

Crowdsourcing Scholarly Data and Universality of Impact Metrics

Diep Thi Hoang, Jasleen Kaur, Filippo Radicchi, Xiaoling Sun,
Snehal Patil, Lino Possamai, Mohsen Jafari-Asbagh,
Filippo Menczer



**SCHOOL OF INFORMATICS
AND COMPUTING**

INDIANA UNIVERSITY

Bloomington

Bloomington

INDIANA UNIVERSITY

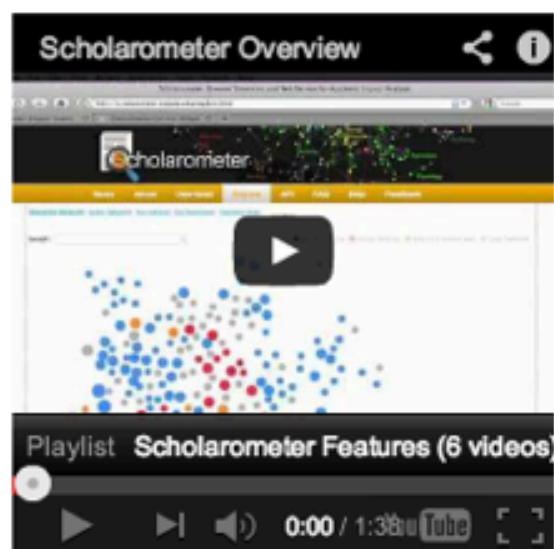
Scholarometer^(beta) is a social tool to facilitate citation analysis and help evaluate the impact of an author's publications.

DOWNLOAD
NOW

GET YOUR
WIDGET

Install the browser extension and start querying and tagging authors!

Features



[Read more about Scholarometer features](#)

Statistics



[See more...](#)

Latest Updates



[scholarometer](#) JA Wisniewski and 1 other author added to [#mathematics](#). bit.ly/162YIzD
3 hours ago · [reply](#) · [retweet](#) · [favorite](#)

[scholarometer](#) JA Wisniewski and 1 other author tagged with [#mathematics](#). bit.ly/p6p1AC
3 hours ago · [reply](#) · [retweet](#) · [favorite](#)

[scholarometer](#) HP Kuo and 3 other authors added to [#biology](#)

[Join the conversation](#)

[SHARE](#) [f](#) [t](#) [e](#) ...

Scholarometer^(beta) is a social tool to facilitate citation analysis and help evaluate the impact of an author's publications.

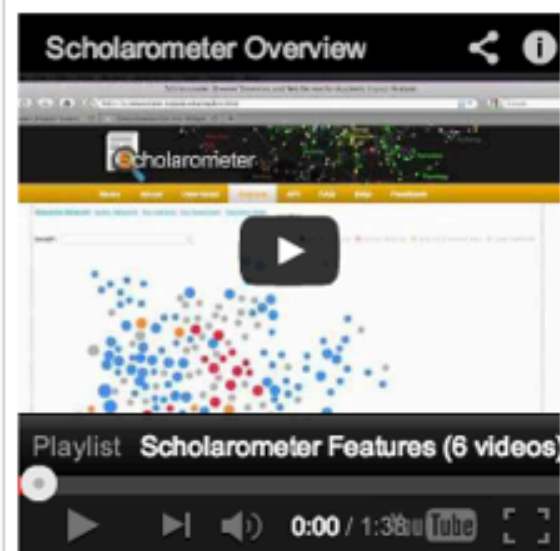
DOWNLOAD
NOW

GET YOUR
WIDGET

scholarometer.indiana.edu

Install the browser extension and start querying and tagging authors!

Features



[Read more about Scholarometer features](#)

Statistics



[See more...](#)

Latest Updates



scholarometer JA Wisniewski and 1 other author added to #mathematics. bit.ly/162YIzD
3 hours ago · reply · retweet · favorite

scholarometer JA Wisniewski and 1 other author tagged with #mathematics. bit.ly/p6p1AC
3 hours ago · reply · retweet · favorite

scholarometer HP Kuo and 3 other authors added to #biology

[Join the conversation](#)

SHARE    ...

Mozilla Firefox

Search Bookmarks and History

Google

Scholarometer


1. Simple search for articles

written by author authors

example: "GC Fox"

2. Tag this query [\(Required, Why?\)](#)

- Use at least one tag marked by (?)
- Use as many tags as you like (hit [enter] after each one)

 **Scholarometer**

1 With the simple interface, just enter a scholar name and one or more disciplines. First and middle initials and last name works best.

Check out advanced and group search modes too!

2 Help the community by tagging the scholar disciplines.

3 Check out our statistics and visualizations or use our API to get the data at <http://scholarometer.indiana.edu>.

1. Simple search for articles

written by author authors

"S Freud"

example: "GC Fox"

2. Tag this query (Required. Why?)

- Use at least one tag marked by (?)
- Use as many tags as you like (hit [enter] after each one)

social issues

sociology

psychology

Reset

Submit

Filter

Compact View

Check All

Uncheck All

View Checked

Checked Items:

Remove

Merge

Impact Analysis

Max Year: 2011

Min Year: 1891

Max Cited: 12442

Min Cited: 49

Select

Any

Name Variations

s freud (213)

Top Co-authors

j strachey (4)

j breuer (2)

t dufresne (1)

d mclintock (1)

w fließ (1)

h cixous (1)

mr gonzález (1)

e jones (1)

th watson (1)

a gesell (1)

Show 25 entries

Search:

	Times Cited	Authors	Title/Links	Year
<input type="checkbox"/>	12442	S Freud	The interpretation of dreams	1953
<input type="checkbox"/>	12002	S Freud	Jokes and their relation to the unconscious	1960
<input type="checkbox"/>	8200	S Freud, ...	Civilization and its discontents	2005
<input type="checkbox"/>	7739	S Freud	Introductory lectures on psychoanalysis	1977
<input type="checkbox"/>	6173	S Freud, T Dufresne, ...	Beyond the pleasure principle	2011
<input type="checkbox"/>	6159	S Freud	Three essays on the theory of sexuality	1975
<input type="checkbox"/>	6061	S Freud	Mourning and melancholia	1957
<input type="checkbox"/>	5461	S Freud	Totem and taboo	1999
<input type="checkbox"/>	4271	S Freud	Group psychology and the analysis of the ego	1975
<input type="checkbox"/>	4202	S Freud	On narcissism: An introduction	1957
<input type="checkbox"/>	4034	J Breuer, S Freud, ...	Studies on hysteria	2000
<input type="checkbox"/>	3101	S Freud	Analysis terminable and interminable	1964
<input type="checkbox"/>	2848	S Freud, J Strachey, ...	The future of an illusion	1989
<input type="checkbox"/>	2553	S Freud, ...	Totem and taboo; some points of agreement between the mental lives of savages and neurotics	1950
<input type="checkbox"/>	2247	S Freud, D McLintock, ...	The uncanny	2003
<input type="checkbox"/>	2142	S Freud	The psychopathology of everyday life	1966
<input type="checkbox"/>	2125	S Freud	Project for a scientific psychology (1950)	1966
<input type="checkbox"/>	2121	S Freud	The unconscious	1957
<input type="checkbox"/>	2086	S Freud	Instincts and their vicissitudes	1957
<input type="checkbox"/>	2046	S Freud	A general introduction to psychoanalysis	1920
<input type="checkbox"/>	2028	S Freud	O mal-estar na civilização (1930)	1980
<input type="checkbox"/>	1925	S Freud, ...	Tres ensayos sobre teoría sexual	1972
<input type="checkbox"/>	1789	S Freud	Moses and monotheism: Three essays	1964
<input type="checkbox"/>	1726	S Freud	Remembering, repeating and working-through (Further recommendations on the technique of psycho-analysis II)	1958

Number of Articles: 214

Number of Citations: 191158

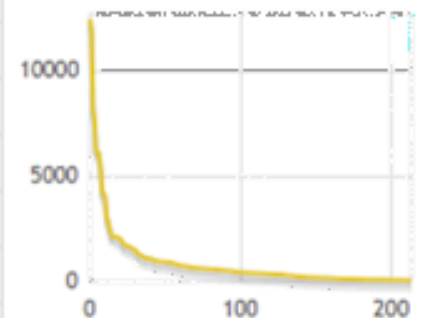
h (%ile): 158 (100)

g (%ile): 214 (99)

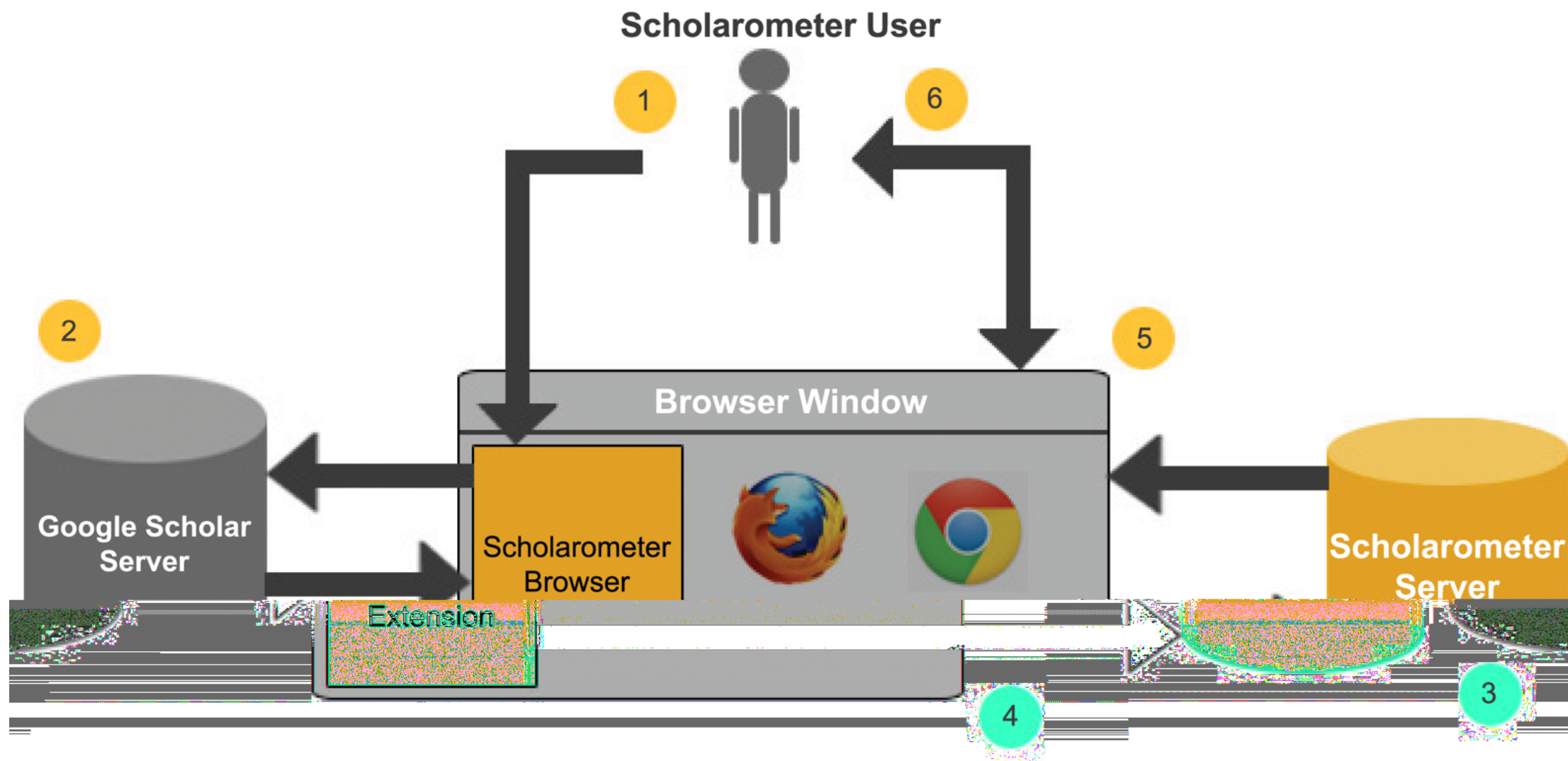
h_m (%ile): 141.75 (100)

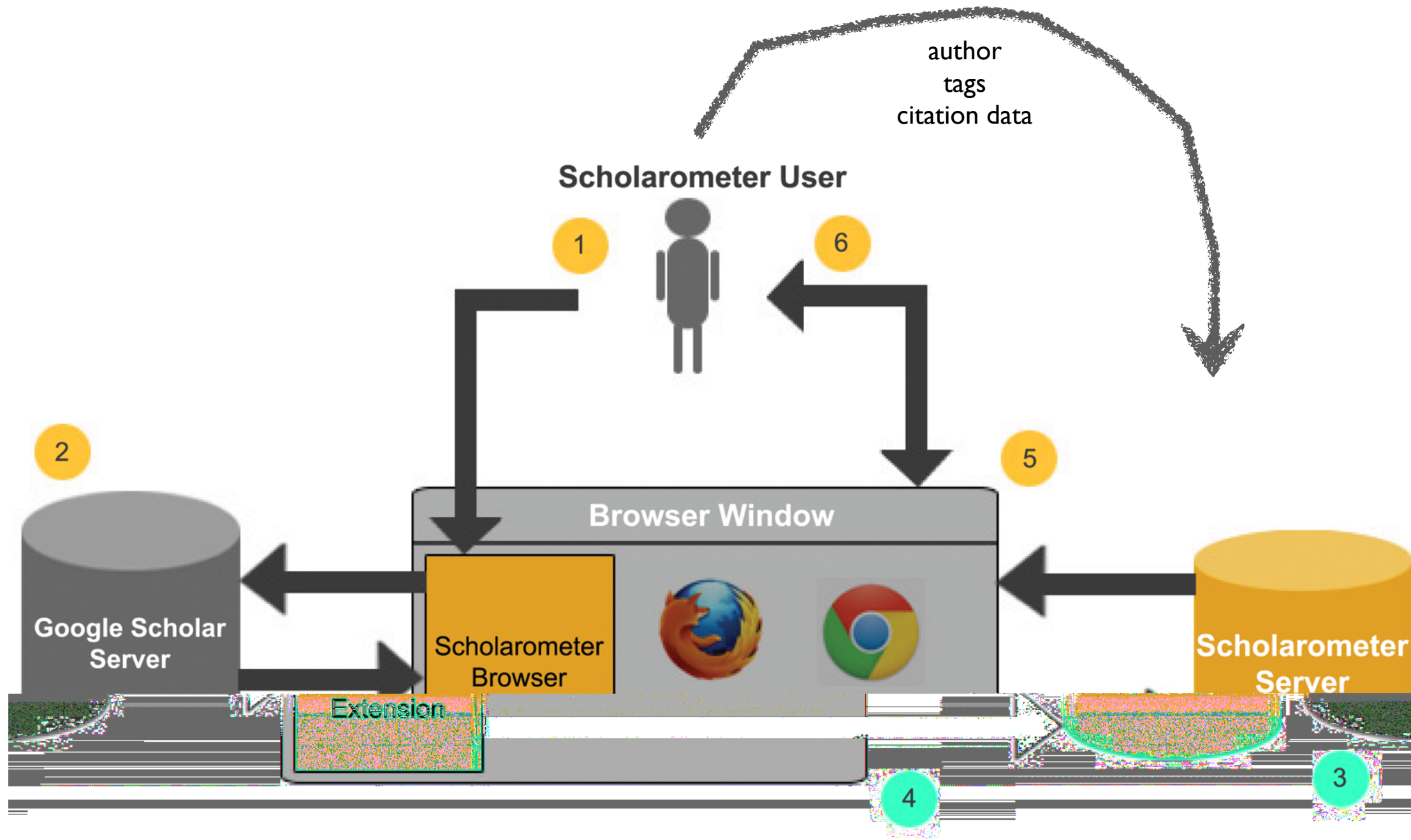
discipline	tagged	h _r (%ile)
psychology	7	8.45 (100)
psychology, psychoanalysis	2	1.58 (46)
social issues	2	3.36 (94)
sociology	2	8.36 (100)
automation & control systems	1	4.92 (100)
behavioral sciences	1	5.49 (100)
philosophy	1	16.19 (100)
political theory	1	17.92 (98)

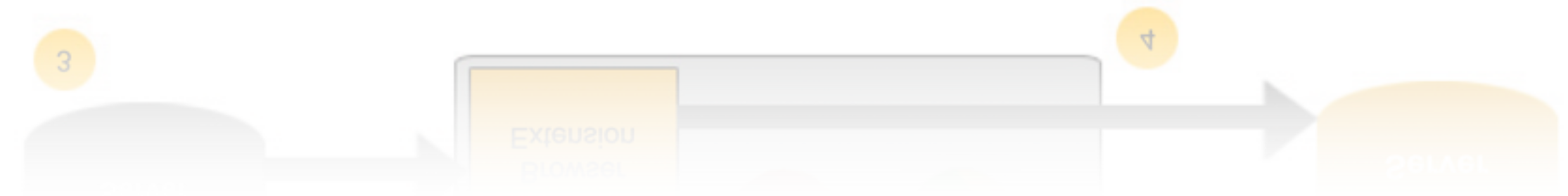
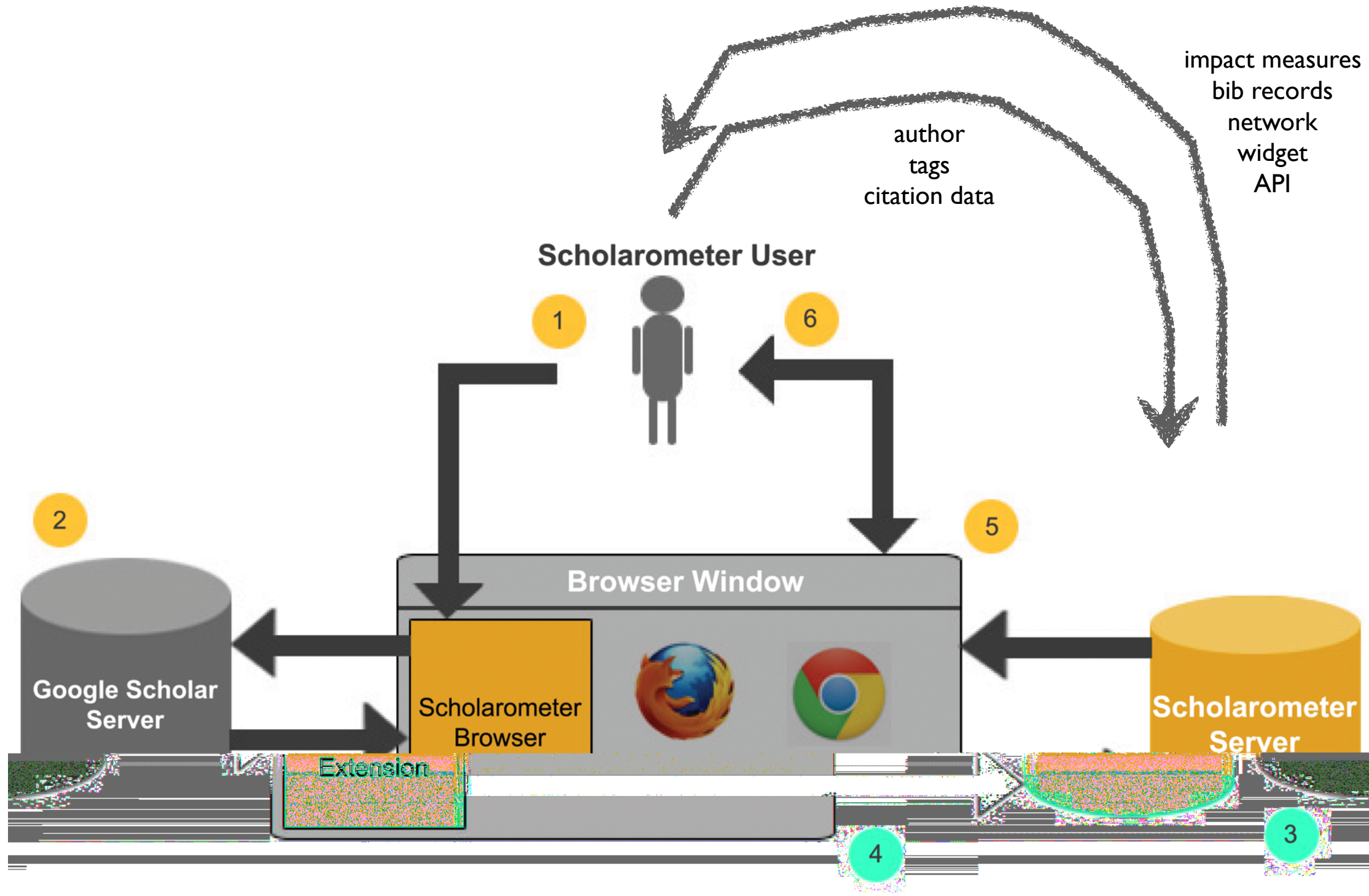
Citations by Article Rank

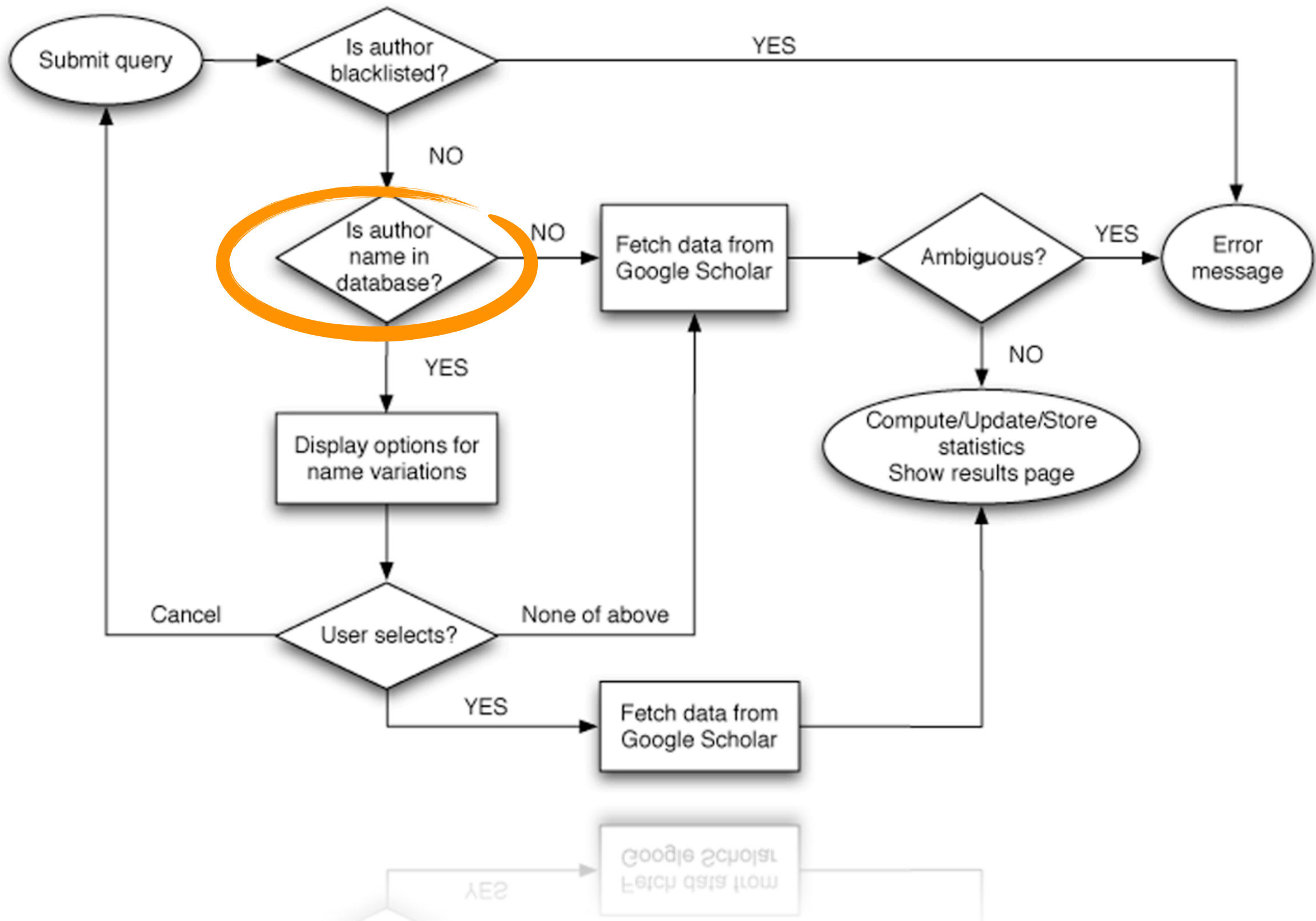


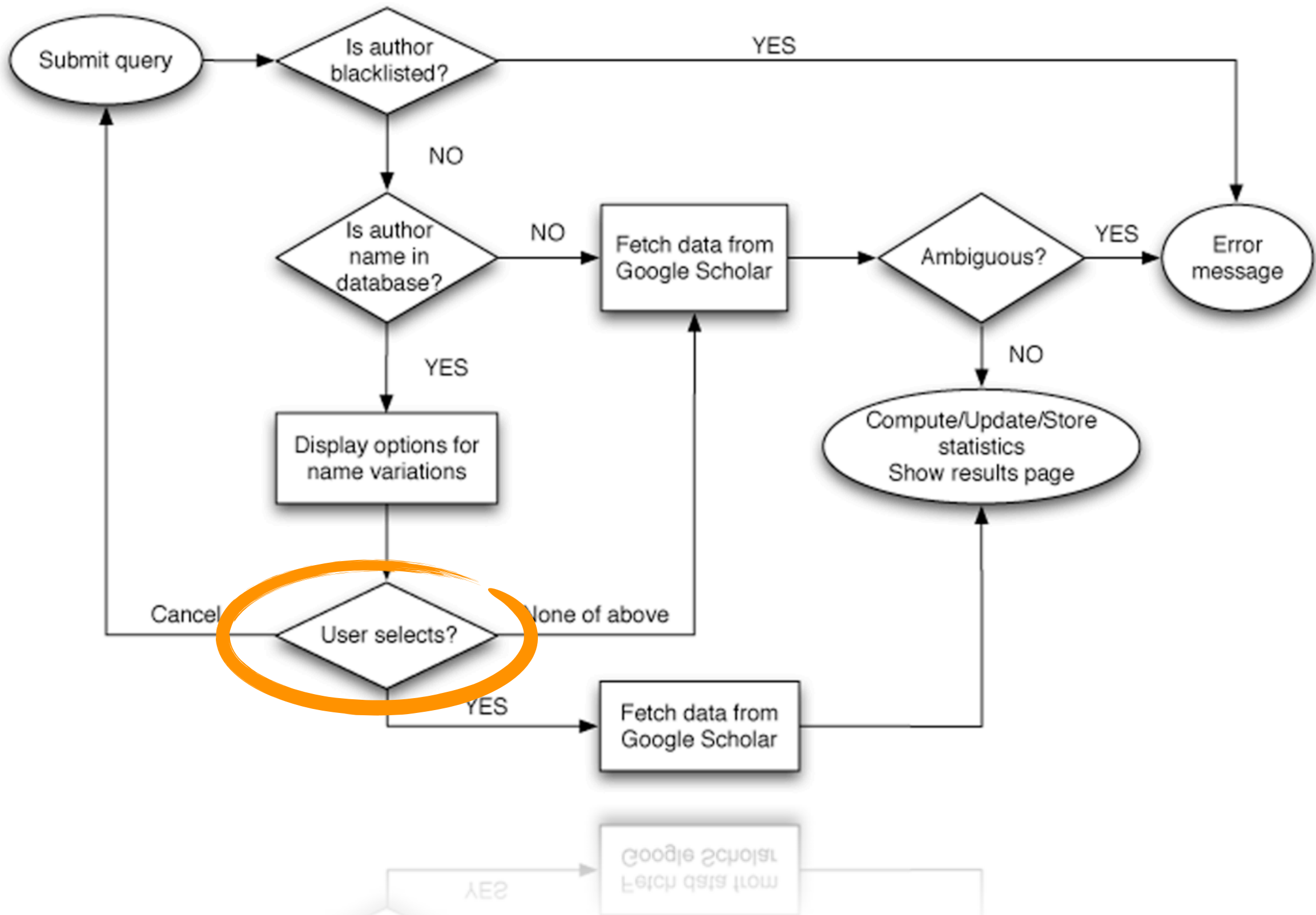
History



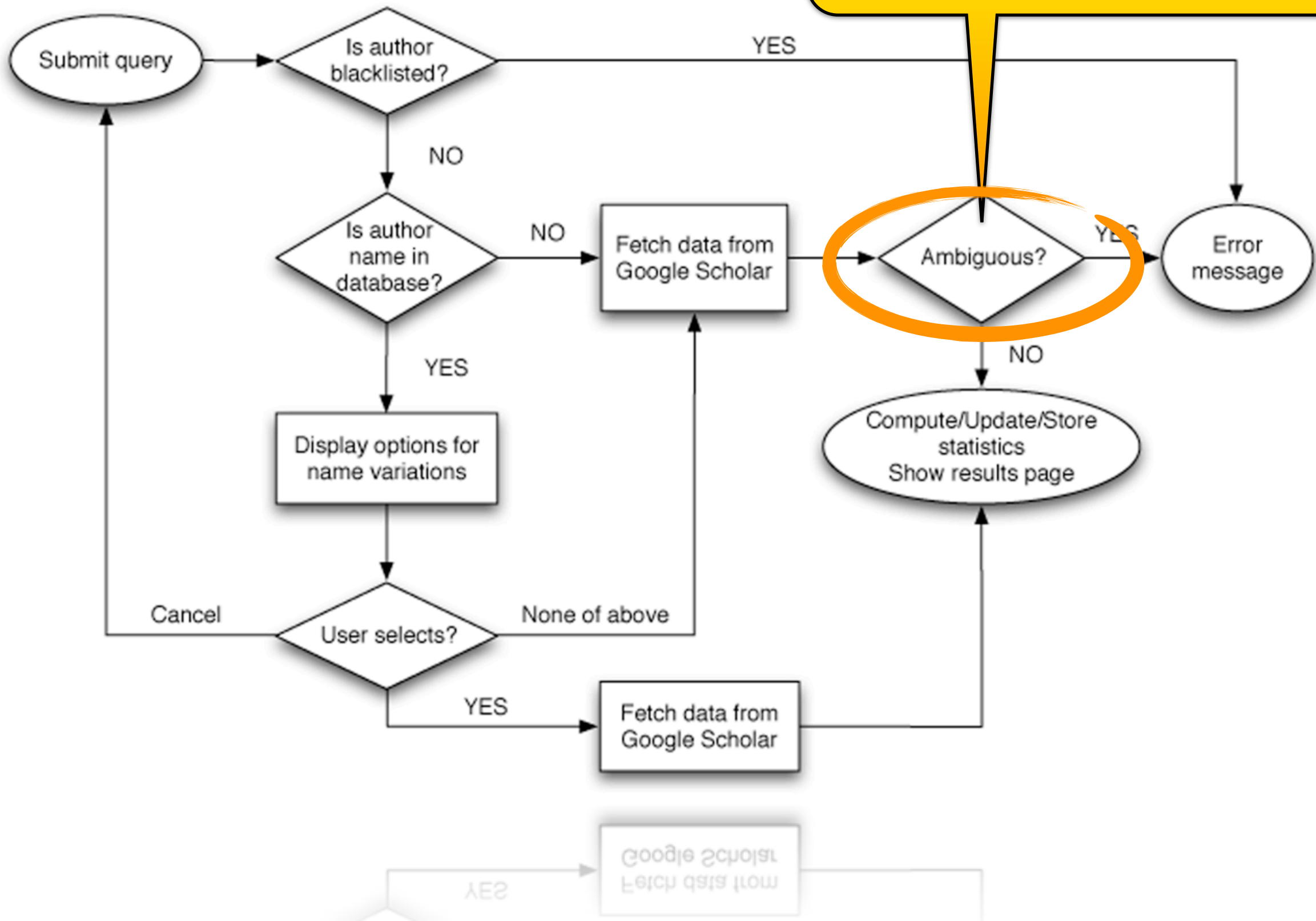




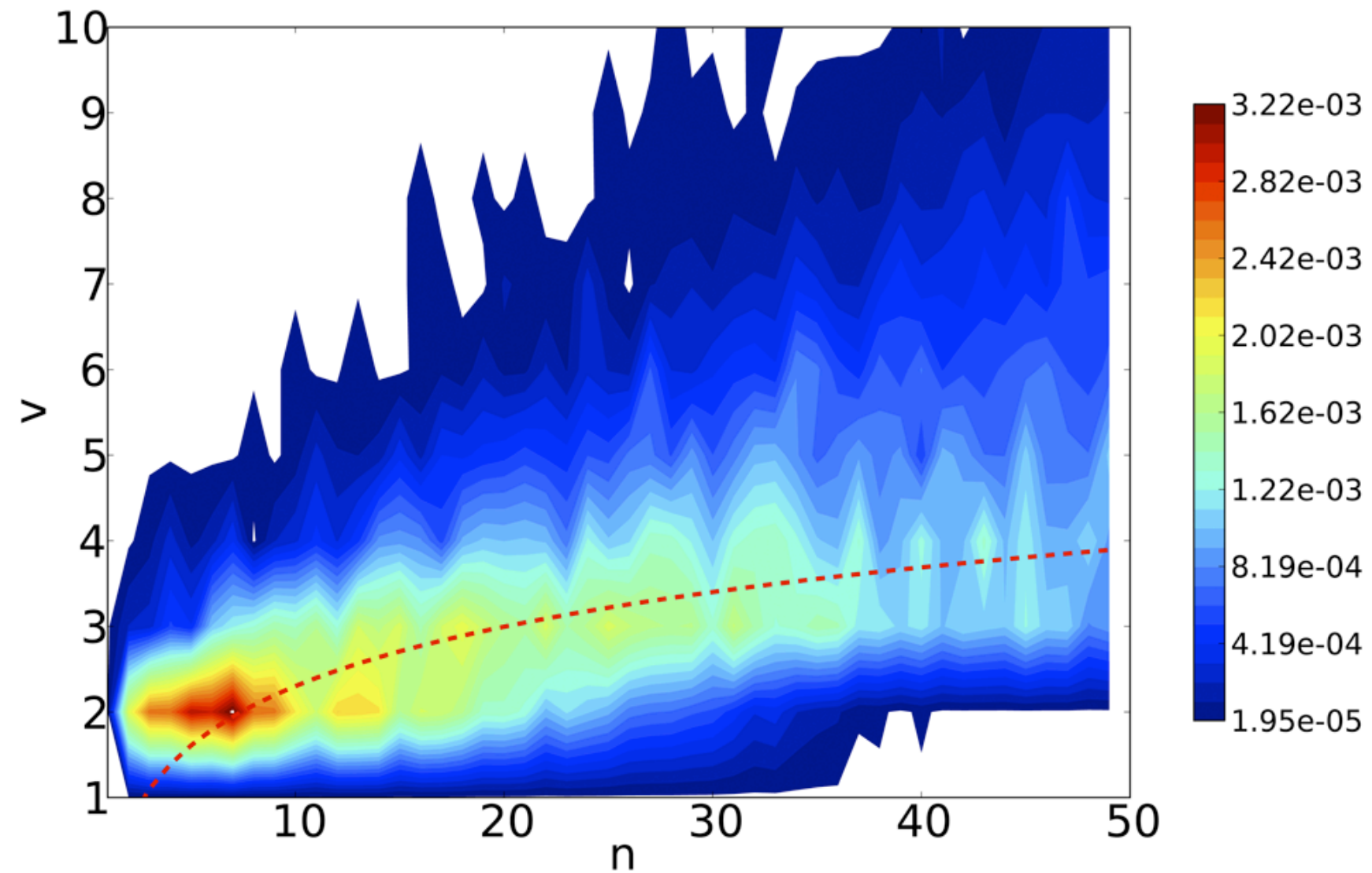




X. Sun & al: Ambiguous Author Query Detection using Crowdsourced Digital Library Annotations. *Information Processing & Management* 49:454-464, 2013

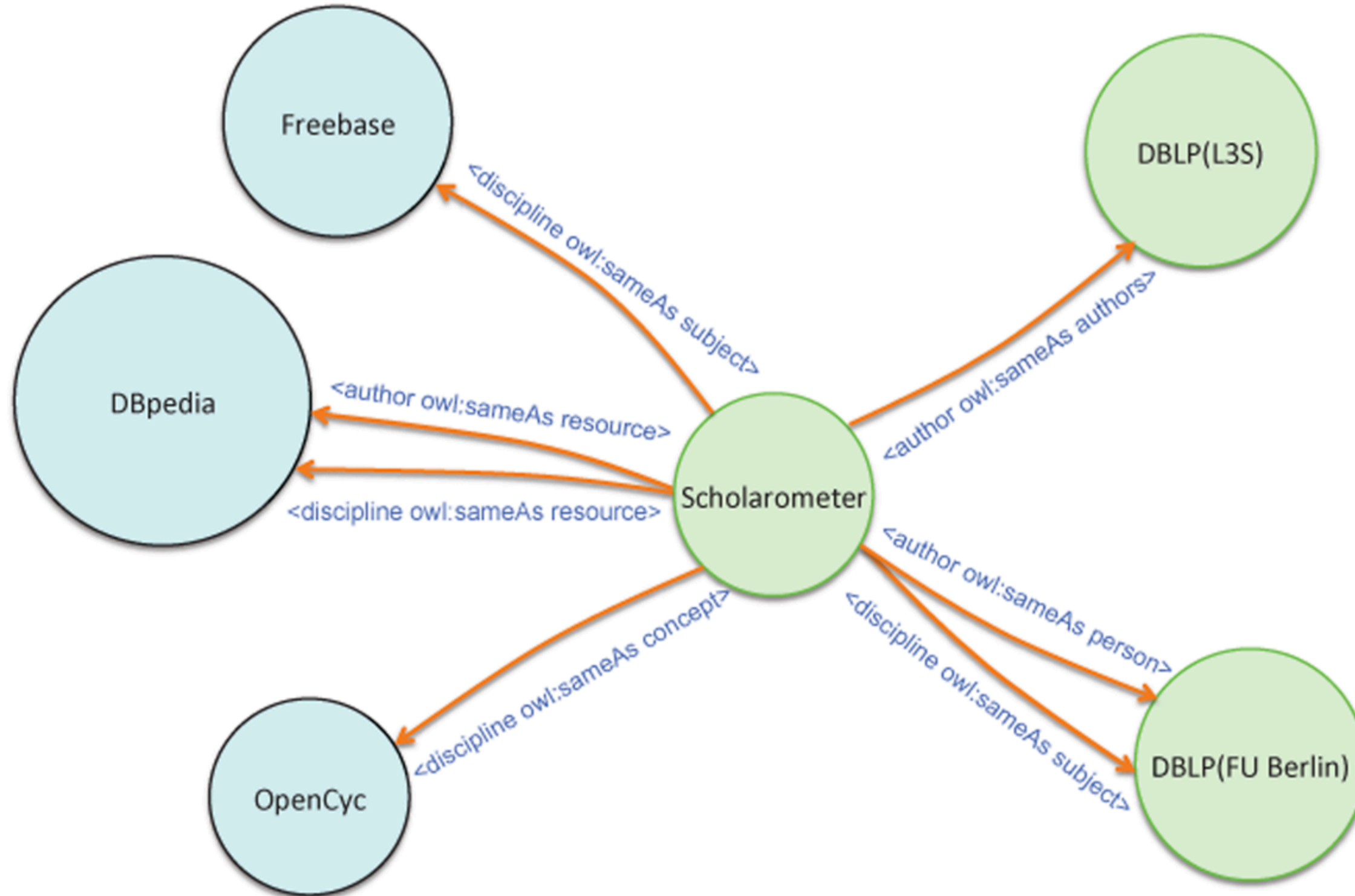


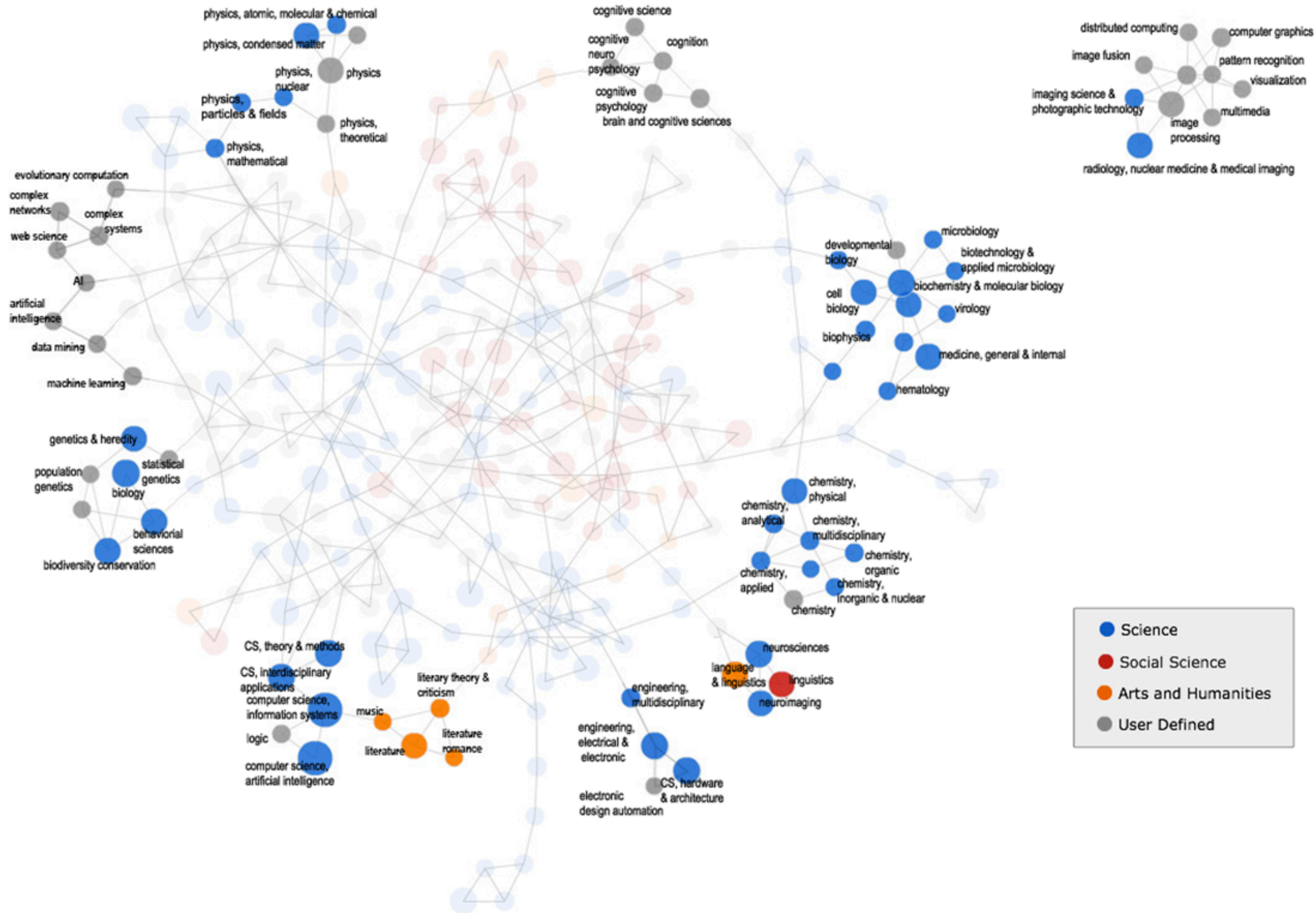
Reliability heuristics

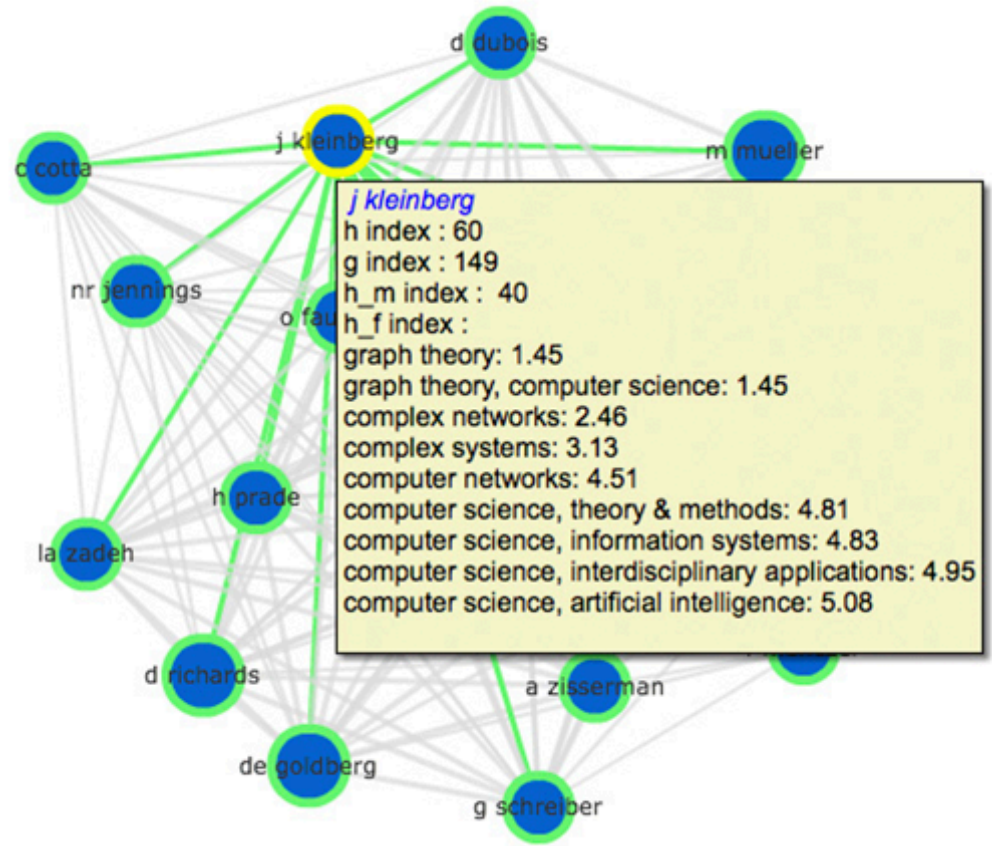
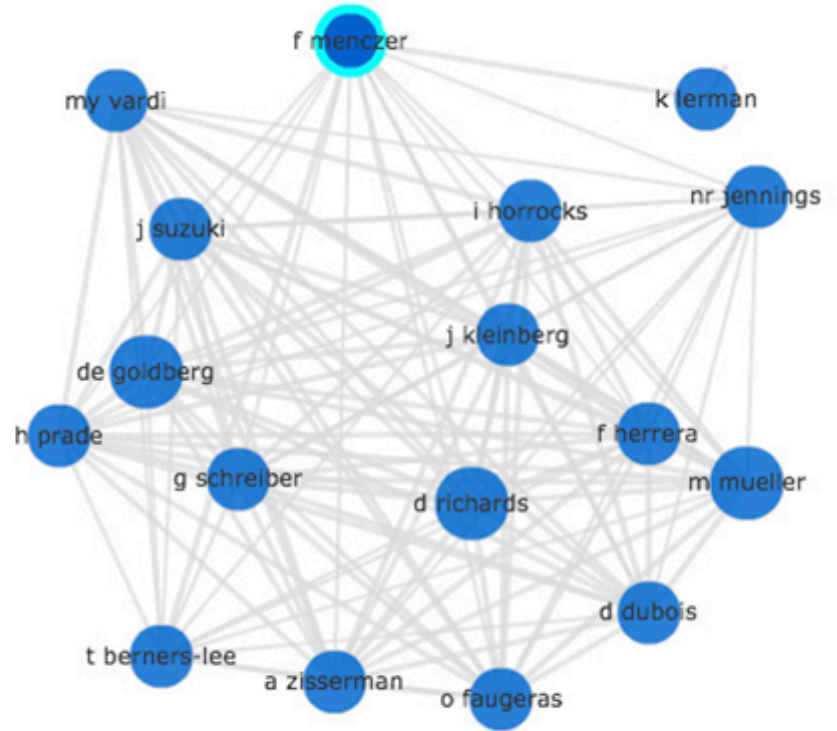
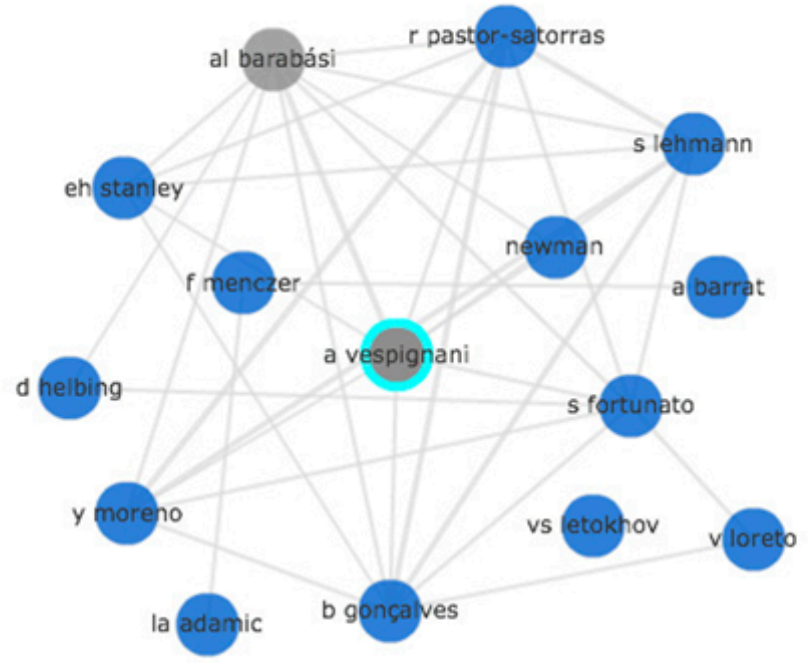
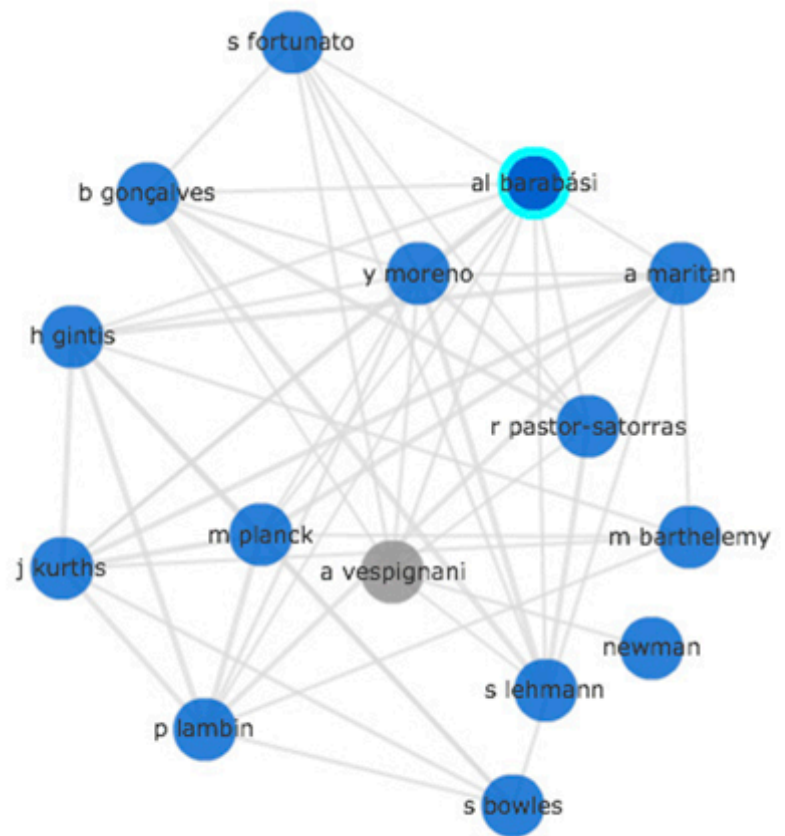


J. Kaur & *al*: Scholarometer: A Social Framework for Analyzing Impact across Disciplines. *PLoS ONE* 7(9):e43235, 2012

Linked Open Data & API







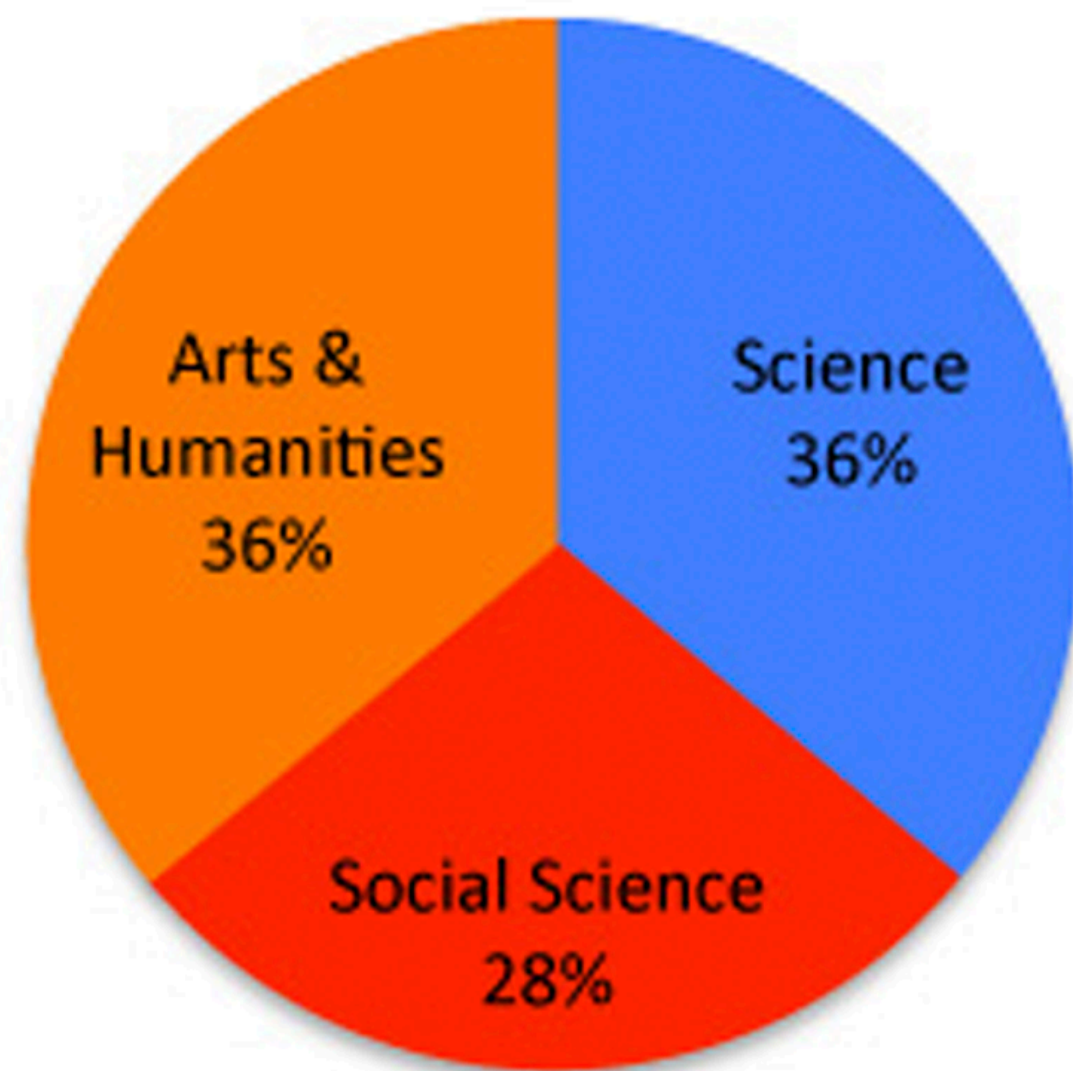
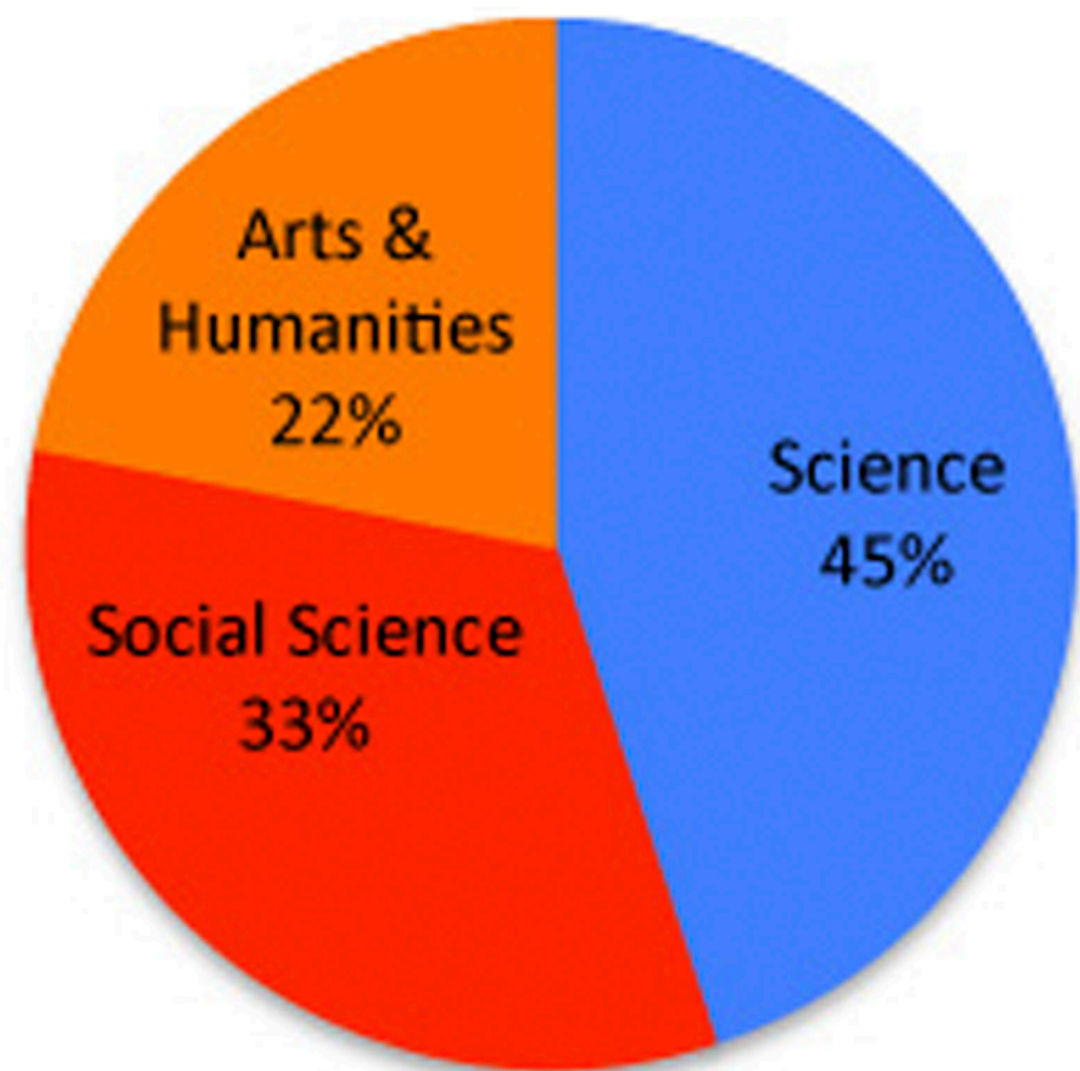


A profusion of measures

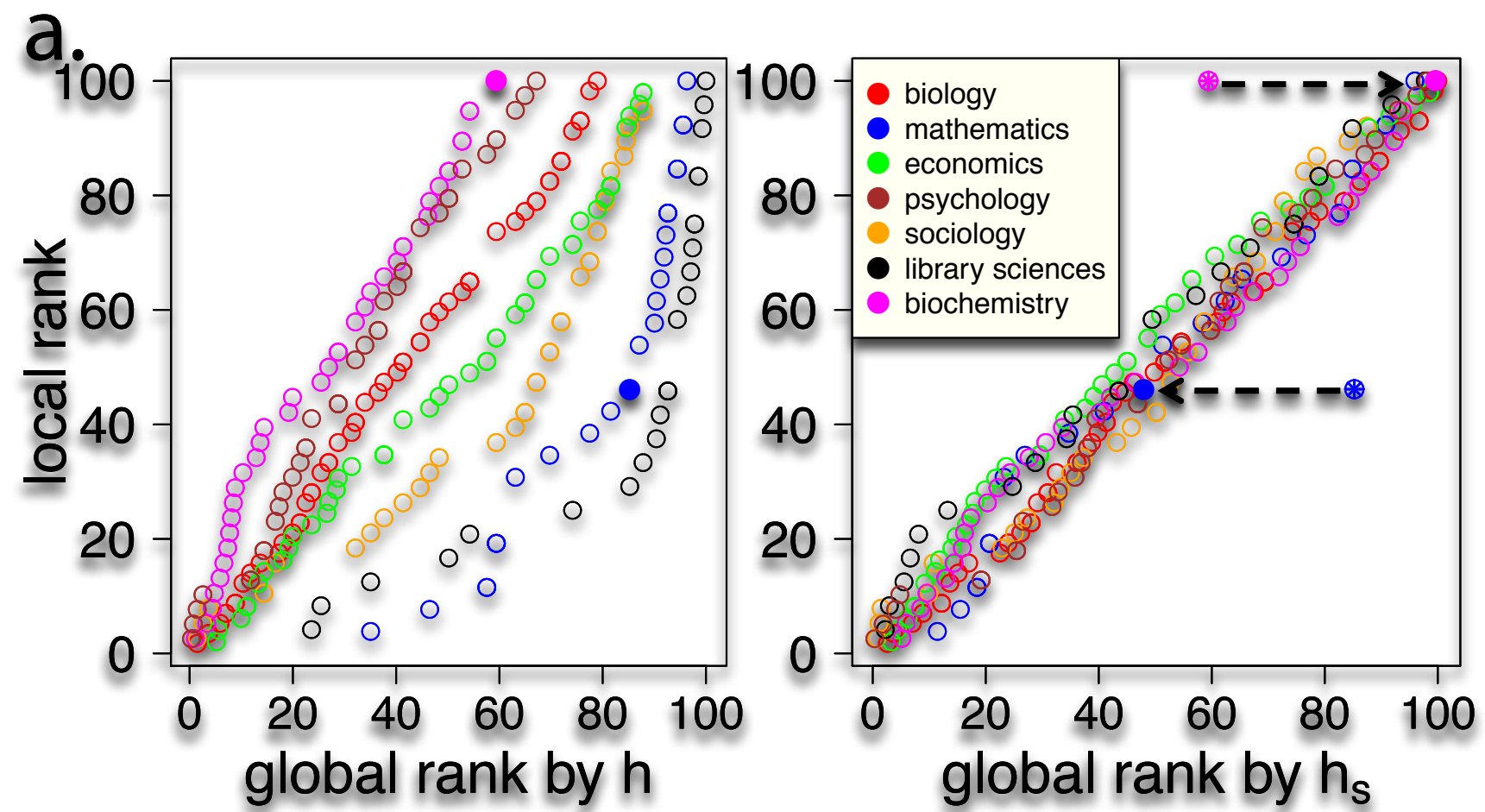
Scientific performance indicators are proliferating — leading researchers to ask afresh what they are measuring and why. **Richard Van Noorden** surveys the rapidly evolving ecosystem.

	<i>h</i>	<i>g</i>	<i>h_m</i>	<i>h_f</i>
1	JN Ihle	DR Cox	S Freud	S Freud
2	WC Willett	GM Whitesides	M Friedman	N Chomsky
3	MJ Stampfer	JN Ihle	P Bourdieu	S Kumar
4	M Friedman	W Zhang	SH Snyder	W Zhang
5	W Zhang	S Freud	E Witten	CR Sunstein
6	SH Snyder	LA Zadeh	JE Stiglitz	R Langer
7	Y Sun	A Shleifer	S Weinberg	E Witten
8	S Freud	P Bourdieu	N Chomsky	P Krugman
9	B Vogelstein	N Chomsky	HA Simon	P Bourdieu
10	S Kumar	T Maniatis	RA Posner	JL Goldstein

doi:10.1371/journal.pone.0043235.t001





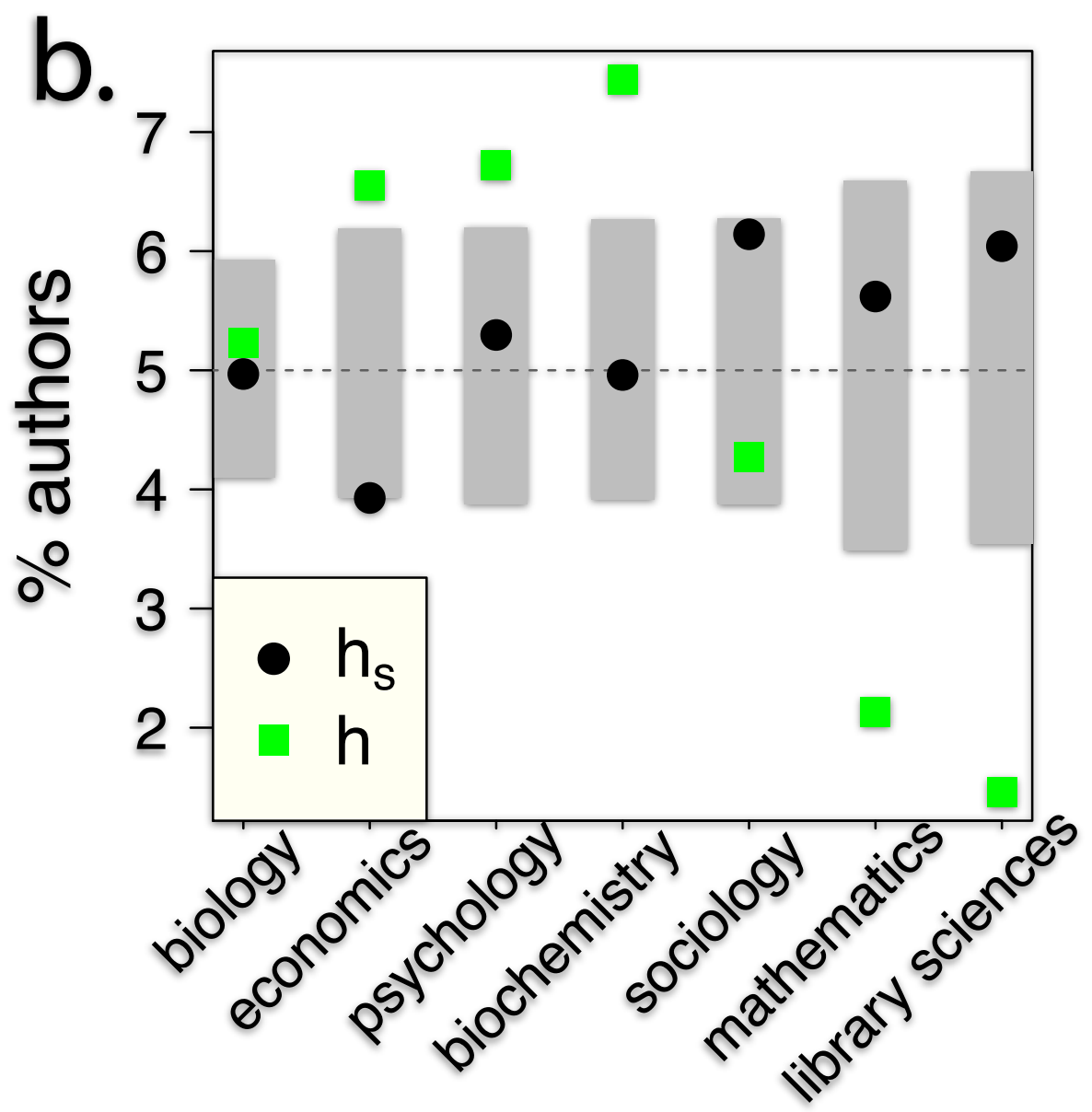


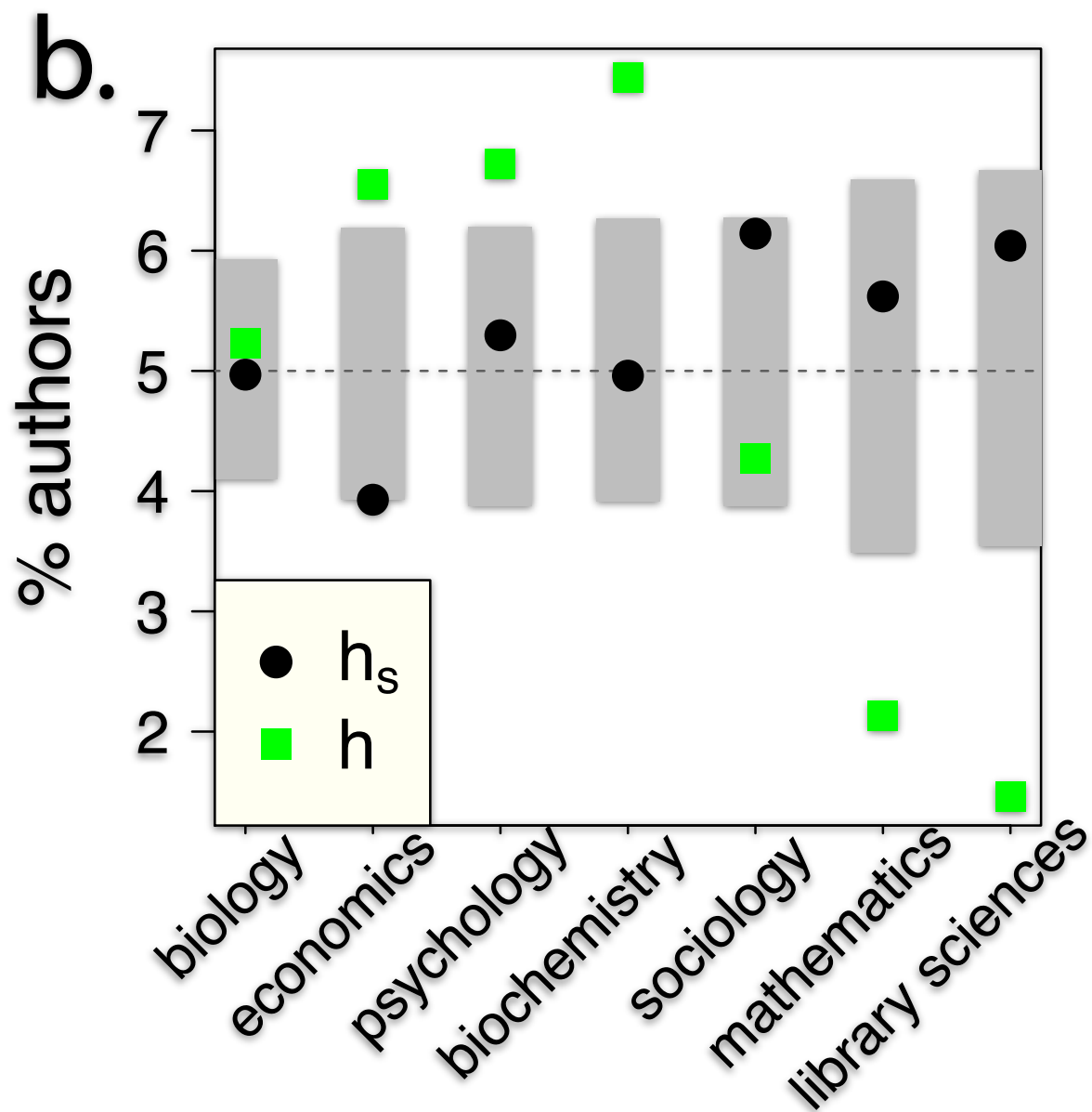
Universality

$$u_m(z) = 1 - \frac{1}{D} \sum_{d=1}^D \left| \frac{f_{z,d}^m}{z} - 1 \right|^\alpha$$

Universality

$$u_m(z) = 1 - \frac{1}{D} \sum_{d=1}^D \left| \frac{f_{z,d}^m}{z} - 1 \right|^\alpha$$

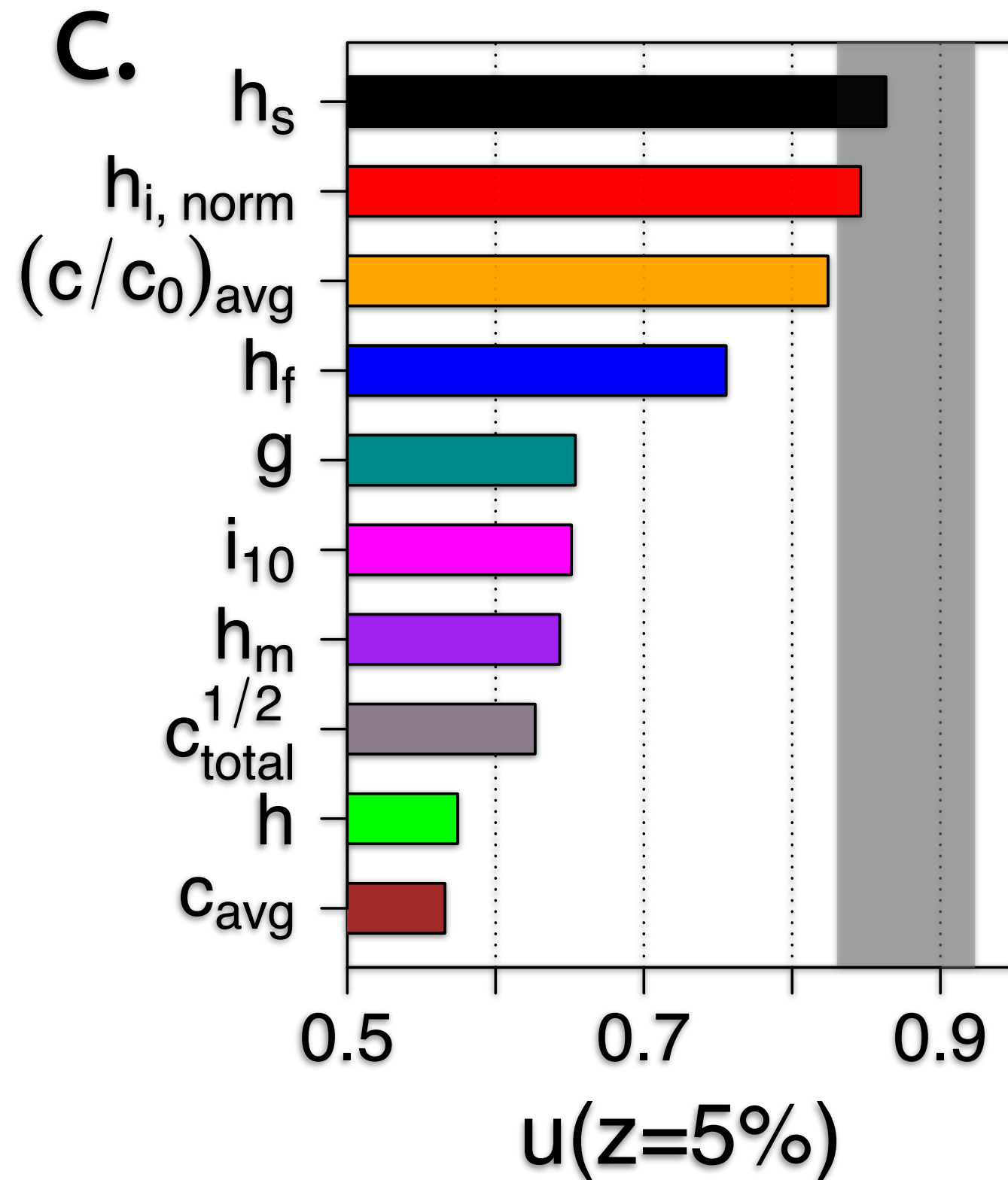




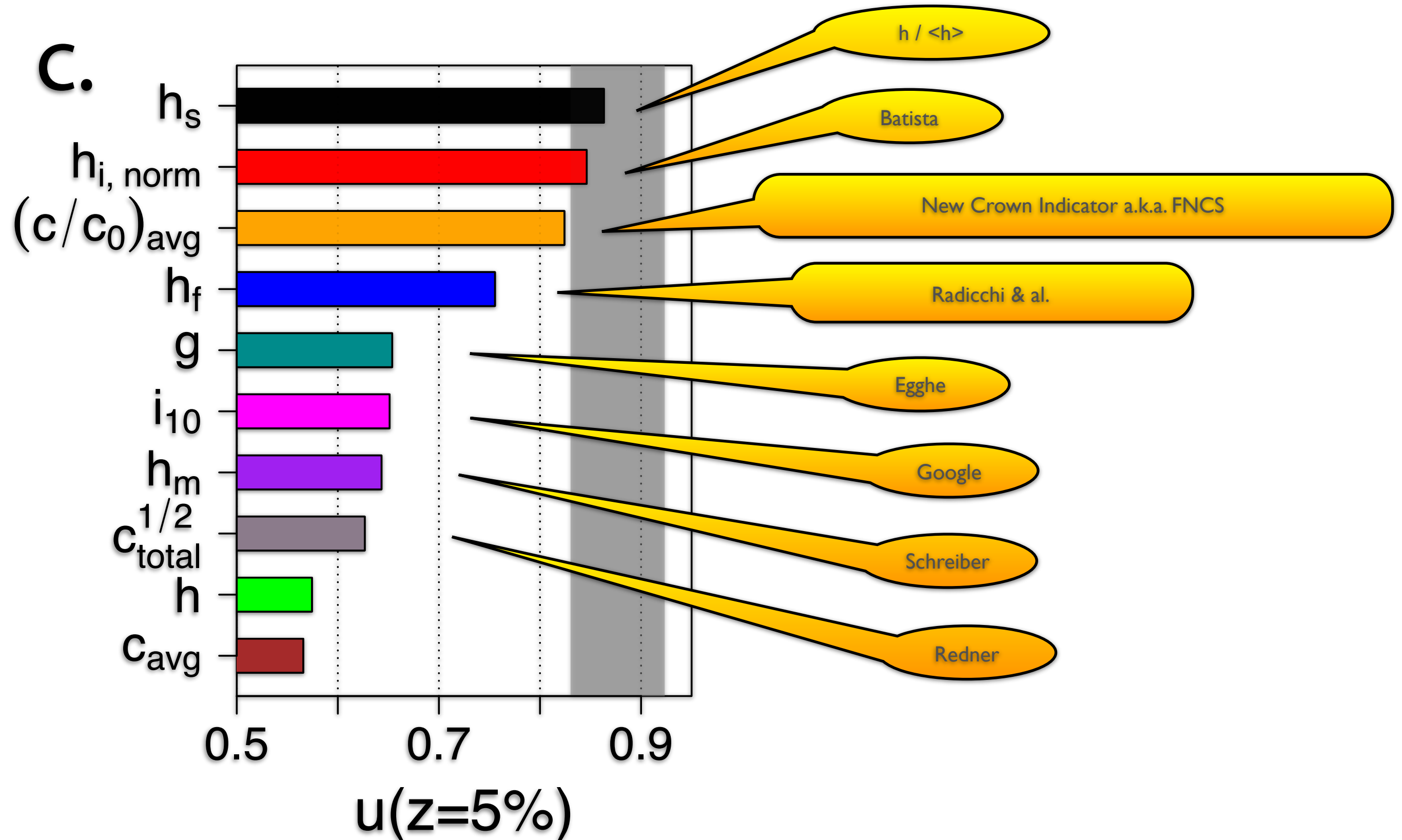
Fluctuations:
hypergeometric
distribution

$$P(m_d^z | n_z, N, N_d) = \frac{\binom{N_d}{m_d^z} \binom{N - N_d}{n_z - m_d^z}}{\binom{N}{n_z}}$$

Which metrics are universal?

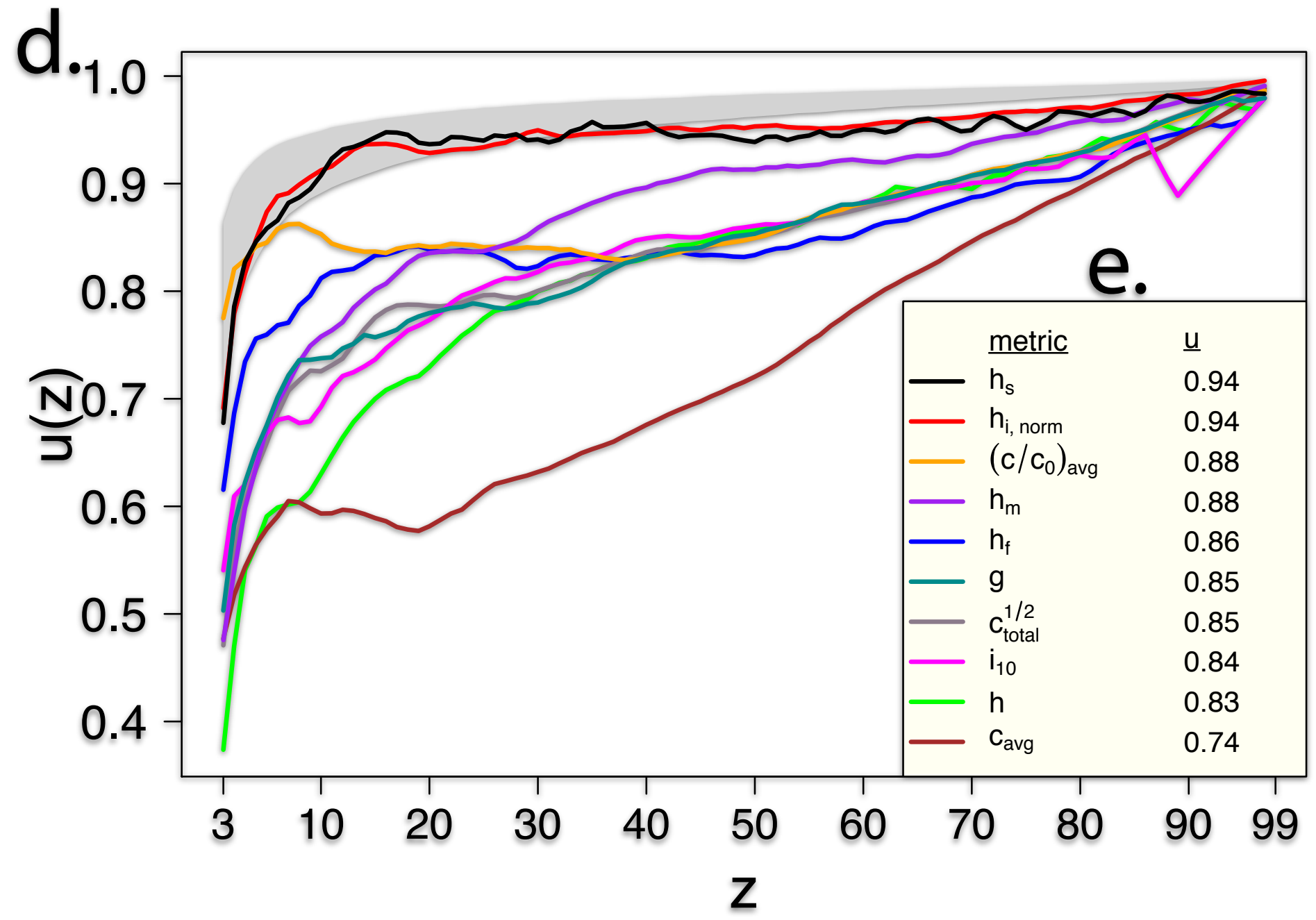


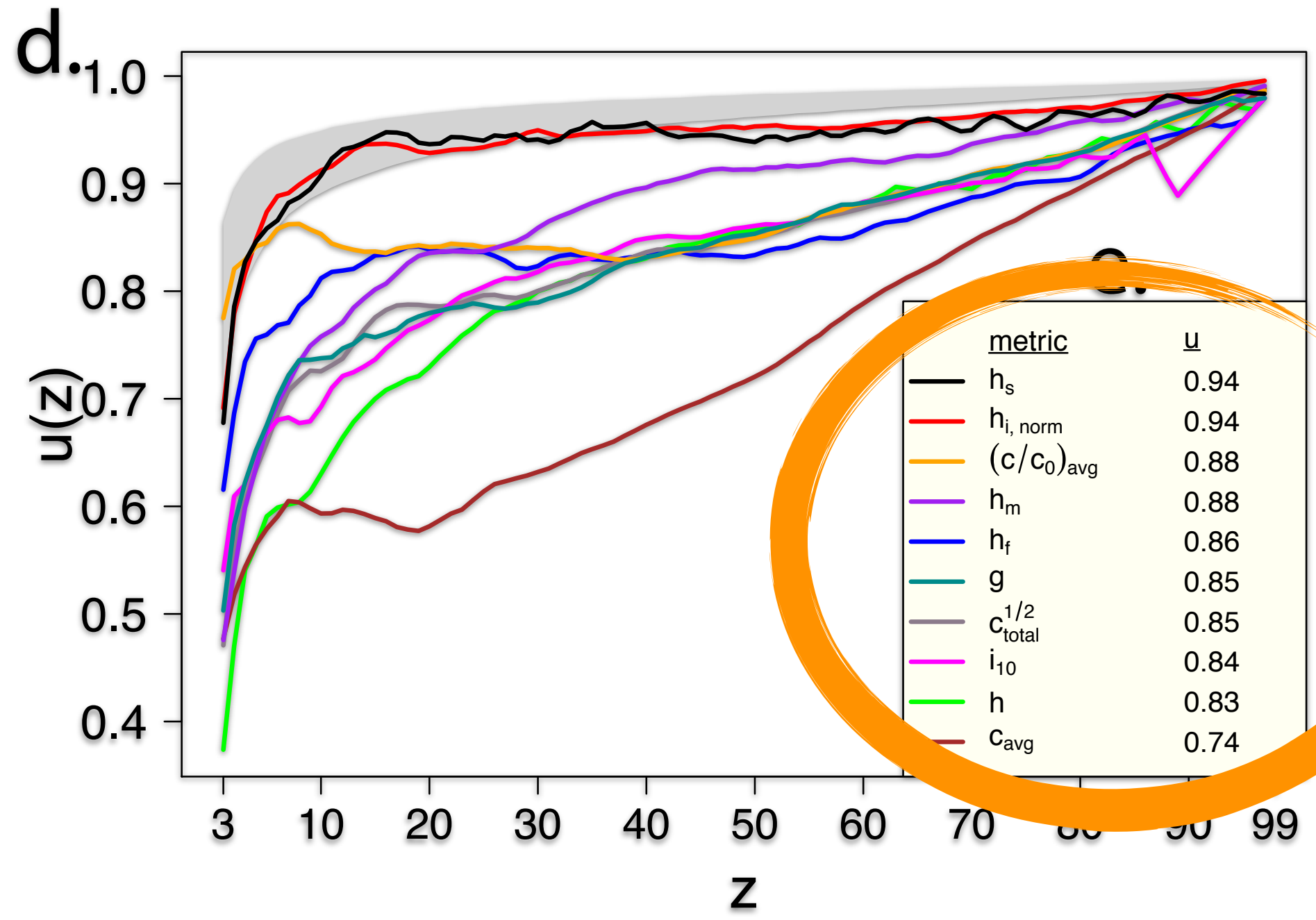
Which metrics are universal?

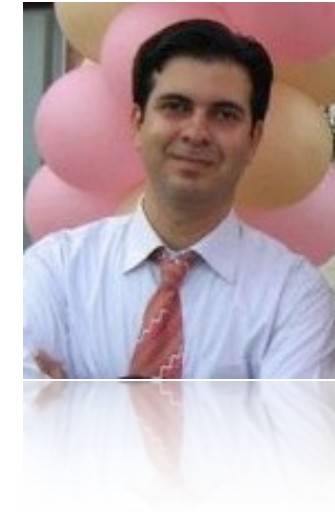
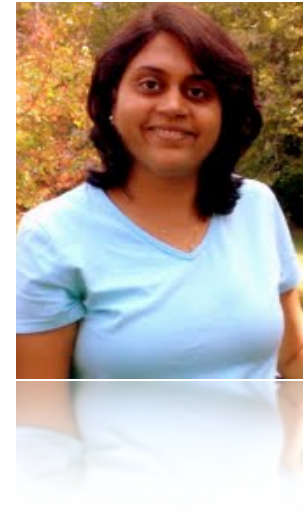
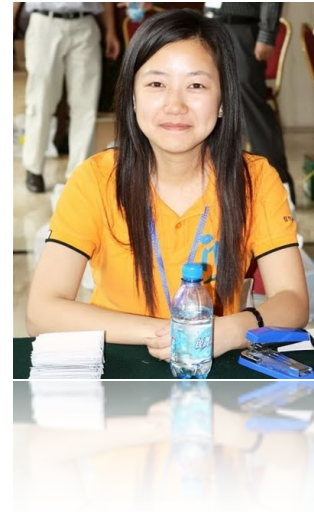
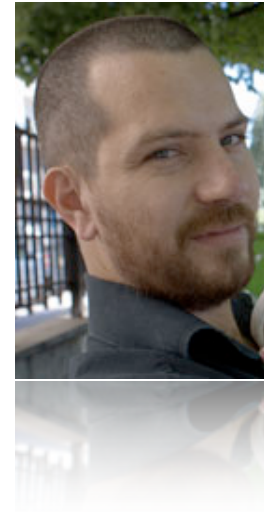
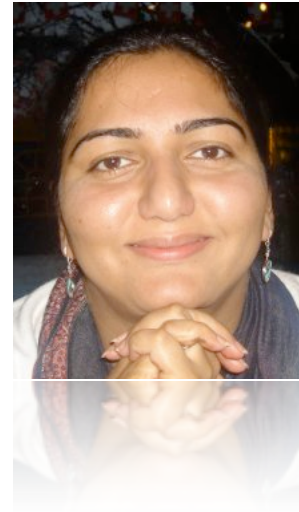


Universality Index

$$\overline{u_m} = \int_0^1 u_m(z) dz$$







Diep Thi Hoang, Jasleen Kaur, Filippo Radicchi, Xiaoling Sun, Snehal Patil,
Lino Possamai, Mohsen Jafari-Asbagh, Filippo Menczer

Thanks: Geoffrey Fox, Filippo Radicchi, Santo Fortunato, Alex Vespignani,
Johan Bollen, Rajasee Rege, Heather Roinestad, Alessandro Flammini,
Networks & agents Network, NSF Award IIS-0811994

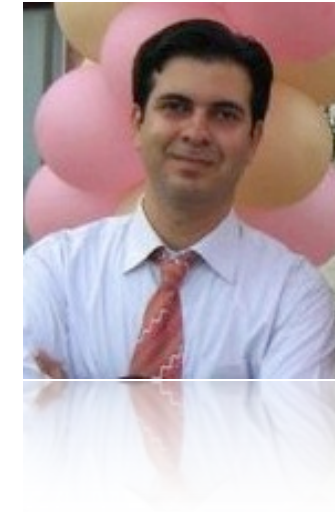
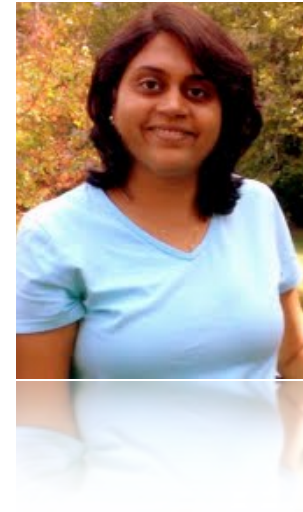
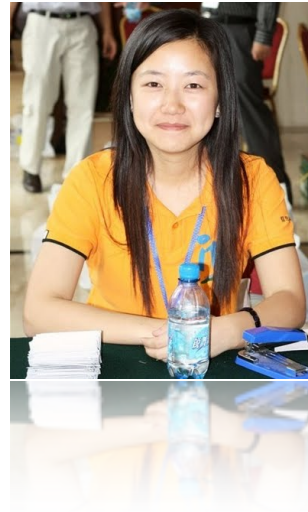
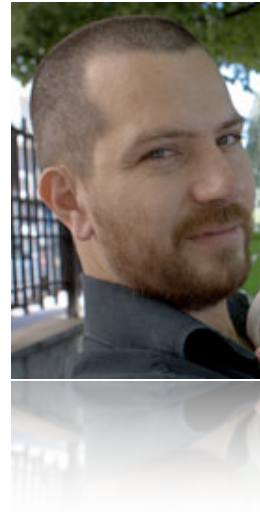


**SCHOOL OF INFORMATICS
AND COMPUTING**

INDIANA UNIVERSITY
Bloomington

Bloomington
INDIANA UNIVERSITY

scholarometer.indiana.edu



Diep Thi Hoang, Jasleen Kaur, Filippo Radicchi, Xiaoling Sun, Snehal Patil,
Lino Possamai, Mohsen Jafari-Asbagh, Filippo Menczer

Thanks: Geoffrey Fox, Filippo Radicchi, Santo Fortunato, Alex Vespignani,
Johan Bollen, Rajasee Rege, Heather Roinestad, Alessandro Flammini,
Networks & agents Network, NSF Award IIS-0811994



**SCHOOL OF INFORMATICS
AND COMPUTING**

INDIANA UNIVERSITY
Bloomington

Bloomington
INDIANA UNIVERSITY