(Pontille, 2004; Biagioli, 2006; Biagioli, 2003; Birnholtz, 2006)

Authors do bad things.

--(Gøtzsche et al., 2007; Flanagin et al., 1998)

Criteria for authorship

ICMJE



Authorship credit should be based on

- 1) substantial contribution to **conception and design, or acquisition of data, or analysis and interpretation of data**; AND
- 2) **drafting the article or revising** it critically for important intellectual content; and AND
- 3) **final approval** of the version to be published. Authors should meet conditions 1, 2, and 3. AND
- 4) Agreement **to be accountable** for all aspects of the work and identify which co-authors are responsible for specific parts of the work. Should have **confidence in the integrity** of the conclusions of their co-authors

**AUTHORSHIP FAILS
TO CAPTURE LABOR**

New forms of attribution

PLOS



 OPEN ACCESS  PEER-REVIEWED

RESEARCH ARTICLE

Nest Etiquette—Where Ants Go When Nature Calls

Tomer J. Czaczkes , Jürgen Heinze, Joachim Ruther

Published: February 18, 2015 • DOI: 10.1371/journal.pone.0118376

Author Contributions

Conceived and designed the experiments: TJC JH JR. Performed the experiments: TJC. Analyzed the data: TJC. Contributed reagents/materials/analysis tools: TJC JH JR. Wrote the paper: TJC JH JR.

Acknowledgments

Thanks to Anna-Theresa Lorenz for caring for the ants, Jan Oettler and Sylvia Cremer for helpful discussions, to Michaela Fink for performing the blind localisation of the ant toilets in the nests, to Christoph Leidig for composing the title of the manuscript, and to Martha Weiss and the anonymous reviewers for improving the manuscript.

Authorship

Contributorship

Acknowledgements

Description of data

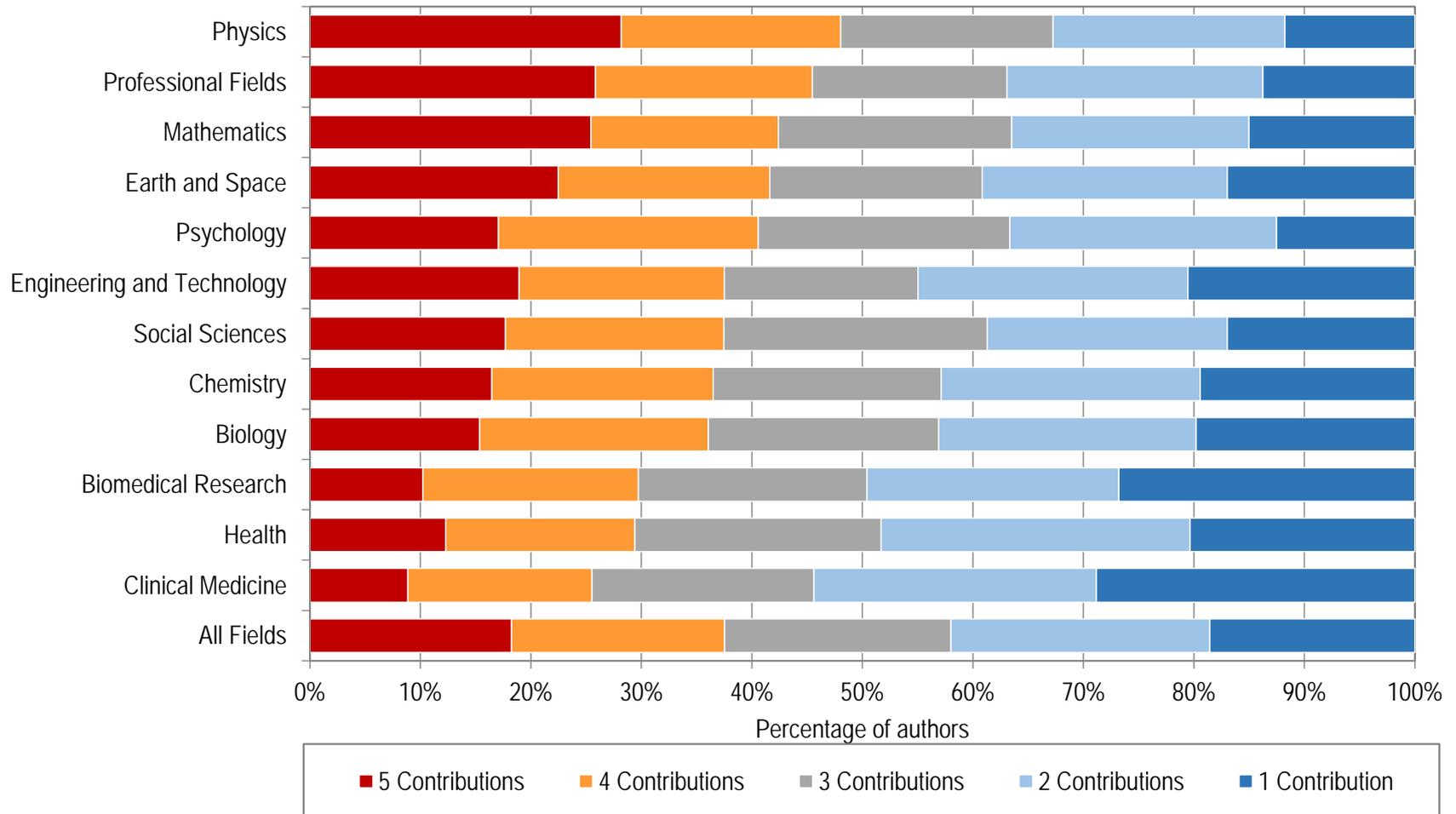
PLoS journal articles



Contribution	Articles		Author-article combinations	
	N	%	N	%
Analyzed the data	85,900	98.7%	320,080	50.6%
Conceived and designed the experiments	85,406	98.2%	288,765	45.6%
Contributed reagents/materials/analysis tools	64,444	74.1%	220,331	34.8%
Performed the experiments	82,811	95.2%	311,679	49.3%
Wrote the paper	86,517	99.4%	287,796	45.5%
<i>Other (20 243)</i>	<i>15,900</i>	<i>18.3%</i>	<i>79,978</i>	<i>12.6%</i>
N distinct papers	87,002	100.0%	632,799	100.0%

How distributed is the labor?

Distribution of contributions, by field



Which contributions are isolated?

Contribution by number of contributions



Contribution	Nb. of Contribution				
	1	2	3	4	5
Analyzed the data	Light Blue	Light Red	Light Red	Light Red	White
Conceived and designed the experiments	Light Blue	Light Blue	Light Red	Light Red	White
Contributed reagents/materials/analysis tools	Light Red	Light Blue	Light Blue	Light Blue	White
Performed the experiments	Red	Light Red	Light Blue	Light Blue	White
Wrote the paper	Light Blue	White	Light Red	Light Red	White

Which contributions are related?

Association between contributions



Contribution	Analyzed the data	Conceived and designed the experiments	Contributed reagents/materials/analysis tools	Performed the experiments	Wrote the paper
Analyzed the data		Red	Blue	Light Red	Red
Conceived and designed the experiments	Red		Blue		Red
Contributed reagents/materials/analysis tools	Blue	Blue		Blue	Blue
Performed the experiments	Light Red		Blue		
Wrote the paper	Red	Red	Blue		

**IS LABOR EQUITABLY
DISTRIBUTED?**

DR. RUTH HUBBARD

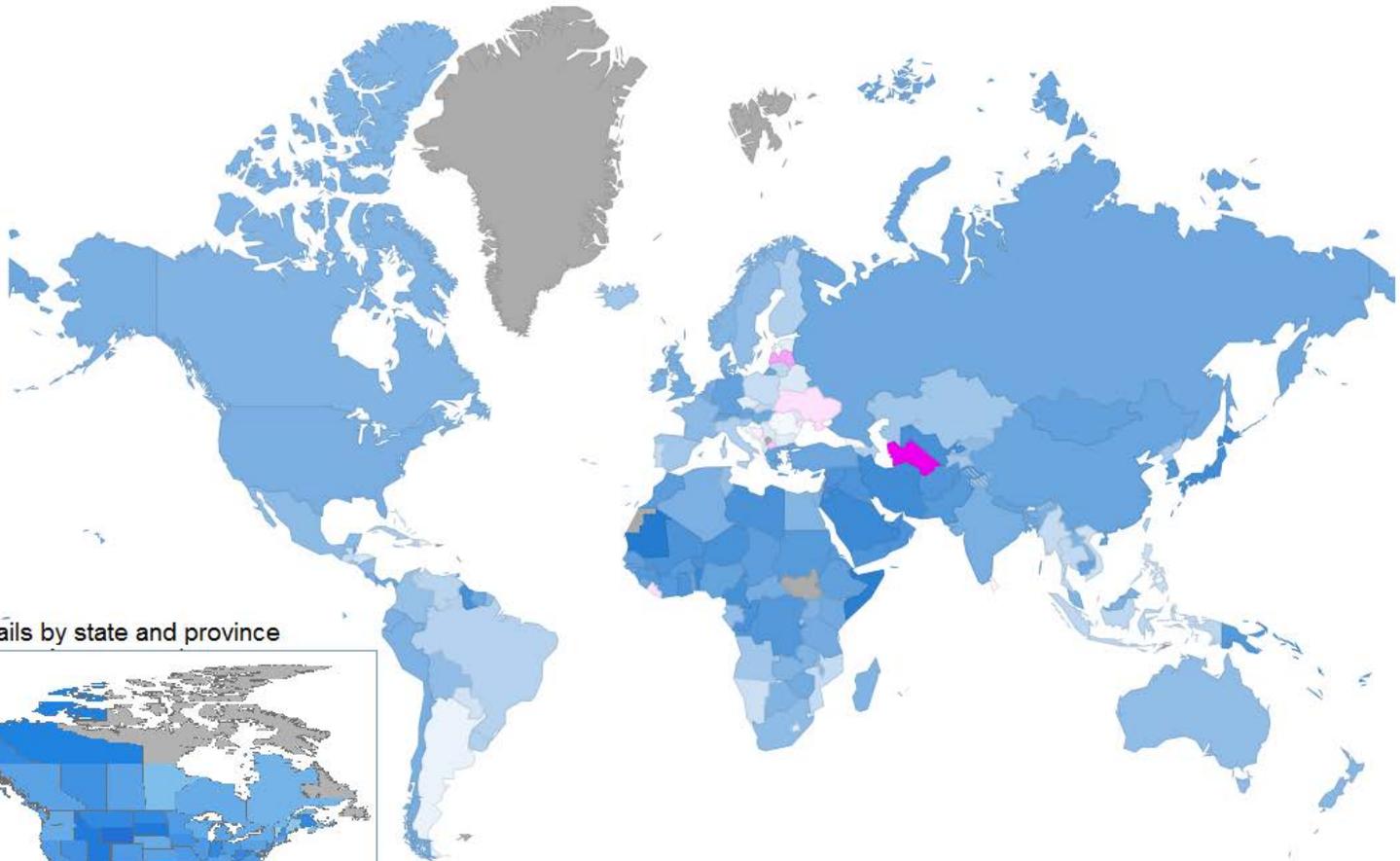
“Women and nonwhite, working-class and poor men have largely been outside the process of science-making. Though we have been described by scientists, by and large we have not been the describers and definers of scientific reality. We have not formulated the questions scientists ask, nor have we answered them. This undoubtedly has affected the content of science, but it has also affected the social context and the ambience in which science is done.” *(New York Times, 1981)*



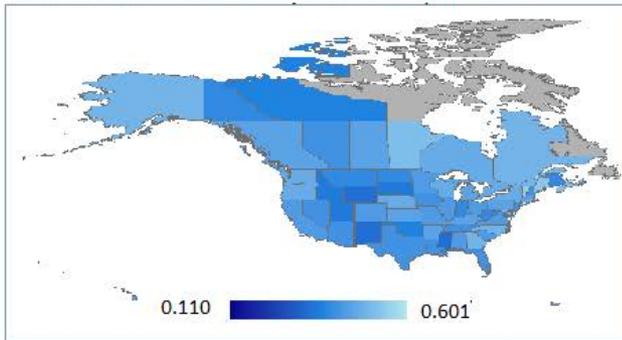
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Gender differences in production?

Female/male productivity by country (2008-2012, Nature)



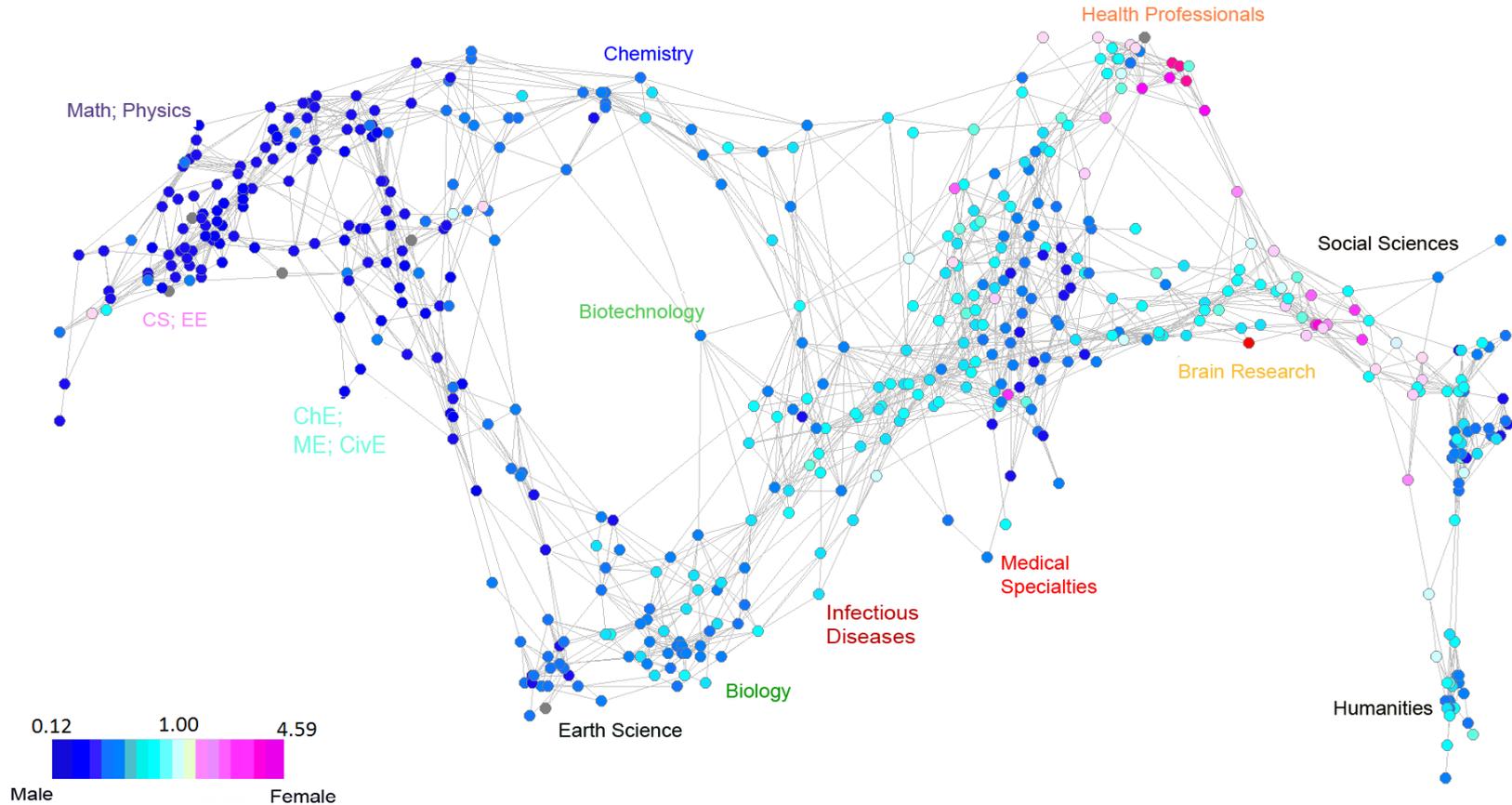
North America details by state and province



0 2.435

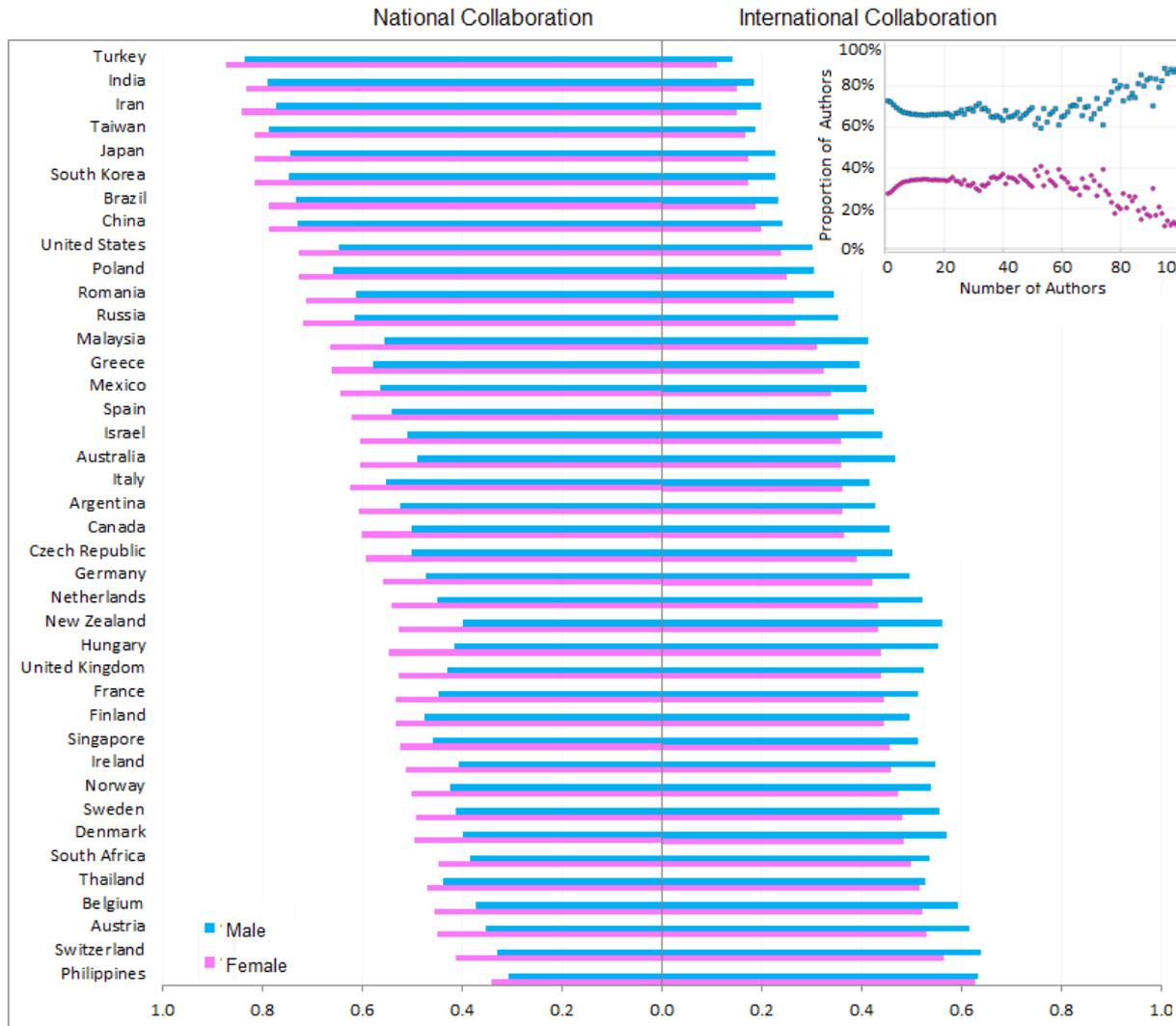
Gender differences by discipline?

Female/male productivity by discipline



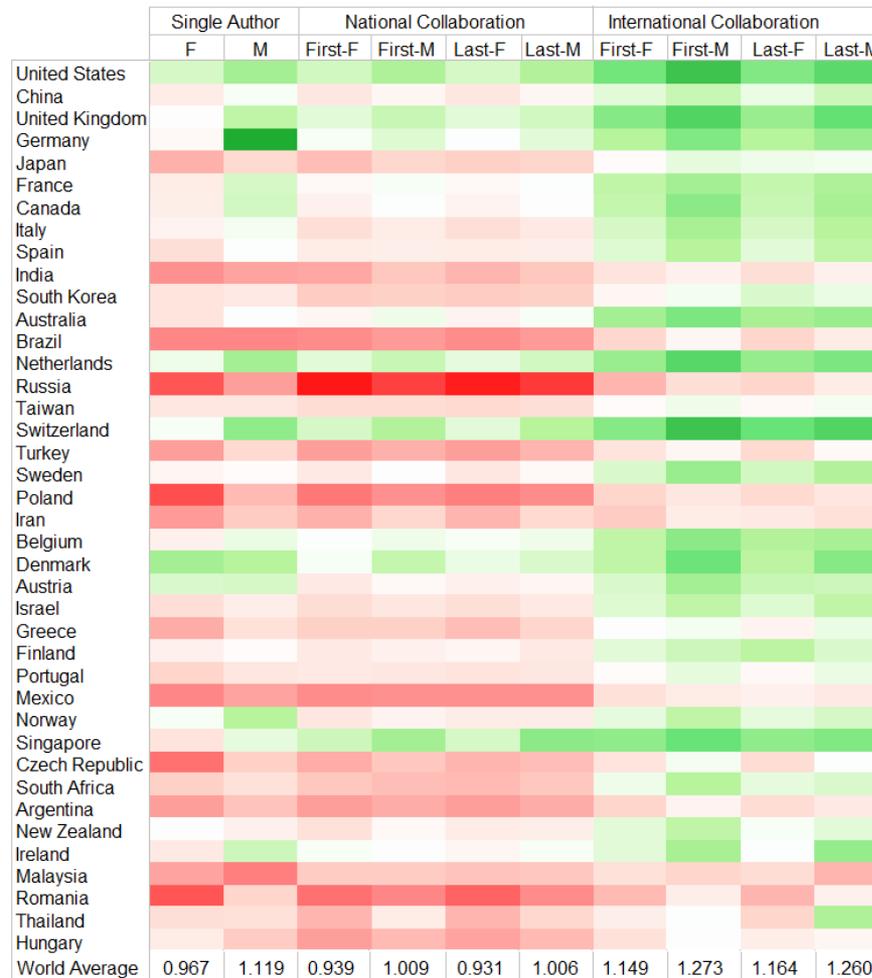
Gender differences in collaboration?

National vs. international collaboration by gender



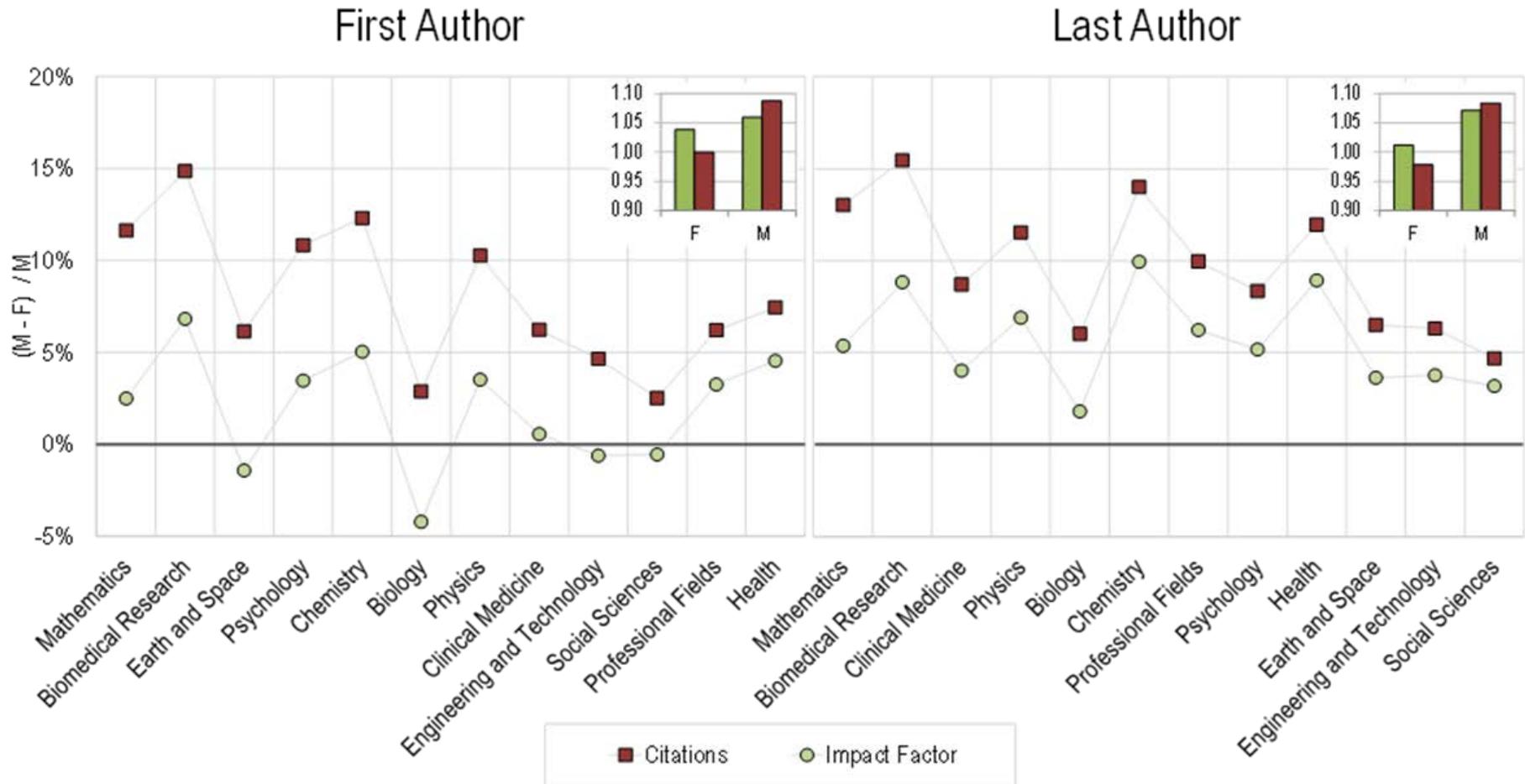
Implications for reward system?

Citation impact by type of collaboration and country



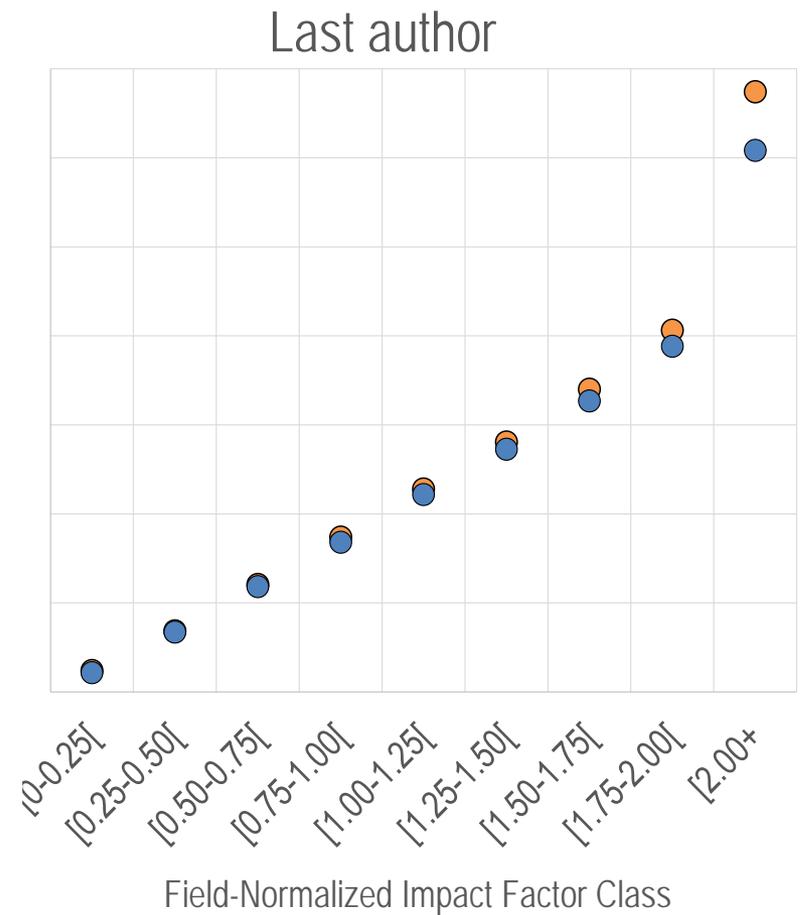
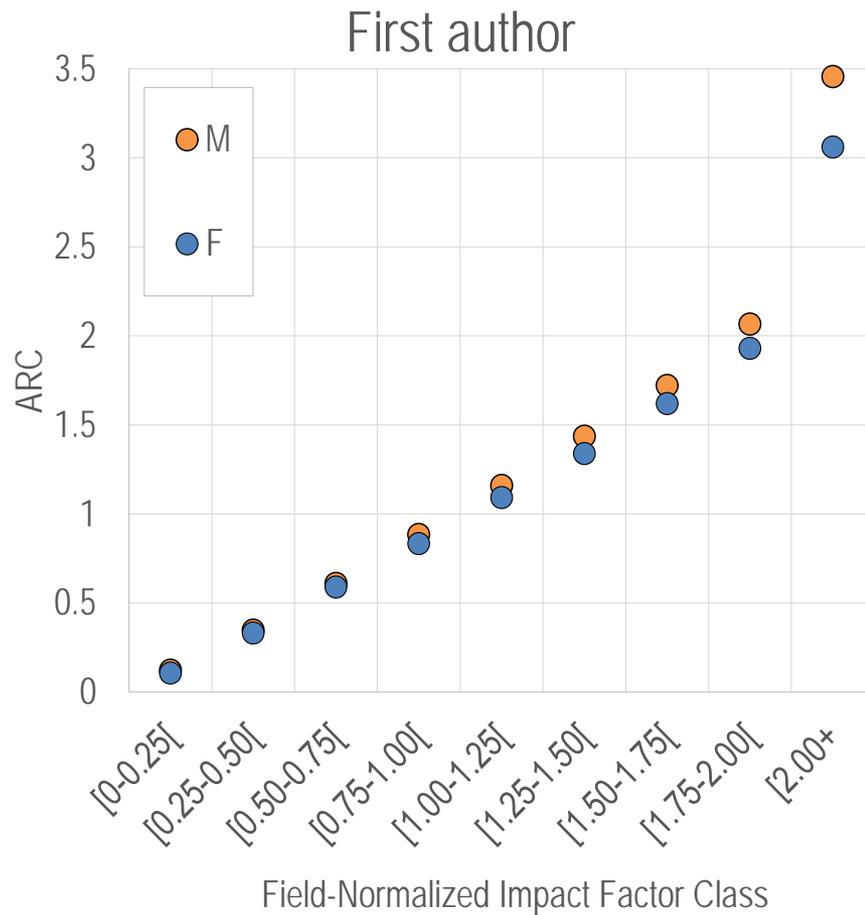
Citations v. Impact Factor

Disparity in citations and impact factor by gender



The impact factor gap

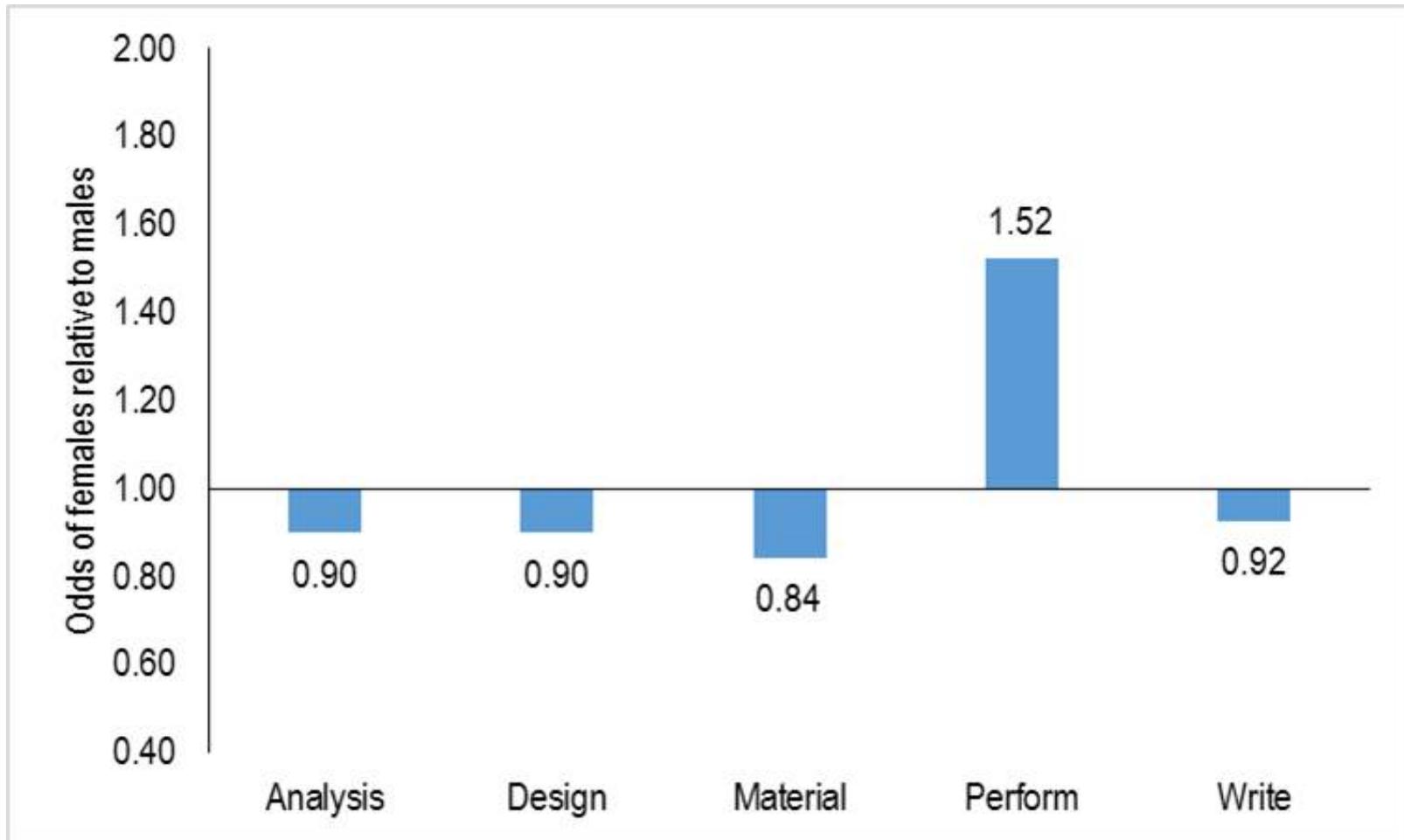
Disparity in impact factor by gender



**WHAT CAN CONTRIBUTORSHIP
REVEAL ABOUT GENDER?**

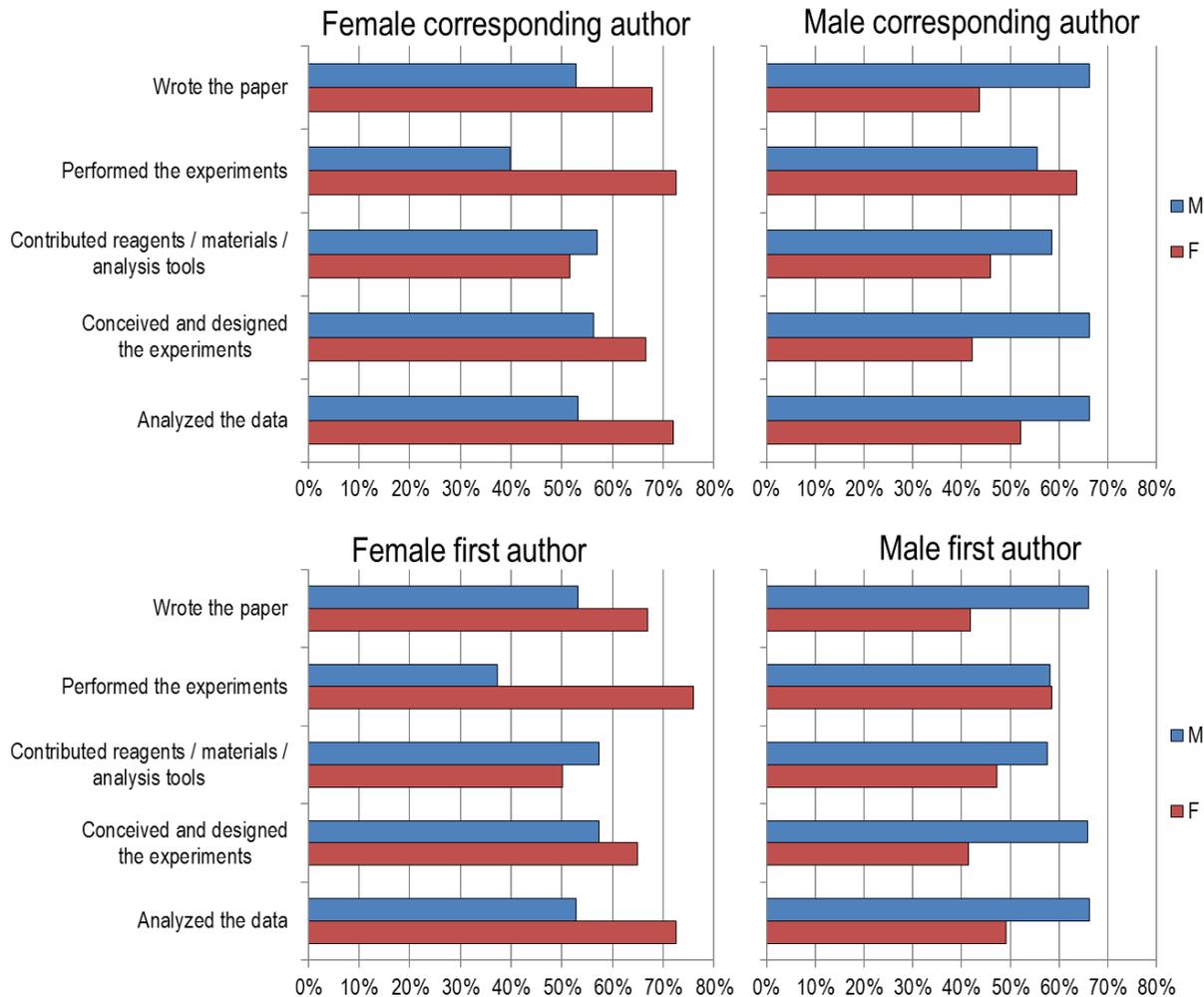
Are labor roles gendered?

Odds of female contribution by type



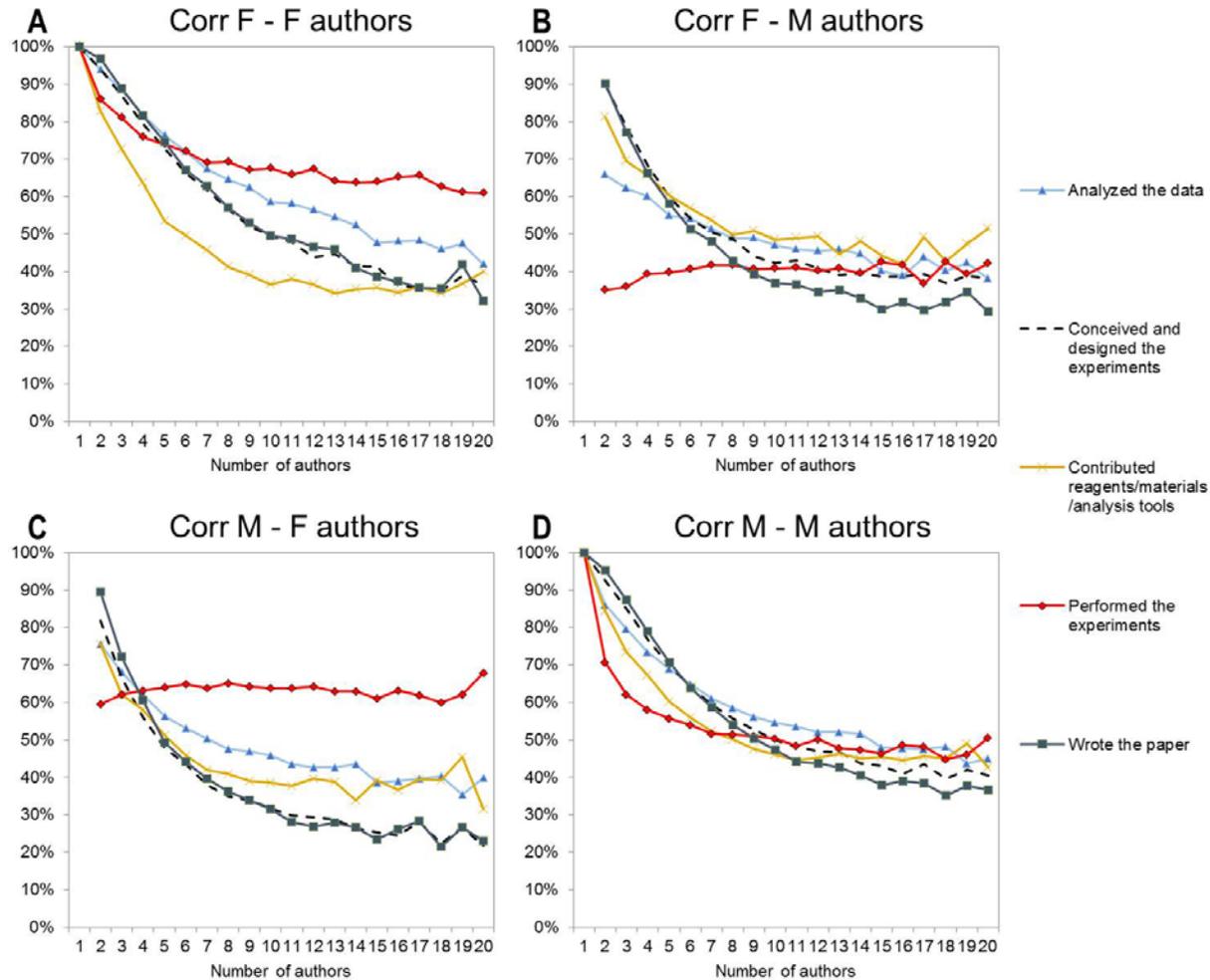
Does the gender of the leader matter?

Proportion of authors contributing by author position



Many hands makes light work...

Contribution distribution by number of authors



**WHAT DO THE
AUTHORS HAVE TO SAY?**

Authorship survey

Asking the authors



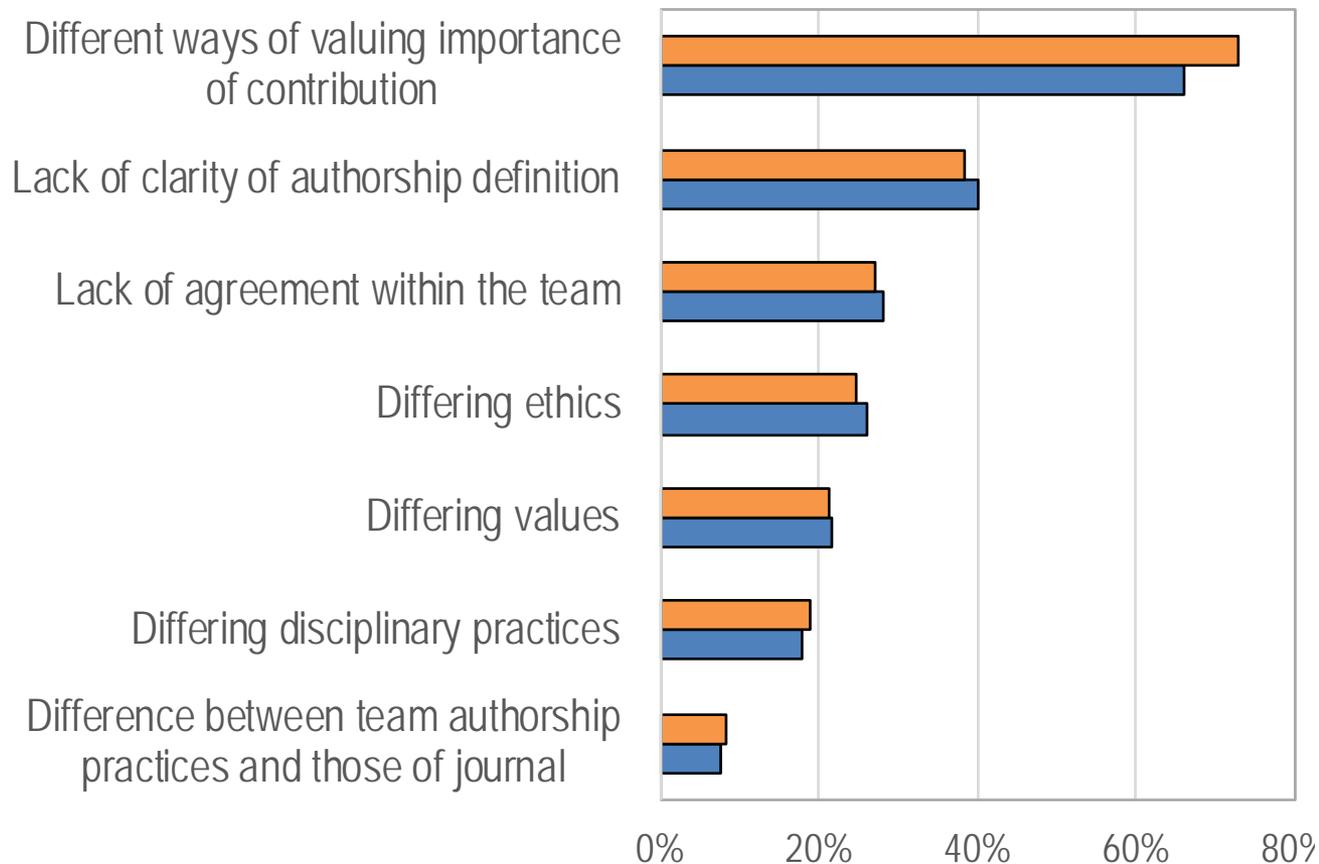
- **Data:** 5309 cases with all relevant variables
(of more than 11k responses)
 - Gender, rank, discipline, # of collaboratively authored publications
 - Question: “Have you ever encountered disagreement regarding authorship naming?” (yes/no)
- **Method:** Logistic regression
- **Results:** Controlling for all other variables, **women were significantly ($p < .000$) more likely to report author disputes than men.**

Disagreement factors by gender

Percentage of “very important” or “extremely important”

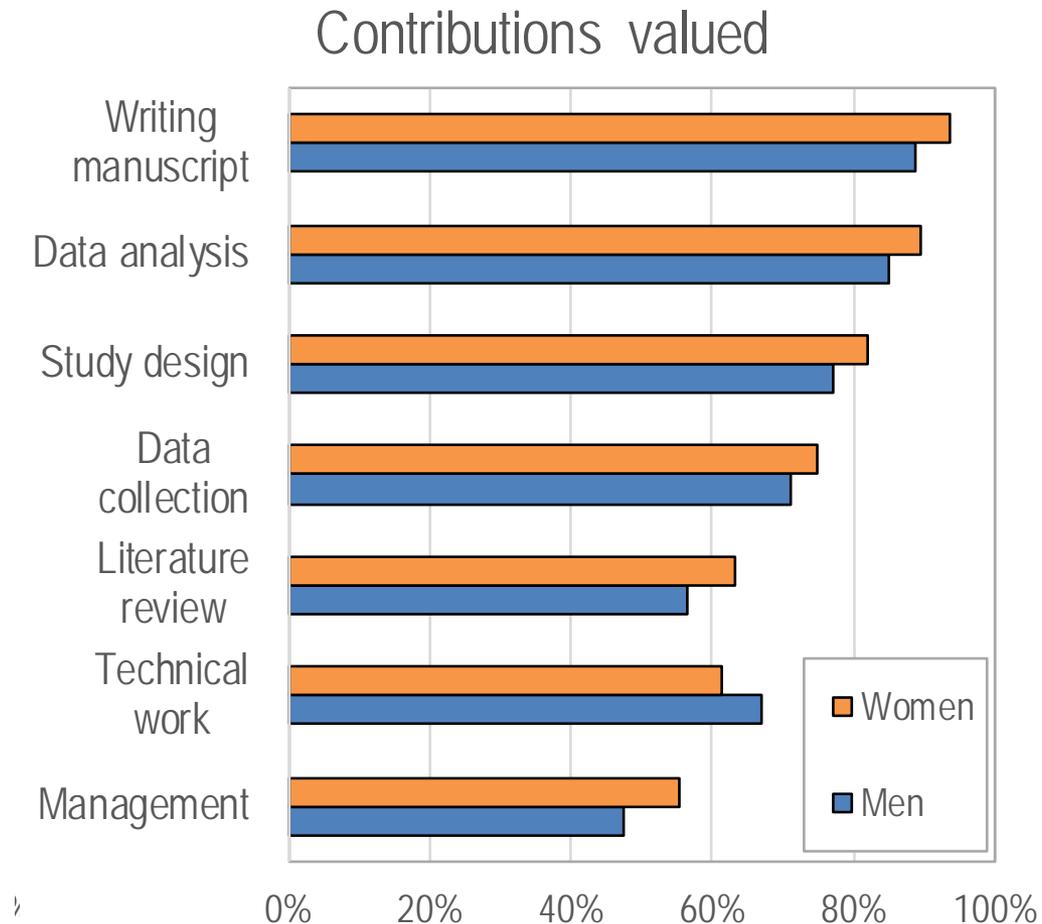


Factors contributing to disagreement



Valued contributions by gender

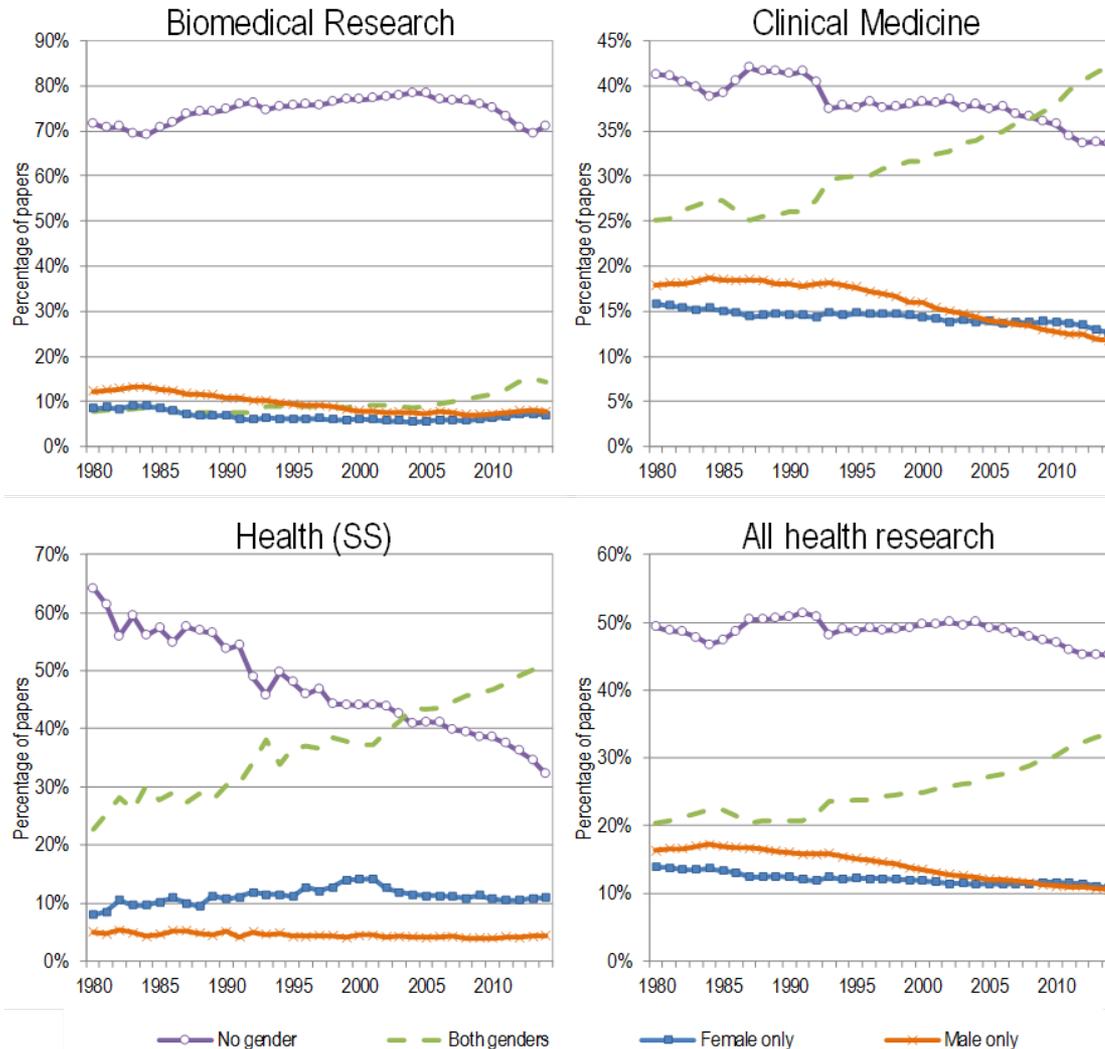
Percentage of “very important” or “extremely important”



**BUT DOES IT CHANGE WHAT
QUESTIONS ARE ASKED?**

Gender as an object of study

Percentage of studies which examine male/female populations

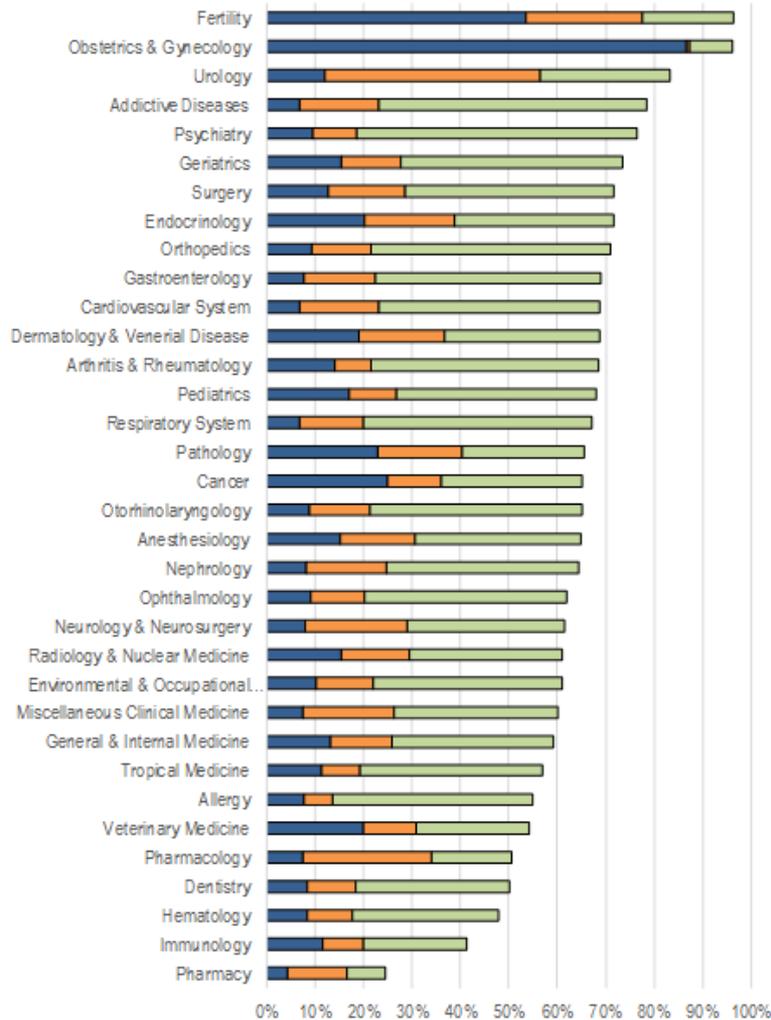


Gender as an object of study

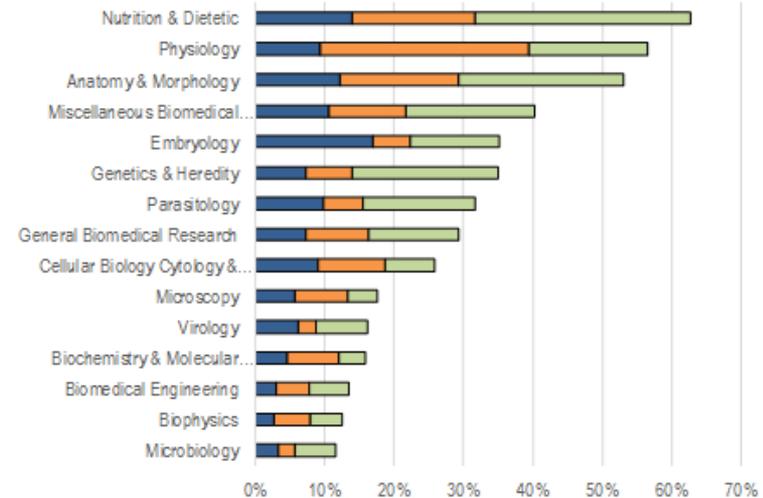
Percentage of studies with gender by subdiscipline



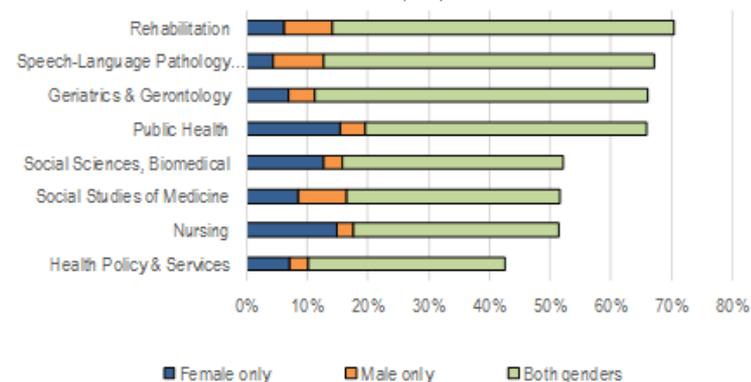
Clinical Medicine



Biomedical Research



Health (SS)



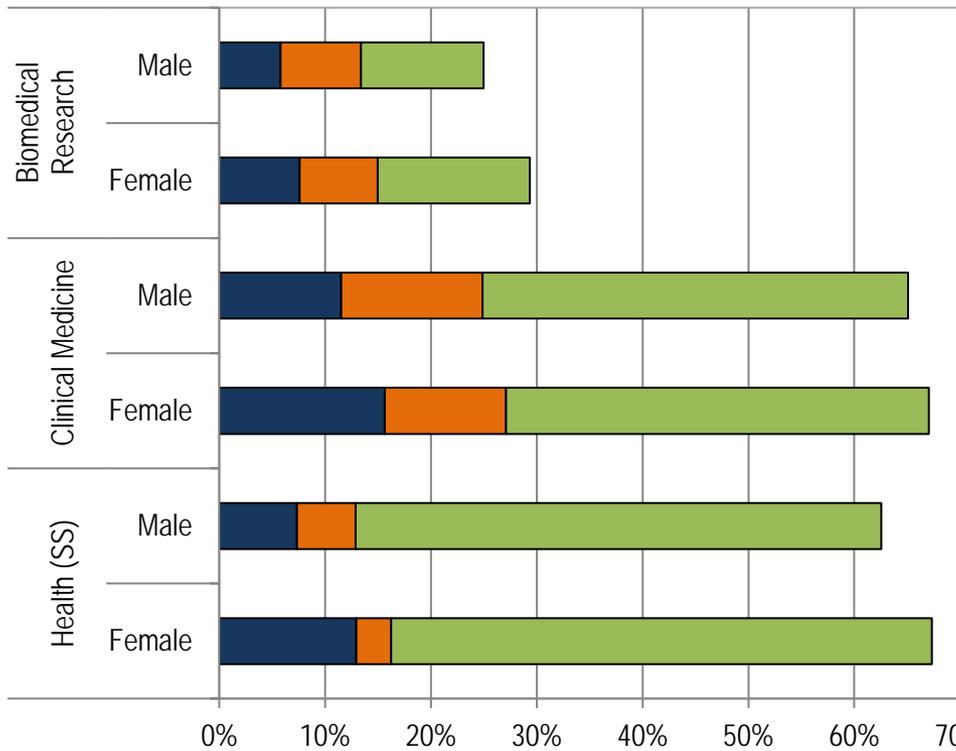
Female only Male only Both genders

Gender as an object of study

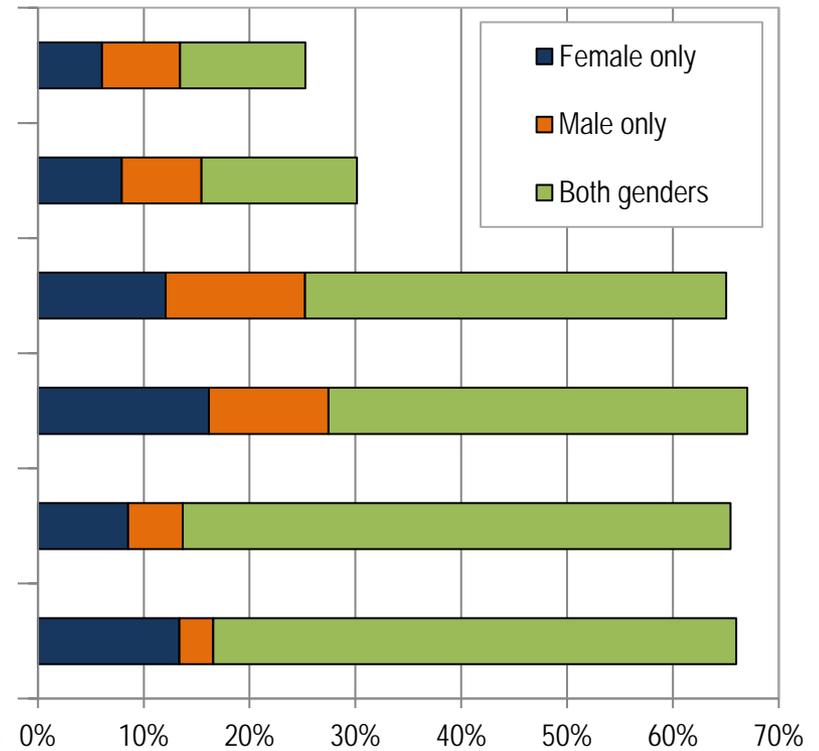
Percentage of male/female authors incorporating gender



First author



Last author



**WILL THE INTERNET FIX
EVERYTHING?**

Perpetuating disparities online

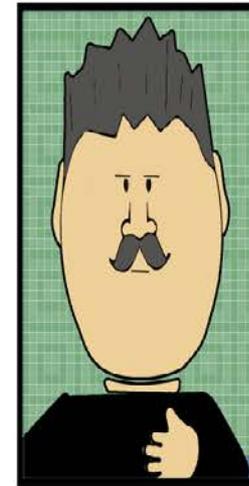
Self-presentation in scholarly profiles (Tsou et al., 2016)



— ★ 10,500 IMAGES ★ —



THE
TYPICAL
SCHOLAR



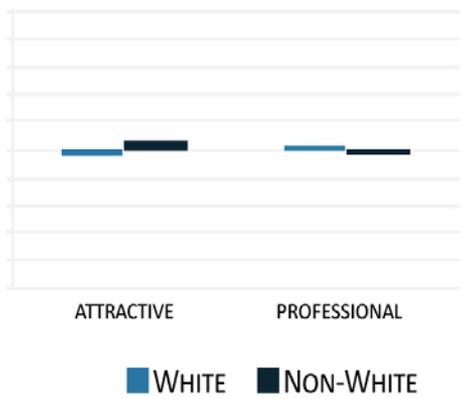
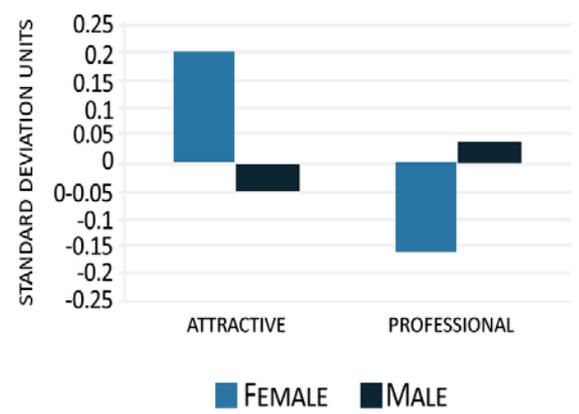
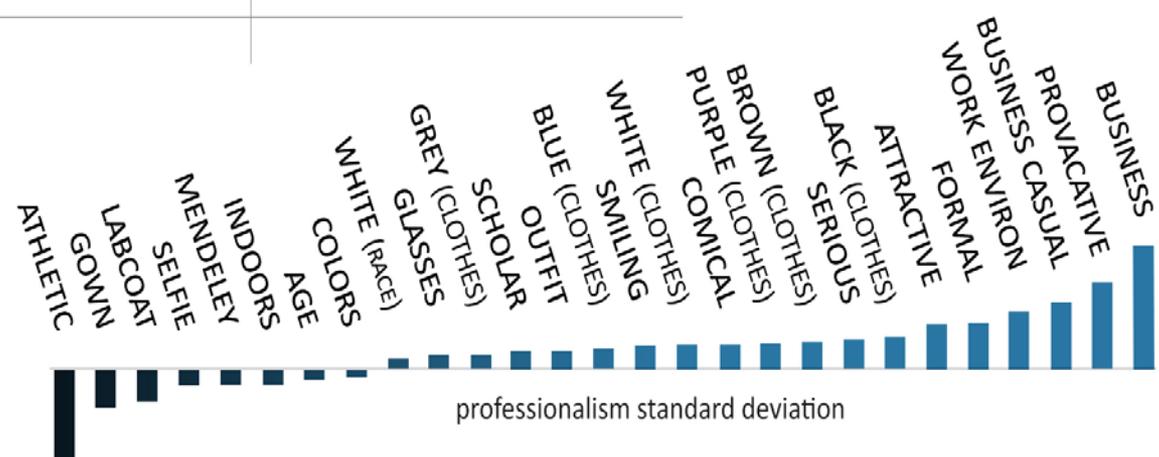
- 80% MALE
- 57% OVER 35
- 56% WHITE
- 54% SHOULDERS & HEAD
- 46% INDOORS
- 46% CASUAL CLOTHES
- 34% BLACK CLOTHES

Perpetuating disparities online

Self-presentation in scholarly profiles (Tsou et al., 2016)



PROFESSIONALISM & ATTRACTIVENESS



Gender differences in altmetric indicators



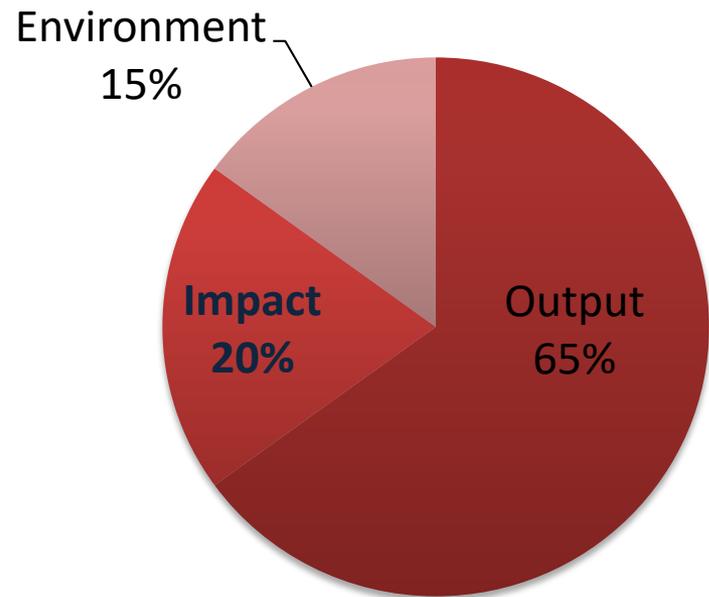
Discipline	Citations		Mendeley		Twitter		Facebook		Blogs		Wikipedia	
	F	M	F	M	F	M	F	M	F	M	F	M
Arts	0.35	0.37	4.53	4.09	18%	15%	0.03	0.04	0.01	0.01	0.01	0.01
Biology	2.39	2.49	12.62	13.39	25%	27%	0.12	0.14	0.04	0.04	0.01	0.02
Biomedical Research	4.03	4.66	15.41	18.27	40%	41%	0.36	0.39	0.09	0.13	0.02	0.03
Chemistry	3.79	4.41	6.42	7.09	19%	20%	0.04	0.04	0.01	0.02	0.00	0.00
Clinical Medicine	3.26	3.42	10.02	9.60	42%	39%	0.37	0.38	0.05	0.04	0.01	0.01
Earth & Space	3.05	3.31	10.70	9.69	23%	21%	0.16	0.15	0.06	0.07	0.02	0.03
Engineering & Technology	2.80	2.68	7.54	7.60	6%	6%	0.03	0.02	0.01	0.01	0.00	0.00
Health	1.62	2.00	10.87	11.29	54%	55%	0.27	0.30	0.05	0.09	0.00	0.01
Humanities	0.49	0.42	4.90	4.31	22%	24%	0.05	0.09	0.02	0.02	0.00	0.01
Mathematics	1.06	1.15	2.75	2.86	6%	6%	0.02	0.02	0.01	0.01	0.00	0.00
Physics	2.45	2.76	5.45	6.00	9%	10%	0.02	0.04	0.01	0.02	0.00	0.00
Professional Fields	1.24	1.42	18.63	19.77	37%	31%	0.09	0.07	0.03	0.02	0.00	0.01
Psychology	2.15	2.45	17.56	18.53	49%	48%	0.22	0.23	0.10	0.12	0.01	0.02
Social Sciences	1.34	1.40	12.81	12.70	36%	34%	0.11	0.11	0.04	0.06	0.01	0.01

**IF BROADER IMPACT
IS THE QUESTION...**

...ARE ALTMETRICS THE ANSWER?

Searching for Broader Impacts

Research Excellence Framework (2014)



‘**Impact**’ is any effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, **beyond academia**.

.....

Searching for Broader Impacts

National Science Foundation (2016)



Broaden dissemination to enhance scientific and technological understanding, for example, by presenting results of research and education projects in formats useful to students, scientists and engineers, members of Congress, teachers, and **the general public**.

..... Searching for Broader Impacts

Indiana University Bloomington P&T (2016)



Impact on Diverse Communities. In assessing the impact of research/creative activity, reviewers should consider the variety of communities – **inside the academy and beyond** – which may be transformed in significant ways by a candidate’s work. The emergence of “**public scholarship**” **expands the range of audiences** to whom a scholar/artist may direct their research/creative activity, and sometimes the best of this work does not appear in narrowly-defined professional outlets.

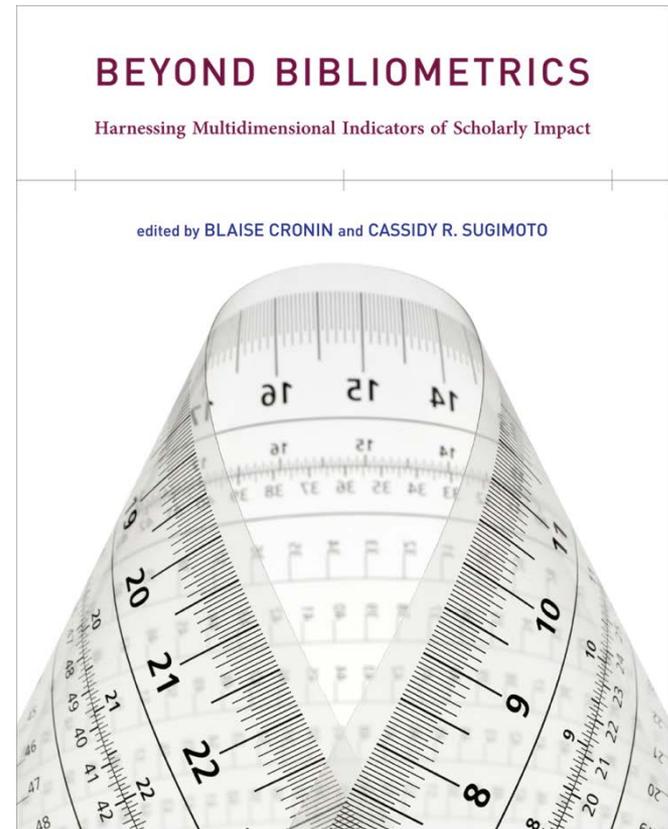
**CAN ALTMETRICS
REVEAL BROADER IMPACTS?**

Vision of altmetrics

Priem (2014)



1. “an approach to **uncovering previously invisible traces of scholarly impact** by observing activity in online tools and systems”
2. “agrees that **citations**, while useful, **miss many important kinds of impacts**”
3. “**citations are products of a slow rigid formal communication systems**, while scientific ideas themselves are born, nursed, and raised in messy, fast-moving *informal invisible colleges*”



The promise of altmetrics



The critique of citations



Document-centered metrics



Article-level indicators



nature International weekly journal of science

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NATURE | LETTER

日本語要約

Video game training enhances cognitive control in older adults

J. A. Anguera, J. Boccanfuso, J. L. Rintoul, O. Al-Hashimi, F. Faraji, J. Janoo, L. Larraburo, C. Rolle, E. Johnston & A. Gazzaley

[Affiliations](#) | [Contributions](#) | [Corresponding authors](#)

Nature 501, 97–101 (05 September 2013) | doi:10.1038/nature12486
Received 16 January 2013 | Accepted 18 July 2013 | Published online 04 September 2013

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Cognitive control is defined by a set of neural processes that allow us to interact with our complex environment in a goal-directed manner¹. Humans regularly challenge these

Online attention



Altmetric score (what's this?)

- Tweeted by **497**
- On **39** Facebook pages
- Mentioned in **19** Google+ posts
- Picked up by **64** news outlets
- 1** Reddit
- Blogged by **26**
- 1** F1000
- 2** Video

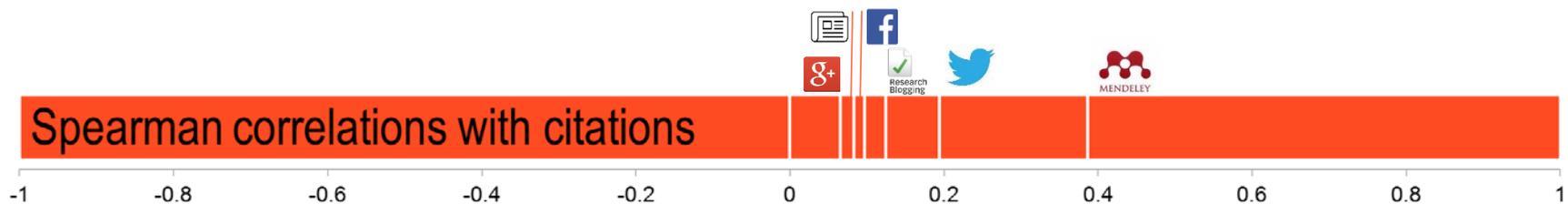
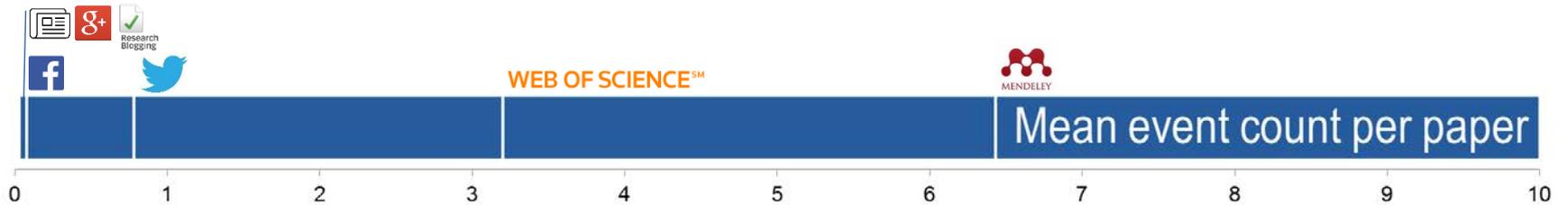
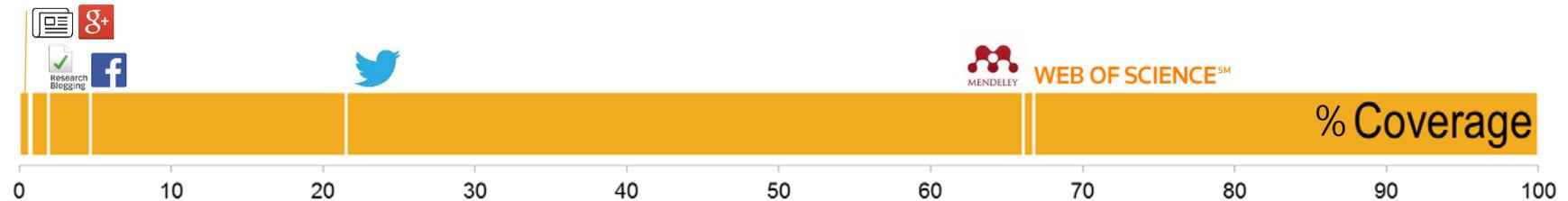
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▶ PLAY ▶ 00:00 / 03:07

Signal strength and correlations

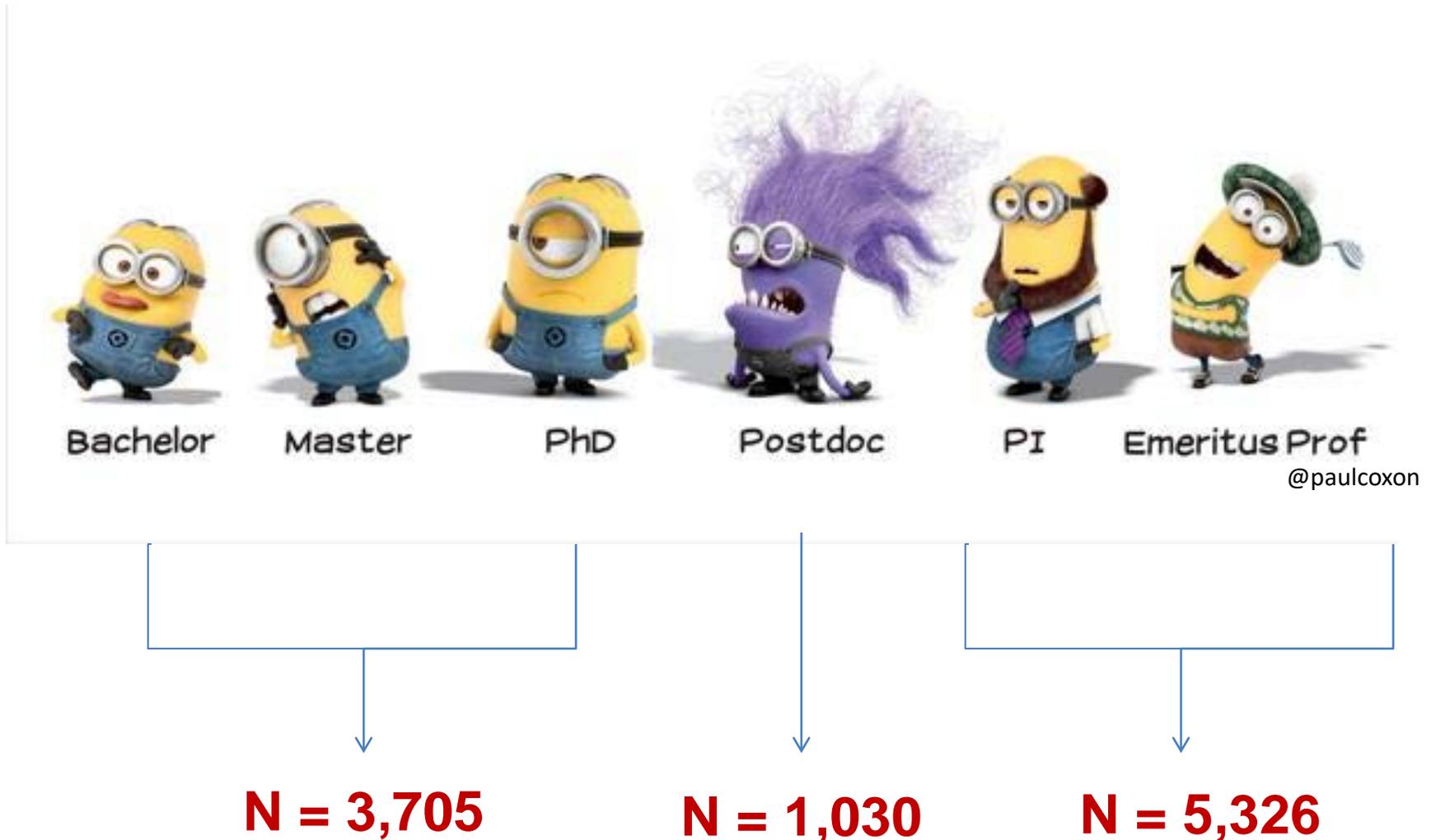
Haustein et al. (2014); Haustein, Costas, & Lariviere (2015)



**BUT WHO ARE
LEAVING THESE TRACES?**

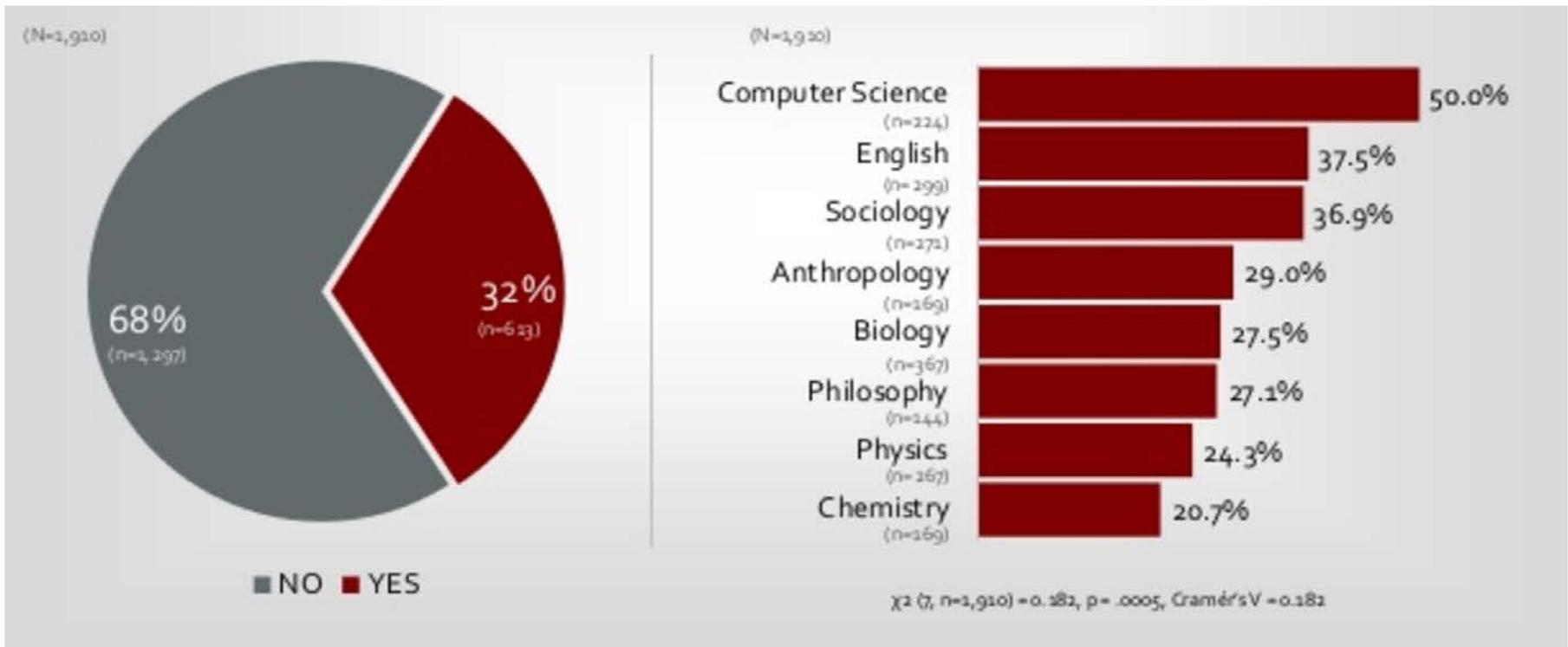
Self-identified status of scientists

Tsou et al. (2015)



Prevalence of scholars' use of Twitter

Bowman (2015)



What disciplines are active on Twitter?

Ke, Ahn, & Sugimoto (2016)



Discipline	Users	Discipline	Users
historian	3586	ecologist	775
psychologist	3579	anthropologist	698
physicist	2737	astronomer	675
nutritionist	2510	statistician	619
political scientist	1441	clinical psychologist	576
computer scientist	1123	linguist	526
archaeologist	1100	social scientist	438
biologist	1075	geographer	430
economist	1044	epidemiologist	403
sociologist	1020	mathematician	370
neuroscientist	916	geologist	359
meteorologist	855	evolutionary biologist	330

Who are the top scientists on Twitter?

Ke, Ahn, & Sugimoto (2016)



Name	Discipline	Lists	Name	Discipline	Lists
Michio Kaku	Physicist	190	Sam Harris	Neuroscientist	77
Richard Dawkins	Biologist	189	Barry Eichengreen	Economist	75
Sean Carroll	Physicist	141	Brian Greene	Physicist	75
J. Bradford DeLong	Economist	136	Carolyn Porco	Planetary scientist	74
Steven Pinker	Cognitive scientist	135	Danah Boyd	Social media scholar	69
Neil deGrasse Tyson	Astrophysicist	133	Katherine Mack	Astrophysicist	65
Jonathan Eisen	Biologist	102	Richard H. Thaler	Economist	65
Tim Harford	Economist	102	Miles Kimball	Economist	63
Paul Zachary Myers	Biologist	100	Lisa Randall	Physicist	60
Lawrence M. Krauss	Physicist	96	Mike Brown	Astronomer	59
Dan Ariely	Economist	93	Robert J Shiller	Economist	59
Karen James	Biologist	85	Hilary Mason	Data Scientist	59
Jim Al-Khalili	Physicist	84	Greg Mankiw	Economist	58
Richard Wiseman	Psychologist	77	J. Craig Venter	Life scientist	57
Betsey Stevenson	Economist	77	Andrew David Thaler	Ecologist	57

Representation on Twitter vs. Workforce

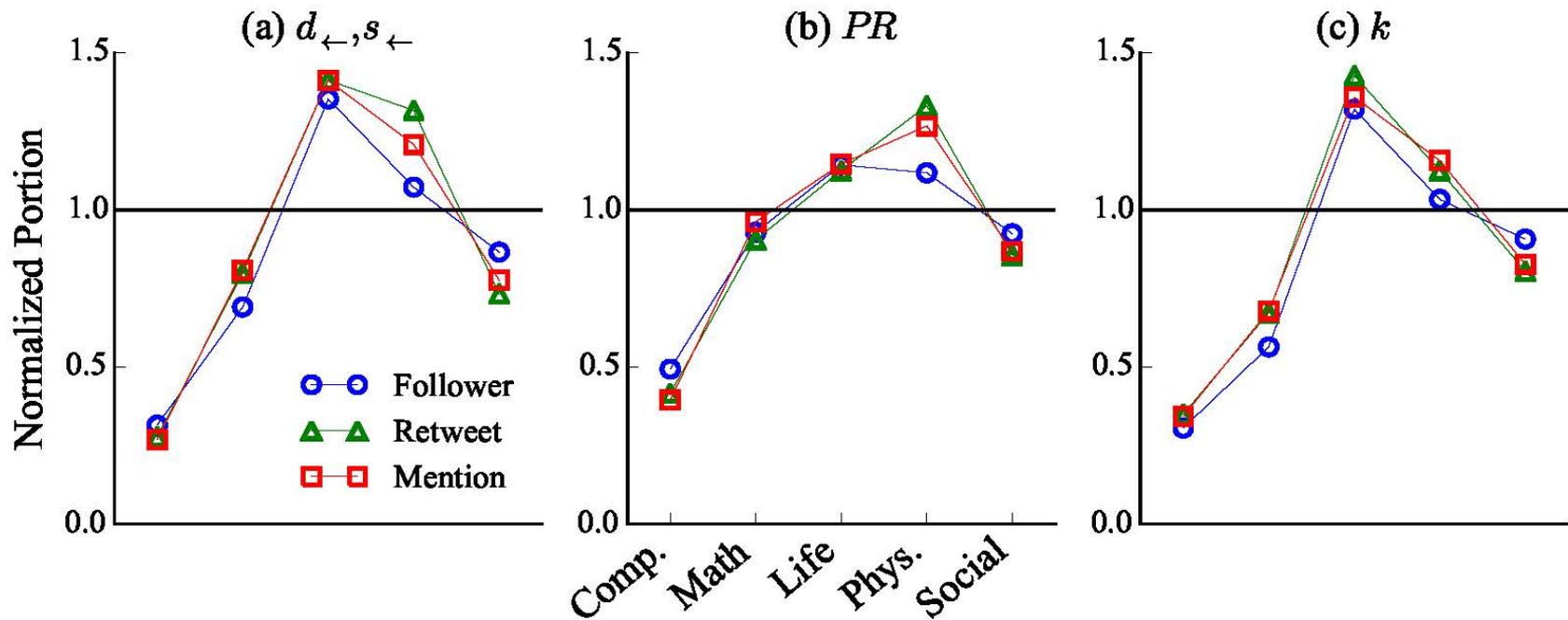
Ke, Ahn, & Sugimoto (2016)



Title	Emp.	Emp. %	Twitter %	Ratio
Computer & Info.	24,210	2.71%	3.62%	1.336
Mathematical	138,540	15.48%	3.18%	0.205
Life	269,660	30.13%	25.18%	0.836
Physical	274,520	30.68%	19.66%	0.641
Social	187,910	21.00%	48.37%	2.303

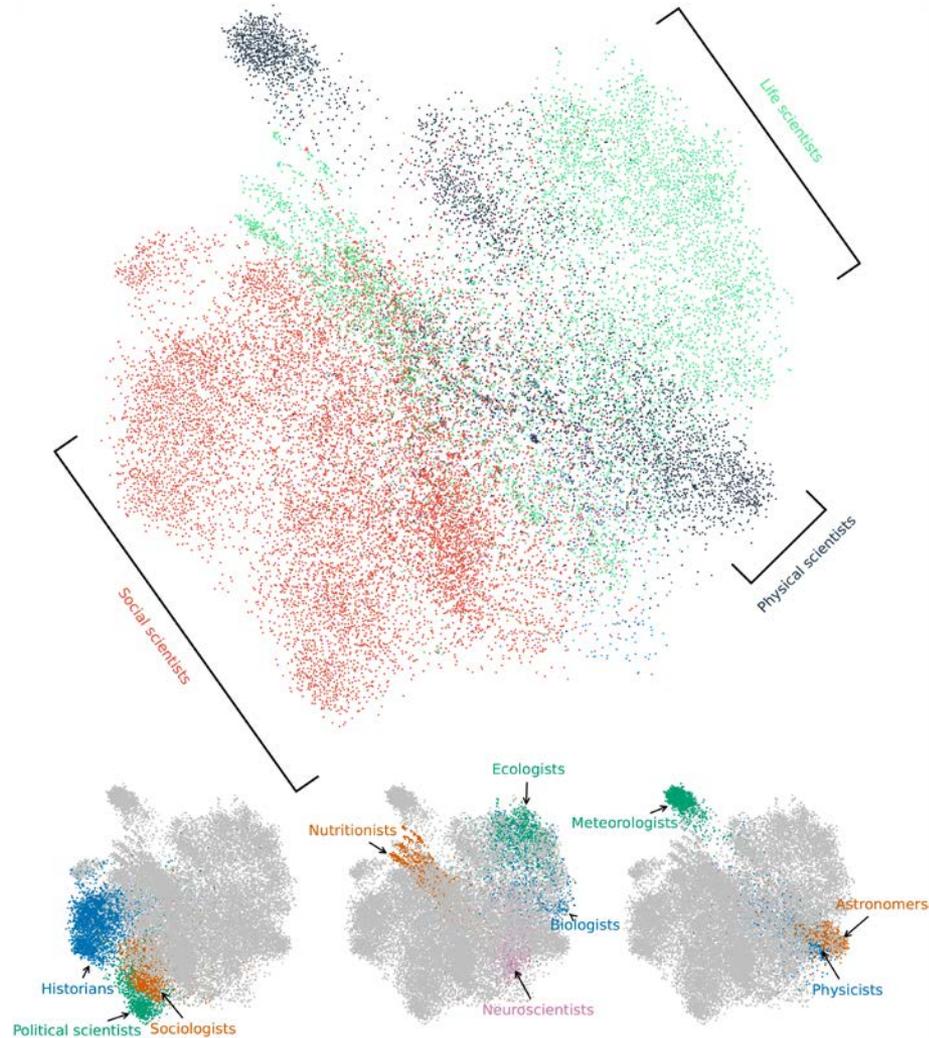
Who is central in the Twitter network?

Fractionalized centrality measures by discipline



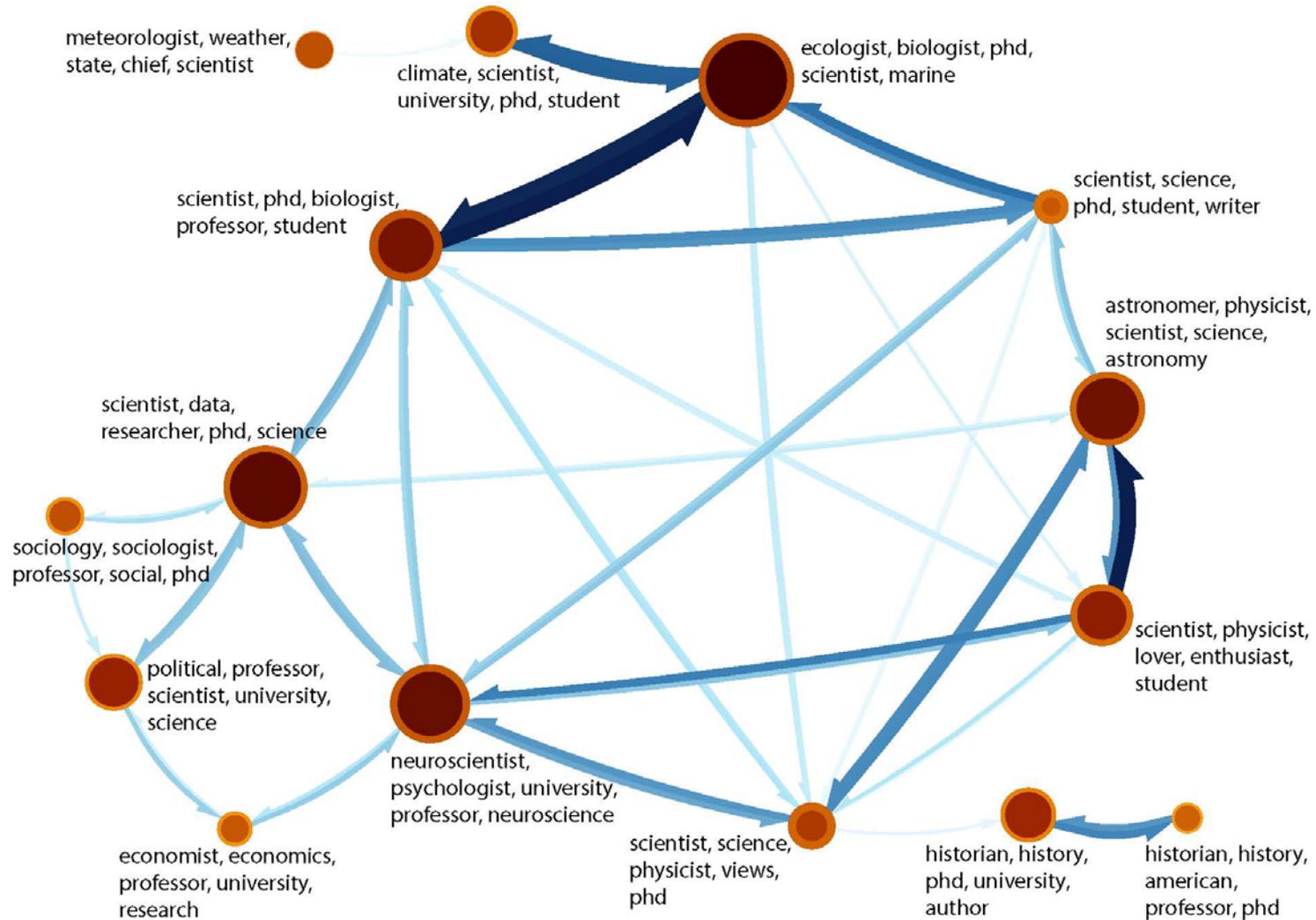
Assortativity of the Twitter network

Ke, Ahn, & Sugimoto (2016)



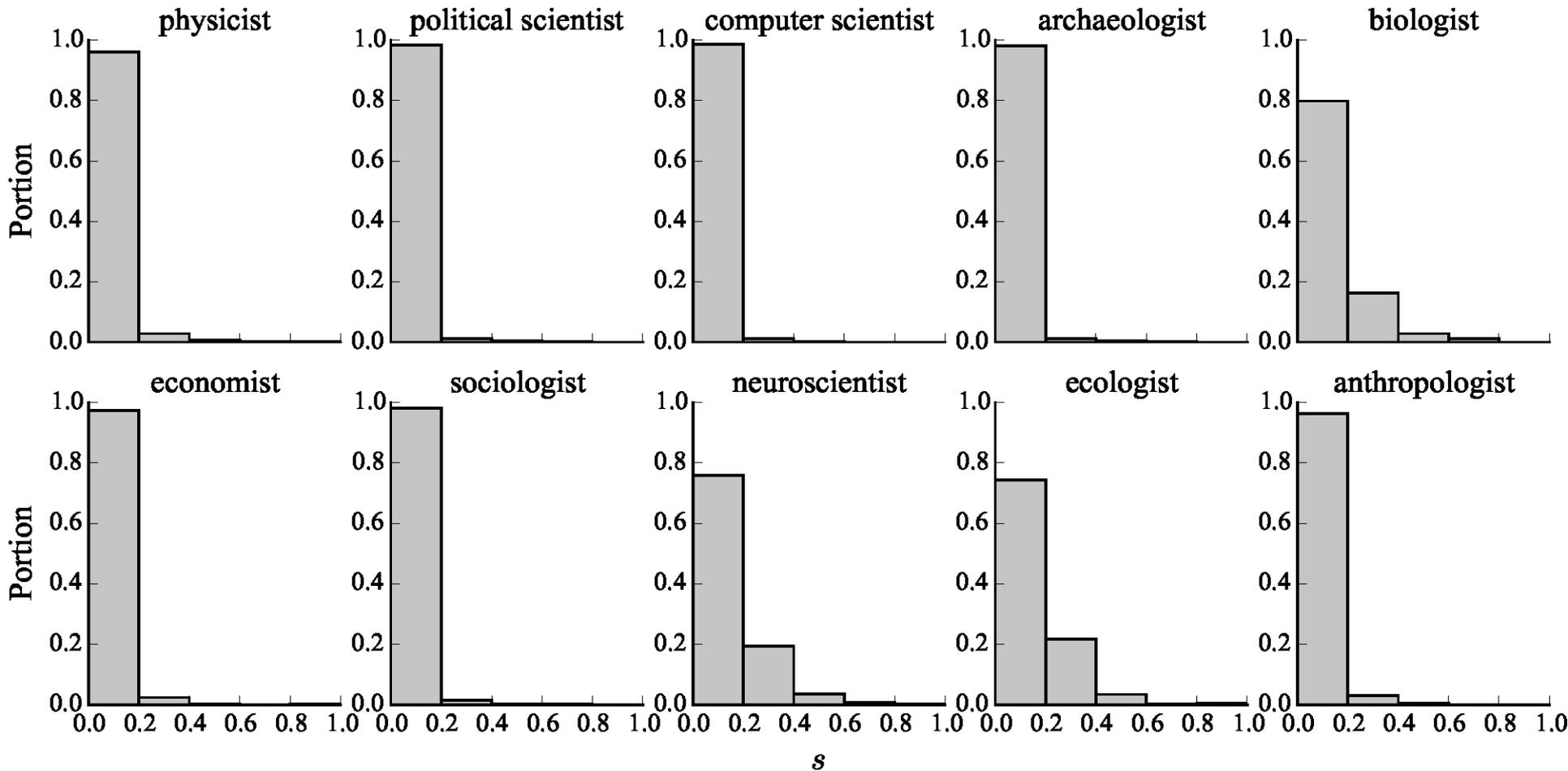
What do the subgroups look like?

Connectivity among subgroups in the Twitter network



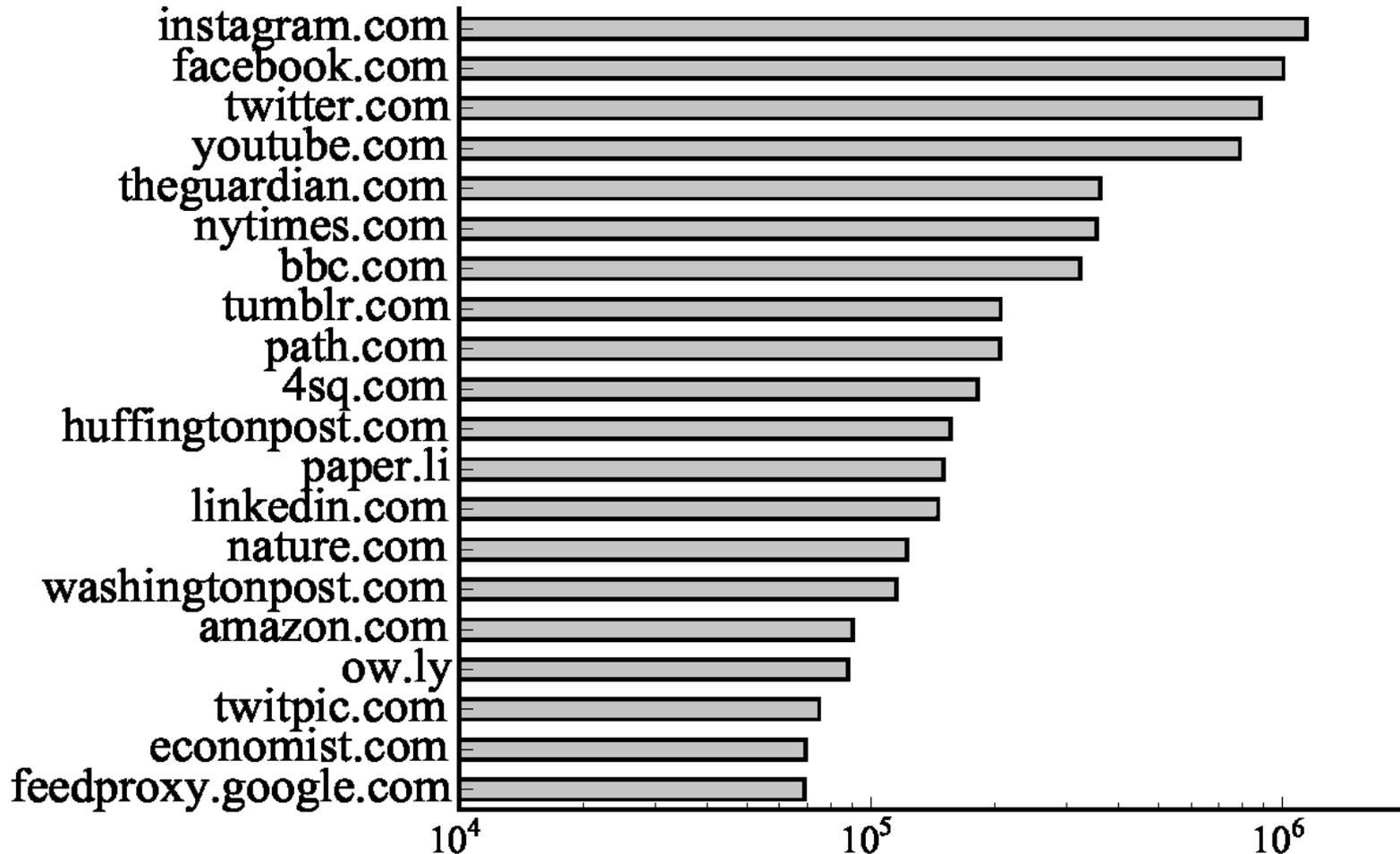
How much of their tweets are scientific?

Proportion of scientists tweeting scientific urls by discipline



What do scientists read?

Top tweeted URLs



Bot identification

Haustein et al. (2016)

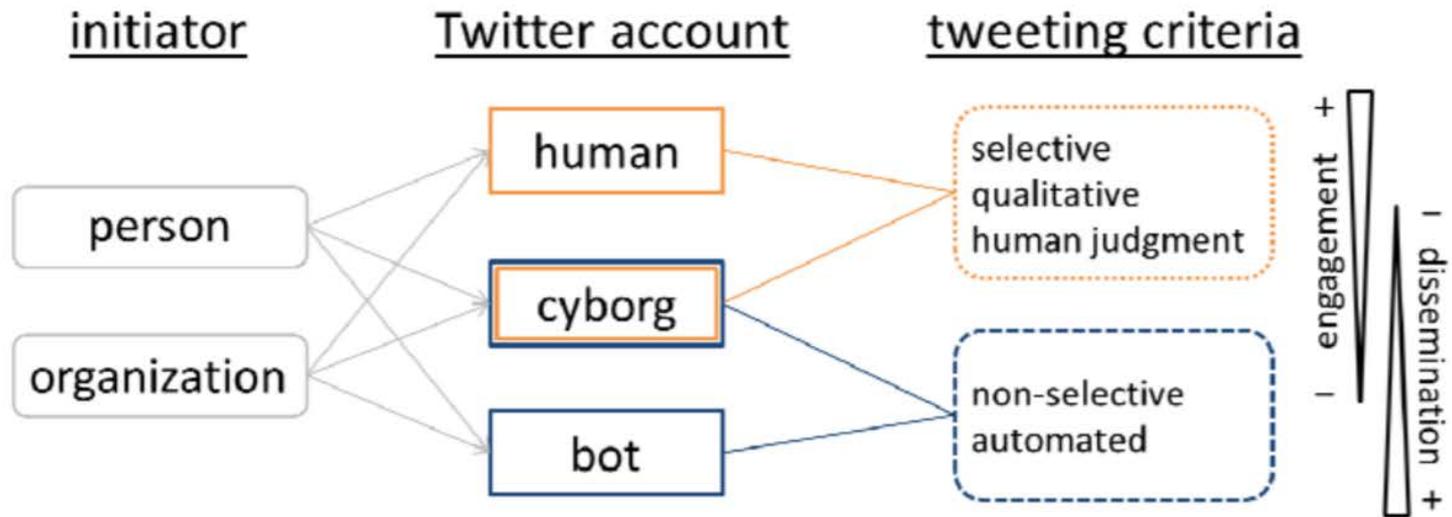


Figure 3 Differentiation between human, cyborg and bot Twitter accounts in scholarly communication.

Levels of engagement and bots



low engagement

percentage (%) represents similarity between paper title and tweet text

 hep articlebot
@heptwit    **100%**

A unification of RDE model and XCDM model
arxiv.org/abs/1212.5790

 JASIST
@JASIST    **100%**

On the calculation of percentile-based bibliometric indicators ow.ly/h8Kzp

 c
@physarxiv    **87%**

Hysteretic response characteristics and dynamic phase transition via site dilution in the kinetic...(arXiv:1206.5425)
arxiv.org/abs/1206.5425

high engagement

 Sarah Kendrew
@sarahkendrew    **36%**

Burkert & Hartmann on star formation thresholds, should be good.
arxiv.org/abs/1212.4543 with nod to newly be-doctored @alunacentroid too!

 Jan Hattenbach @JanHattenbach · 7 Jan 2013
Richard Ellis about possible detection of $z=11.9$ galaxy in Hubble data: "While definitively real, we remain cautious of it's nature" #AAS221
Details    

 Julian Taub @JulianTaub · 7 Jan 2013
@JanHattenbach Any links to learn more about the galaxy?
Details    

 Jan Hattenbach
@JanHattenbach    **16%**

.@JulianTaub Read Ellis' paper from 2012 arxiv.org/abs/1211.6804, and the recently submitted one by Brammer et al: arxiv.org/abs/1301.0317 #AAS221

Marketing or impact?

Haustein et al. (2014)

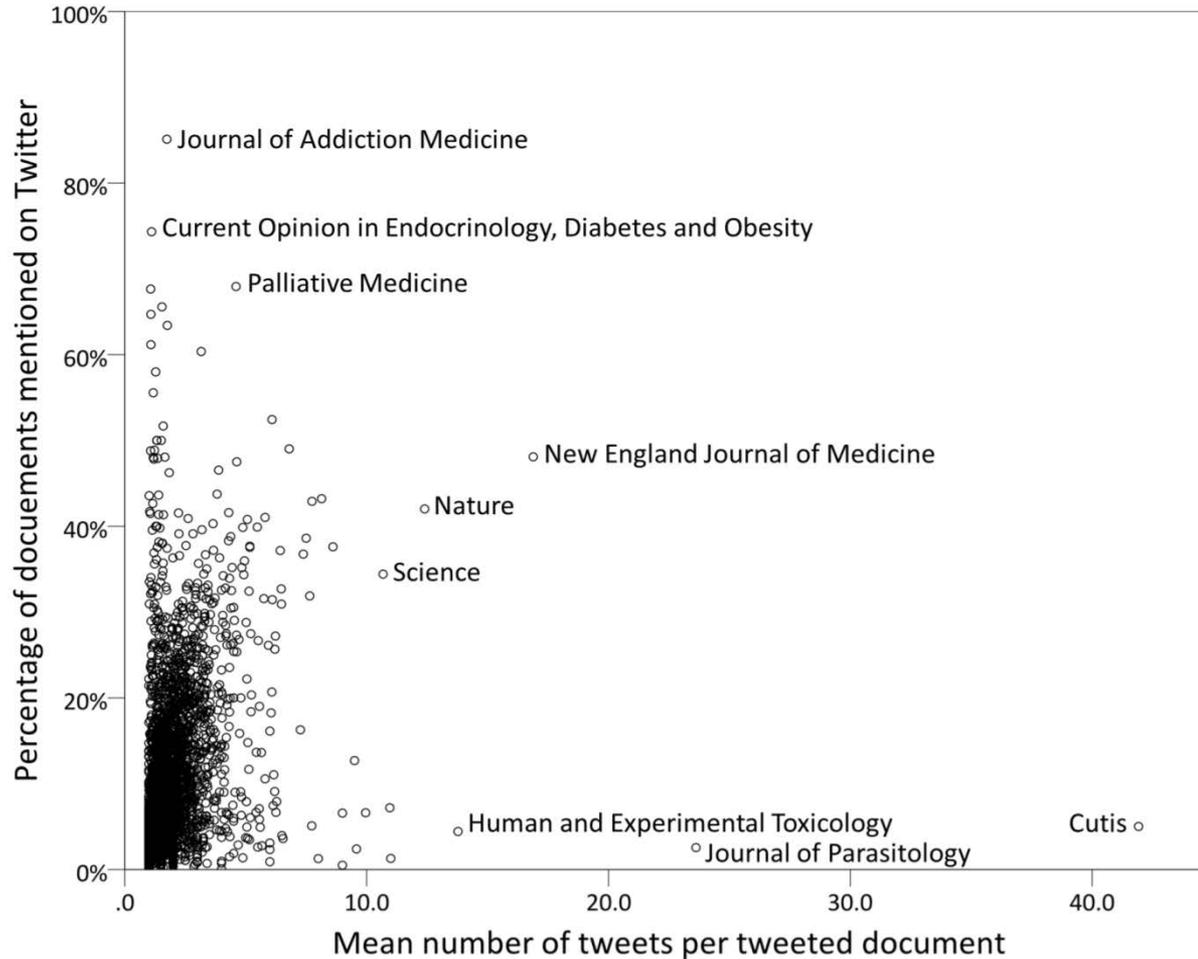


Figure 1. Percentage of tweeted articles (Twitter coverage) and mean number of tweets per tweeted article (Twitter citation rate) for 3,725 journals.

Virality of social media platforms




3668

Score in context

Is one of the highest ever scores in this journal (ranked #1 of 440)

show more...

Mentioned by

- 1 news outlet
- 15 blogs
- 4454 tweeters
- 25 Facebook users
- 140 Google+ users
- 2 Redditors



Richard P Grant
@rpg7twit
3,040 followers

Via @skdh: Best. Abstract. EVER <http://t.co/T24ynptn>

14-Oct-2011

IOP FTC 
AL AND THEORETICAL
[3113/44/49/492001](#)



Kelly Oakes
@kahoakes
4,154 followers

Haha! RT @Stephen_Curry: :-) RT @rpg7twit: Via @skdh: Best. Abstract. EVER <http://t.co/pLPglGnf>

14-Oct-2011



Ian Walker
@ianwalker
2,383 followers

RT @DrBillyo: Ha ha ha! RT @Stephen_Curry: :-) RT @rpg7twit: Via @skdh: Best. Abstract. EVER <http://t.co/MqbkeAqb>

14-Oct-2011



Ben O'Steen
@benosteen
1,906 followers

RT @biochembelle: Ha! RT @Stephen_Curry: :-) RT @rpg7twit: Via @skdh: Best. Abstract. EVER <http://t.co/osnoTR6R>

14-Oct-2011



Mahendra Bhujel
@MahendraBhujel
18 followers

RT @DrBillyo via @skdh : The most awesome abstract ever; <http://t.co/m1R2oeeen> !

14-Oct-2011



Margaret Harris
@DrMLHarris
282 followers

"Best abstract ever" <http://t.co/gfkuhzzG> clearly inspired by <http://t.co/ItiHuu2k>

14-Oct-2011

 Reply  Retweet  Favorite



Anna Sharman
@sharmanedit
2,032 followers

RT @David_S_Bristol: "Best abstract ever" from Berry @bristoluni a) shows power of arxiv system and b) questions point of an abstract! <http://t.co/sp6lgOAJ>

14-Oct-2011

be
,

Distinguishing attention from impact



5020

Score in context

Is one of the highest ever scores in this journal (ranked #1 of 362)

show more...

Mentioned by

- 3 news outlets
- 11 blogs
- 6544 tweeters
- 1 peer review site
- 4 weibo users
- 49 Facebook users
- 15 Google+ users

Readers on

- 1 Mendeley
- 2 CiteULike

Track this article

Variation in Melanism and Female Preference in Proximate but Ecologically Distinct Environments

N
H
S
Although association preferences documented in our study theoretically could be a consequence of either mating or shoaling preferences in the different female groups investigated (should we cite the crappy Gabor paper here?), shoaling preferences are unlikely drivers of the documented patterns both because of evidence from previous research and inconsistencies with *a priori* predictions. Our methods closely followed those of published mate choice experiments in this system (Tobler et al. 2009a,b; Plath et al. 2013),



Rene Xavier Valdez
@rxv00

11 followers

Not sure how this made it through proofreading, peer review, and copyediting. Via <http://t.co/sWaswaM2X4> #addedvalue <http://t.co/8krLlvthAr>

10-Nov-2014



Naomi
@NaomiTsafnat

81 followers

Not sure how this made it through proofreading, peer review, and copyediting. Via <http://t.co/sWaswaM2X4> #addedvalue <http://t.co/8krLlvthAr>

11-Nov-2014

Mendeley and Zotero user perspectives



Question	Zotero	Mendeley	
I am an advocate for open access.	4.53	4.29	Openness
I am an early adopter of new technologies.	4	3.76	
I am an advocate for open source software.	4.41	4.22	
I think that the current peer-review system is broken.	3.64	3.26	Journal Publishing System
The profit margin for publishers is too high.	4.13	3.64	
The journals in which I publish add credibility to my research.	3.83	4.05	
Journals are necessary for scholarly communication.	3.66	4.06	
Publishers are necessary for scholarly communication.	3.11	3.55	
Social media activity (e.g., tweets, Facebook likes) should be used as an indicator of scholarly impact.	2.76	2.57	Indicator of Scholarly Impact
Mendeley reader/Zotero library counts should be used as an indicator of scholarly impact.	2.87	3.07	
Citations should be used as an indicator of scholarly impact.	3.76	3.95	
The number of Mendeley readers of a document is a good indicator of the value of that item.	3	3.25	
Maintaining my privacy online is very important to me.	4.2	4.2	Online Visibility
Having a profile on Mendeley/Zotero makes me more visible in my field.	2.53	2.95	
Being visible online is critical for my scholarly identity.	3.47	3.31	

SO WHAT NEXT?

.....
Open <fill in the blank>



.....

Defense of a core value

Daniel Colt Gilman (1878)



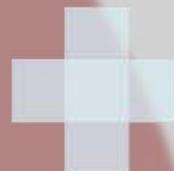
“It is one of the noblest duties of a university to advance knowledge, and to diffuse it not merely among those who can attend the daily lectures—but far and wide”

Changing modes of production

Multimodal and dynamic scholarship



Working draft
Occasional paper
Preprint
Conference paper
Journal article
Monograph
Book review
Review article
Encyclopedia



Data
Tweets
Blogs
Video
E-pre-prints
Webpages
Listservs
Webinars/
Podcasts

OA mandates

Roarmap.eprints.org (2017)

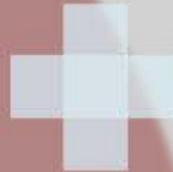


Expansion of publishers

Immediate and personal publishing



Journal of record
Monograph publisher
University press



Author
(blogger, self-archiver, etc.)

Library/Institution
(Repository)



Defend and disrupt peer review

F1000 (2017)



The screenshot shows the F1000 website interface. At the top, the logo 'F1000' and 'FACULTY of 1000 POST-PUBLICATION PEER REVIEW' are visible. Navigation tabs include 'Evaluations', 'Rankings', 'Reports', 'Posters', 'Magazine', and 'Faculty'. A sidebar on the left lists 'Categories' (All Time Top 10, Current Top 10, All Time Most Viewed, Current Most Viewed, Hidden Jewels) and 'Browse by Faculty' (All, Biology, Medicine). The main content area is titled 'ARTICLE RANKINGS' and 'All Time Most Viewed'. It includes a sub-header: 'All Time Most Viewed rankings are generated every day and indicate the articles that your peers have considered to be of the most interest in F1000 since its launch.' Below this, there are icons for 'Export', 'Email', and 'Add to MyF1000'. A featured article is displayed with a 'FFa 12' badge, the title 'Why most published research findings are false.', author 'Ioannidis JP', journal 'PLoS Med. 2005 Aug; 2(8):e124', and '4 evaluations | 1 dissent | 1 comment'. A quote from the article is shown: 'Ecology, like other subjects, has recently taken on the methods of meta-analysis largely pioneered in...'. The latest evaluation is by Andrew Hector on 29 February 2008.

Three stacked evaluation boxes are shown on the right side of the slide. Each box has a yellow, orange, or red background with a white 'F1000' logo and a white arrow pointing left. The boxes contain the following text:

- Recommended: F1000 Factor 3.1
- Must Read: F1000 Factor 6.2
- Exceptional: F1000 Factor 10.7

F1000Research

OPEN SCIENCE • OPEN DATA • OPEN PEER REVIEW

Encourage author/student engagement



Manual circulation

Conferences



Tweeting,
Blogging,
Tagging,
Commenting

.....

Altmetric aggregators

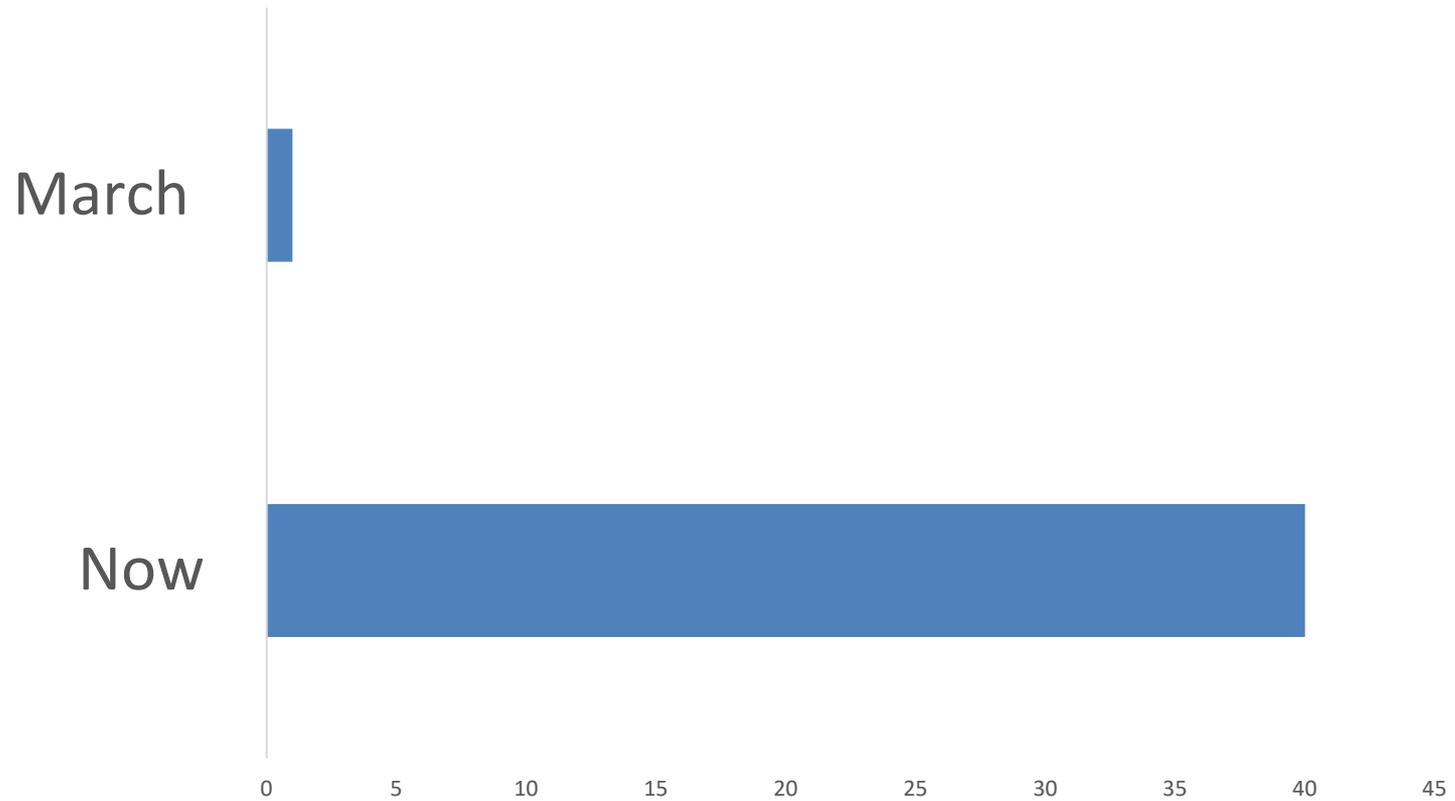
Altmetric and PlumAnalytics





Initiative for Open Citations

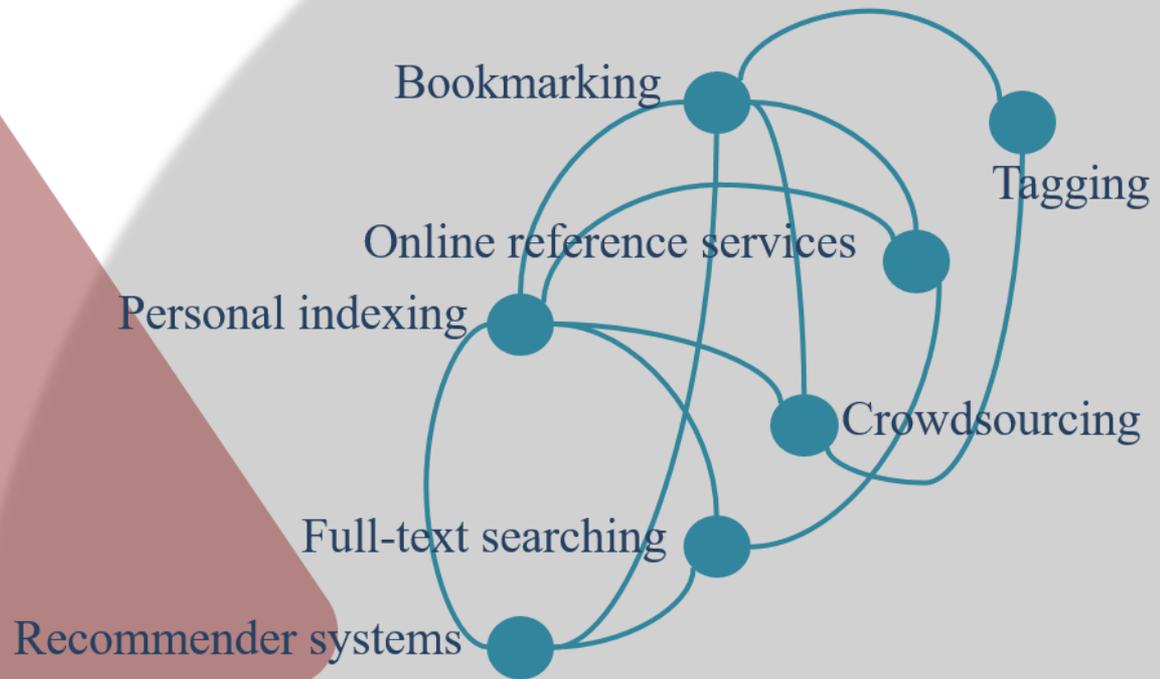
I4OC



From catalogs to crowdsourcing



- ✓ Catalogues/print indexes
- ✓ ISI Databases
- ✓ SDI
- ✓ File cabinet
- ✓ Professional indexing



Acknowledge new forms of search

Google Trends (2017)

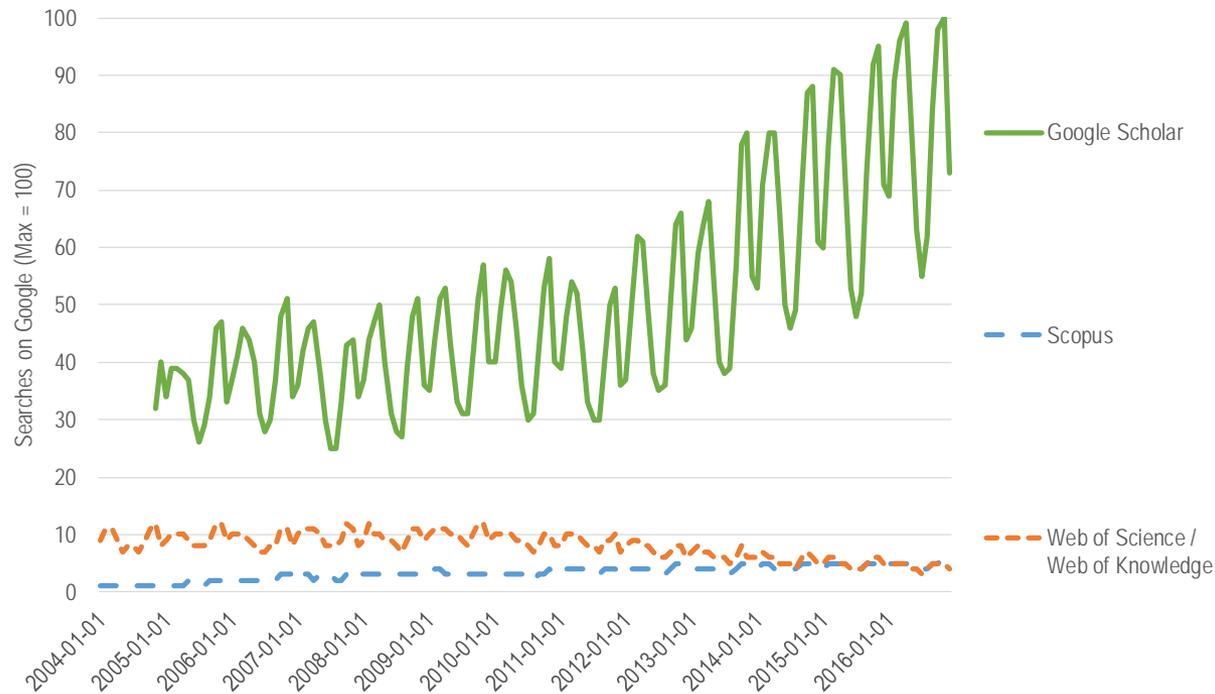
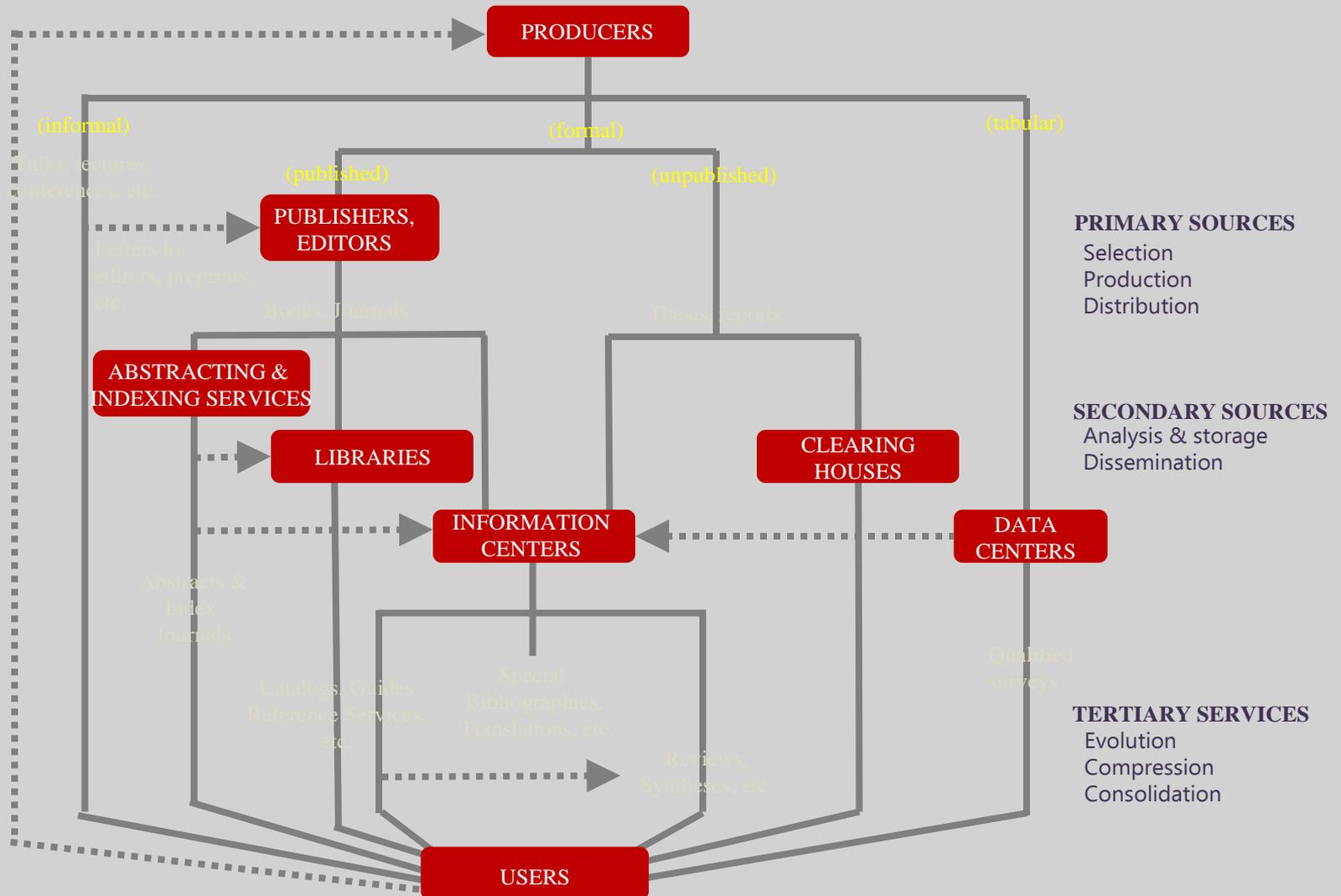


Figure 2. Google searches for the three main citation indexes, 2004-2016. Source: Google

Trends.

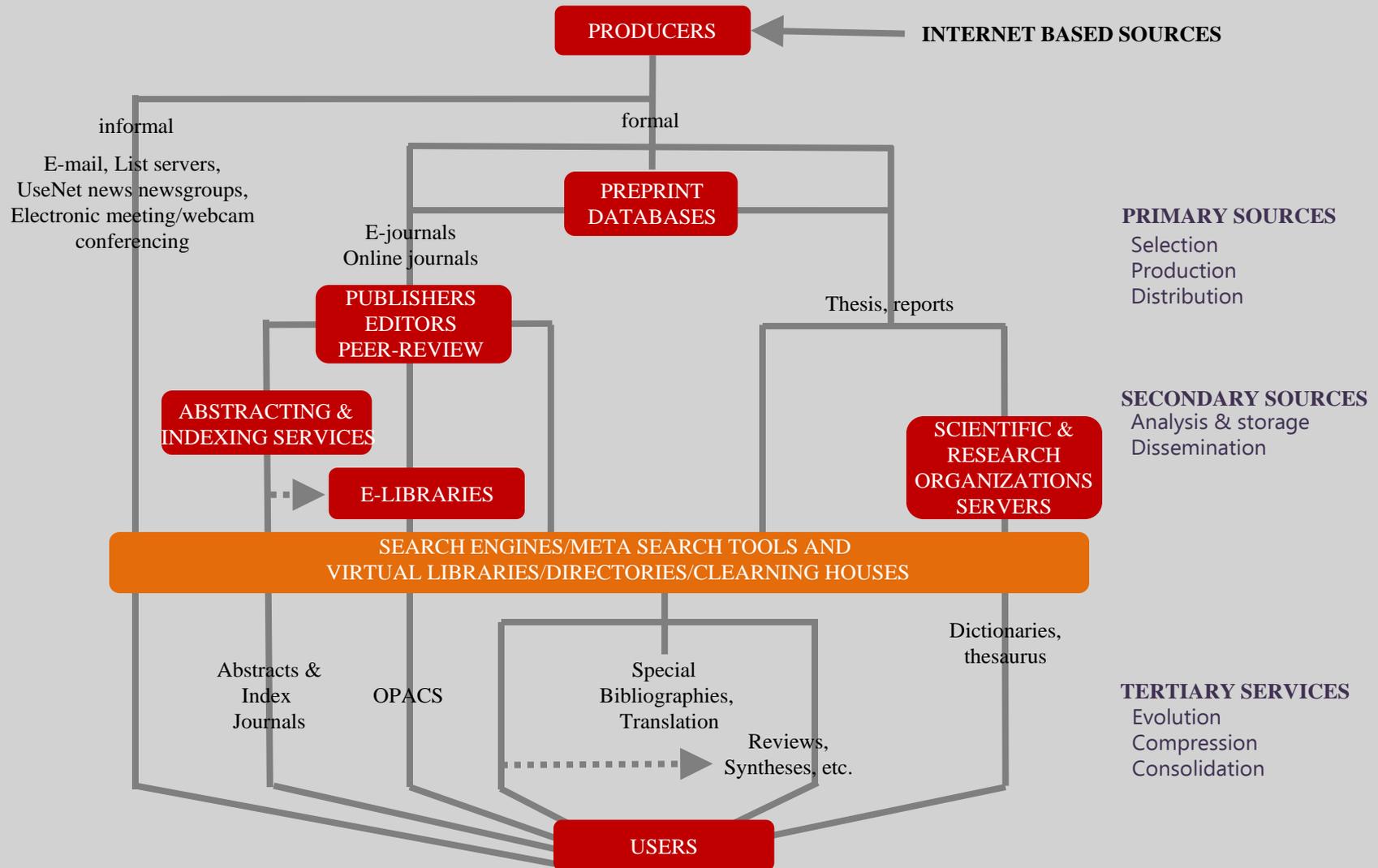
Model of science communication

UNISIST (1971)



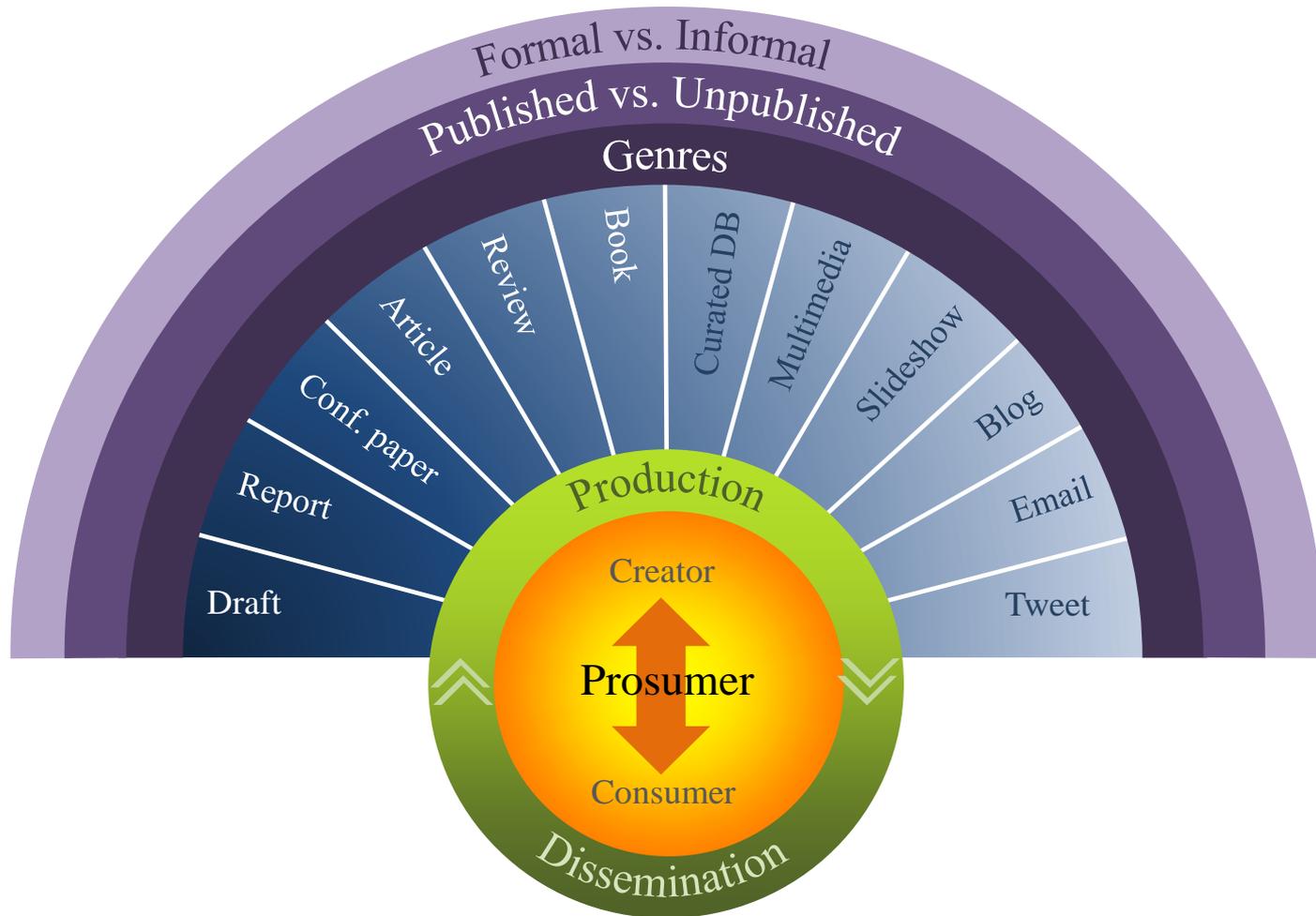
Platforming scholarly performance

Sondergaard, Andersen, & Hjørland (2005)



Blurring of boundaries

Losing the distinctions between creators and consumers



.....
Open science, not feral science



.....

Standardization and interoperability



.....

Authorship badges

BioMed Central



CRediT taxonomy

PLOS



plos.org create account sign in

PLOS ONE Publish About Browse Search advanced search

OPEN ACCESS PEER-REVIEWED

RESEARCH ARTICLE

Early Medieval Muslim Graves in France: First Archaeological, Anthropological and Palaeogenomic Evidence

Yves Gleize, Fanny Mendisco, Marie-Hélène Pemonge, Christophe Hubert, Alexis Groppi, Bertrand Houix,

Contributed equally to this work with: Yves Gleize, Fanny Mendisco

Roles: visualization, writing - original draft

yves.gleize@inrap.fr; yves.gleize@u-bordeaux.fr (YG); fanny.mendisco@gmail.com (FM)

Affiliations: French National Institute for Preventive Archaeological Research (INRAP), Bron, France, University of Bordeaux, UMR 5199 PACEA, Equipe Anthropologie des Populations Passées et Présentes, Allée Geoffroy ST Hilaire, Pessac Cedex, France

<http://orcid.org/0000-0001-5882-6823>

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Subject Areas

- Paleogenetics
- Archaeological exca...
- France
- Mitochondria
- Paleoanthropology
- Archaeology
- Islam

References

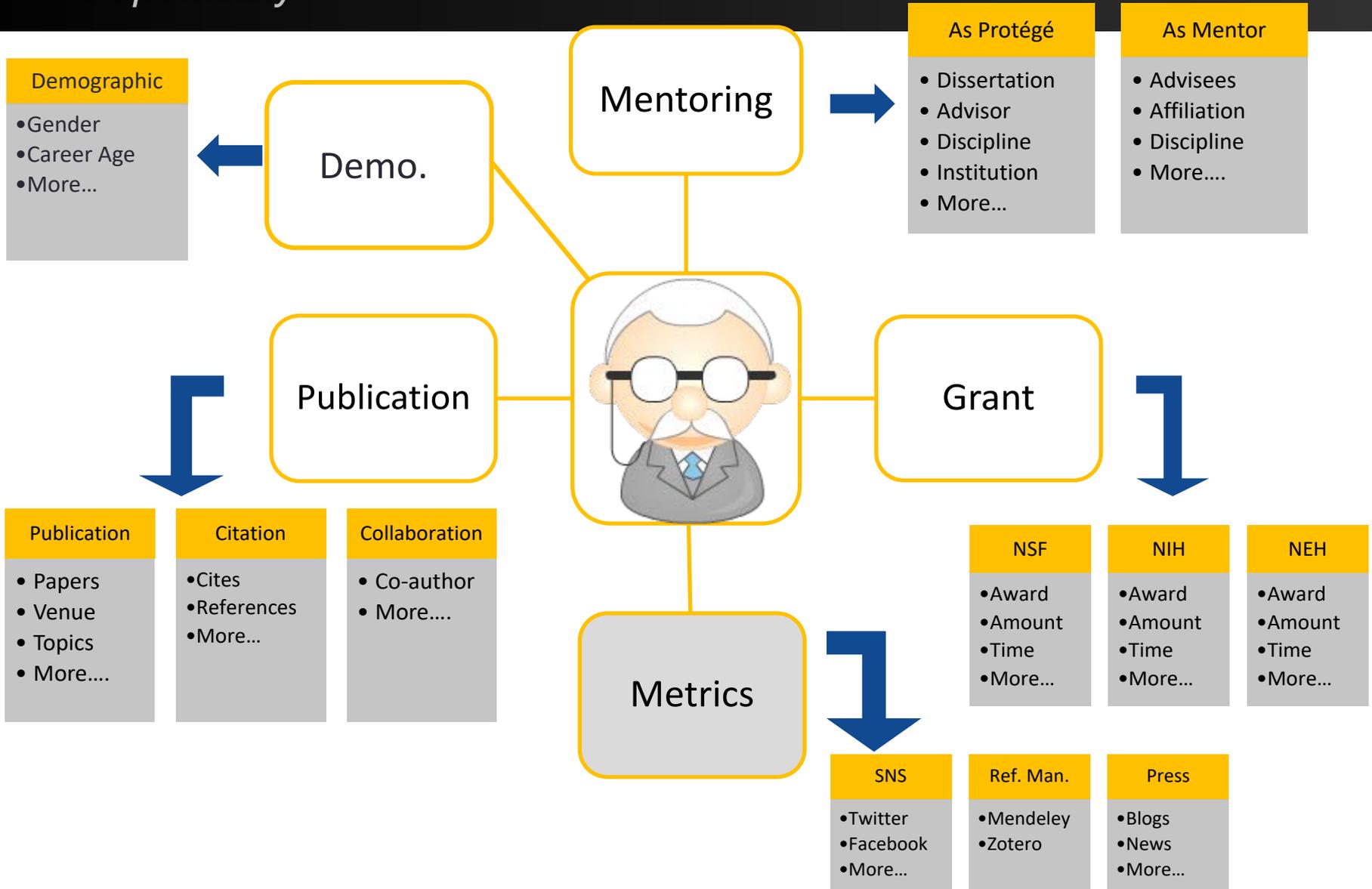
Reader Comments (1)

Media Coverage (17)

The early Middle Ages led to major political and cultural changes in Europe, including the early medieval Muslim presence in the region of southern France, based in the evaluation of archeological and anthropological data. The area north of the Pyrenees has only been documented through rare archaeological data. Our study provides the first multidisciplinary analysis of three graves excavated at Nîmes. First, we argue in favor of the Muslim establishment in South of France through the analysis of the burials that followed Islamic rites and then note the presence of a community practicing Muslim traditions in Nîmes. Second, the radiometric dates obtained from all three human skeletons (between the 7th and the 9th centuries AD) echo historical sources documenting an early Muslim presence in southern Gaul (i.e., the first half of 8th century AD). Finally, palaeogenomic analyses conducted on the human remains provide arguments in favor of a North African

Transparency to end disparity?

Interoperability



.....

Avoiding goal displacement

Kardashian index (Hall, 2014)



**WHAT SHOULD
INSTRUCTION LIBRARIANS
DO?**

.....

Defending openness & disrupting barriers

Role for instruction librarians (2017)



- **Use and promote open access in training sessions**
- **Provide programming that lessens barriers to participation for women and minorities**
- **Advocate for contributorship models which recognize the diversity of knowledge production**
- **Approach new metrics with productive skepticism**
- **Encourage engagement between students and scholars**
- **Evaluate and contribute to the development of new tools**



Thank you!

Questions?



Cassidy R. Sugimoto

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Indiana University Bloomington
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