A large, faint network graph composed of numerous small, semi-transparent nodes and connecting lines, forming a complex web-like structure.

Mapping Misinformation and Science Communication Research

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Seed Paper Details

In the following pages, we provide additional details on the inclusion/exclusion criteria that was used to construct data C1 and C2. We also include some tables showing most cited papers, venues, etc.

See <http://misinformationresearch.org> for additional details.

This PDF is available at <http://nap.edu/23674>

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Communicating Science Effectively: A Research Agenda

DETAILS

152 pages | 6 x 9 | PAPERBACK

ISBN 978-0-309-45102-4 | DOI 10.17226/23674

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CONTRIBUTORS

Committee on the Science of Science Communication: A Research Agenda; Division of Behavioral and Social Sciences and Education; National Academies of Sciences, Engineering, and Medicine

Extracted 200 citations from 23 pages of references from this report (C2)

Seed papers (C1, C2, C3)

- NAS report on science communication (C2)
 - Extracted 428 references from 23 pages of (unstructured) references
 - Matched 330 papers with DOIs
 - Matched **298** papers with WoS IDs
 - Non-matches include books, reports, etc.
- NAS bibliography on misinformation (C1)
 - 1,918 references based on search criteria
 - Matched **840** papers with WoS IDs
 - Non-matches included recent papers (2018), papers from other databases, etc.
- **Total matches** with WoS IDs for SEED SET: **1,075 papers**
 - 298 papers from C1; 840 papers from C2
 - 63 papers in both C1 and C2
 - Citations to/from this core set

Seed CI Criteria

Inclusion criteria	Exclusion criteria
Experiments/quasi experiments/ meta-analyses, systematic literature reviews: N/A Descriptive: Published between 01/01/2003 and present	Experiments/quasi experiments/meta-analyses, systematic literature reviews: N/A Descriptive: Published before 01/01/2003
Available in English	Languages other than English
Peer-reviewed articles	Non peer-reviewed literature
U.S. & International	N/A
Main literature areas: science, health, risk, or environmental communication	Identify leading journals in these areas to ensure these are covered in the search; TBD
Priority 1a: Any research design used to evaluate outcomes of an approach/intervention/practice intended to address the spread or impact of misinformation/disinformation/propaganda on audiences (randomized controlled trial, quasi-experiment) Priority 1b: meta-analyses, systematic literature reviews Priority 2: Descriptive studies that identify factors (psychological, social, systemic) associated with spread and impact of misinformation/disinformation/propaganda on audiences and that may be the targets of intervention	

Seed CI Criteria

<u>Misinformation Terms</u>	<u>Communication terms</u>	<u>Cross terms</u>	<u>Science terms</u>
bias	campaigns	environment	controversy/controversial science
disinformation	debunking	health	public understanding of science
fake news	diffusion	risk	science
false beliefs	digital media	Science	science communication
misconception	inoculation	climate	science literacy
misinformation	journalism	ebola	uncertainty
misperception	mass media	genetic	trust
myths	news	engineering (or genomic editing, or genetically modified, or CRISPR)	
propaganda	online media	infectious diseases	
rumor	public deliberation	nutrition	
unsupported beliefs	public engagement	vaccines	
	social media	zika	

Most Cited Papers in Seed Set

Paper	Pub Year	Citations
Two conceptions of emotion in criminal law	1996	309
What do alternative sanctions mean?	1996	288
How we know - and sometimes misjudge - What others know: Imputing one's own knowledge to others	1999	265
The secret ambition of deterrence	1999	258
How Numeracy Influences Risk Comprehension and Medical Decision Making	2009	227
Misinformation and Its Correction: Continued Influence and Successful Debiasing	2012	219
Foreword: neutral principles, motivated cognition and some problems for constitutional law	2011	202
Some Realism about Punishment Naturalism	2010	201
Public deliberation, discursive participation, and citizen engagement: A review of the empirical literature	2004	198
Communicating adaptation to climate change: the art and science of public engagement when climate change comes home	2014	191

Venues of Most Cited Papers

Paper	Pub Year	Citations
COLUMBIA LAW REVIEW	1996	309
UNIVERSITY OF CHICAGO LAW REVIEW	1996	288
PSYCHOLOGICAL BULLETIN	1999	265
HARVARD LAW REVIEW	1999	258
PSYCHOLOGICAL BULLETIN	2009	227
PSYCHOLOGICAL SCIENCE IN THE PUBLIC INTEREST	2012	219
PSYCHOLOGICAL SCIENCE IN THE PUBLIC INTEREST	2011	202
HARVARD LAW REVIEW	2010	201
UNIVERSITY OF CHICAGO LAW REVIEW	2004	198
ANNUAL REVIEW OF POLITICAL SCIENCE	2014	191

Most Cited Papers (excluding law)

Paper	Pub Year	Citations
How we know - and sometimes misjudge - What others know: Imputing one's own knowledge to others	1999	265
How Numeracy Influences Risk Comprehension and Medical Decision Making	2009	227
Misinformation and Its Correction: Continued Influence and Successful Debiasing	2012	219
Public deliberation, discursive participation, and citizen engagement: A review of the empirical literature	2004	198
Communicating adaptation to climate change: the art and science of public engagement when climate change comes home	2014	191
Networks and the Challenge of Sustainable Development	2014	185
Informal Learning Through Science Media Usage	2014	181
Pathologies of Studying Public Opinion, Political Communication, and Democratic Responsiveness	2014	172
Extraterrestrial encounters: UFOs, science and the quest for transcendence, 1947-1972	2012	166
Modeling working memory: An interference model of complex span	2012	164

Most Cited Papers in last 5 years

Paper	Pub Year	Citations
Communicating adaptation to climate change: the art and science of public engagement when climate change comes home	2014	191
Networks and the Challenge of Sustainable Development	2014	185
Informal Learning Through Science Media Usage	2014	181
Pathologies of Studying Public Opinion, Political Communication, and Democratic Responsiveness	2014	172
A Failure to Communicate: Agenda Setting in Media and Policy Studies	2013	131
Social contagion theory: examining dynamic social networks and human behavior	2013	126
Communicating Policy-Relevant Science	2015	110
Gender Inequality in Deliberation: Unpacking the Black Box of Interaction	2014	108
Bringing values and deliberation to science communication	2013	102
Ideology, motivated reasoning, and cognitive reflection	2013	102

Venues of Most Cited Papers in last 5 years

Paper	Pub Year	Citations
WILEY INTERDISCIPLINARY REVIEWS-CLIMATE CHANGE	2014	191
ANNUAL REVIEW OF ENVIRONMENT AND RESOURCES	2014	185
EDUCATIONAL PSYCHOLOGIST	2014	181
POLITICAL COMMUNICATION	2014	172
POLITICAL COMMUNICATION	2013	131
STATISTICS IN MEDICINE	2013	126
PS-POLITICAL SCIENCE & POLITICS	2015	110
PERSPECTIVES ON POLITICS	2014	108
PNAS	2013	102
JUDGMENT AND DECISION MAKING	2013	102

Top Journals

Journal	Publications (n)
Risk Analysis	55
Public Understanding of Science	26
PNAS	25
Science	20
Journal of Communication	18
Climatic Change	16
Journal of Experimental Psychology (Learning Memory...)	16
Journal of Risk Research	15
Science Communication	15
Political Communication	15

Top Subjects (Traditional)

Journal	Publications (n)
Communication	74
Multidisciplinary Science	62
Public, Environment & Occupational Health; Math...	55
Political Science	42
Psychology, Experimental	32
Psychology, Multidisciplinary	29
Communication; History & Philosophy of Science	26
Communication; Political Science	23
Psychology, Social	22
Social Sciences, Interdisciplinary	22

*Based on WoS traditional subject classifications. Extended subject classifications are also available

Top Subjects (Extended)

Journal	Publications (n)
Psychology	74
Communication	62
Science and Technology	55
Government & Law	42
Public, Environment & Occupational Health; Math...	32
Environmental Sciences & Ecology; Meteorology...	29
Communication; History & Philosophy of Science	26
Communication; Government & Law	23
Social Sciences - Other Topics	22
General & Internal Medicine	22

*Based on WoS traditional subject classifications. Extended subject classifications are also available

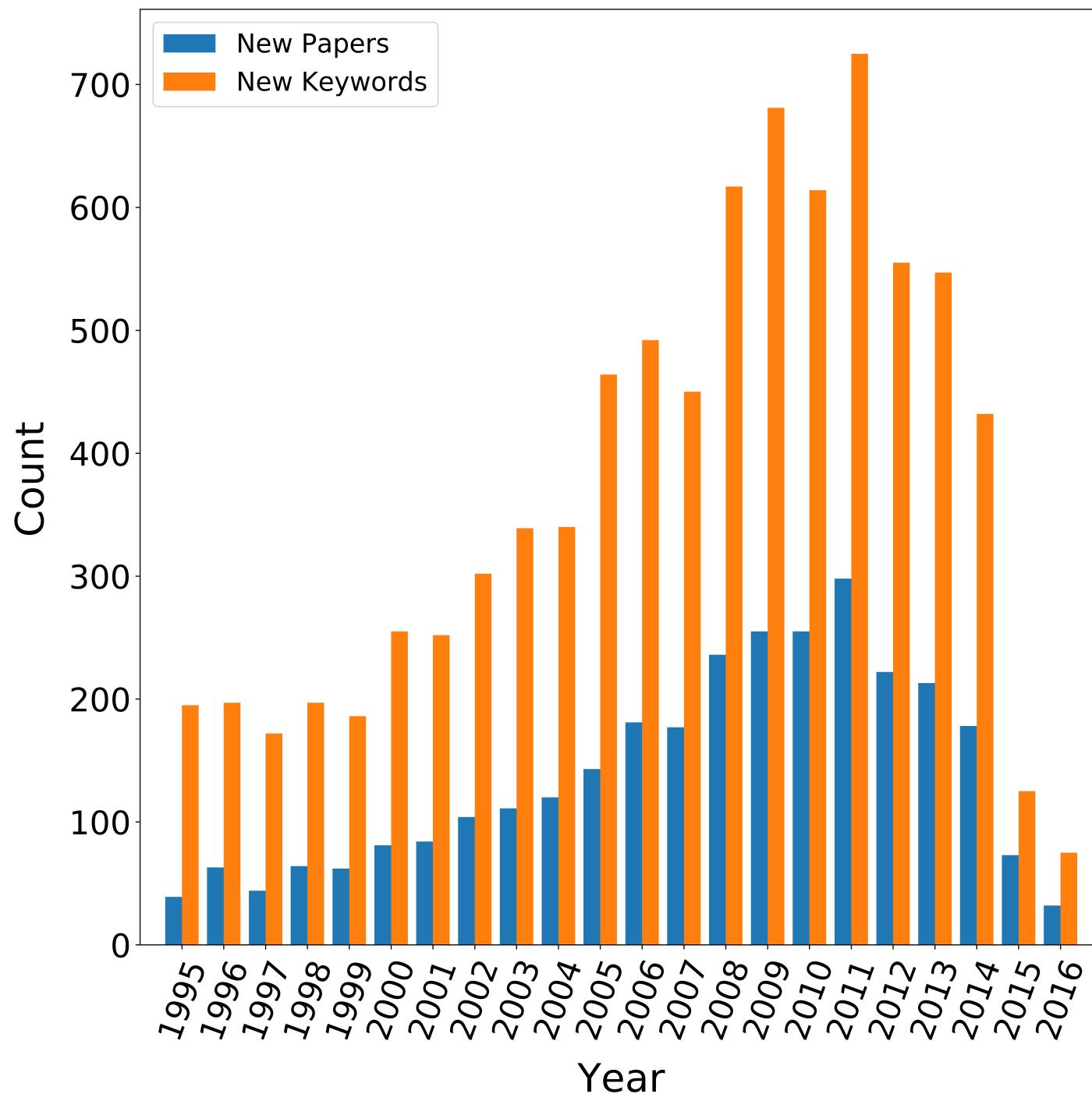
Prolific Authors

Journal	Institution	Publications
Michael Siegrist	ETH Zurich	87
Stephan Lewandowsky	University of Bristol, UK	68
Dietram A. Scheufele	University of Wisconsin	52
Dominique Brossard	University of Wisconsin	39
Edward Maibach	George Mason University	27
Anthony Leiserowitz	Yale University	24
Carmen Keller	Zurich University	23
Joachim Kimmerle	Leibniz-Institut für Wissensmedien	22
James N. Druckman	Northwestern University	21
Ulrike Cress	Leibniz-Institut für Wissensmedien	21

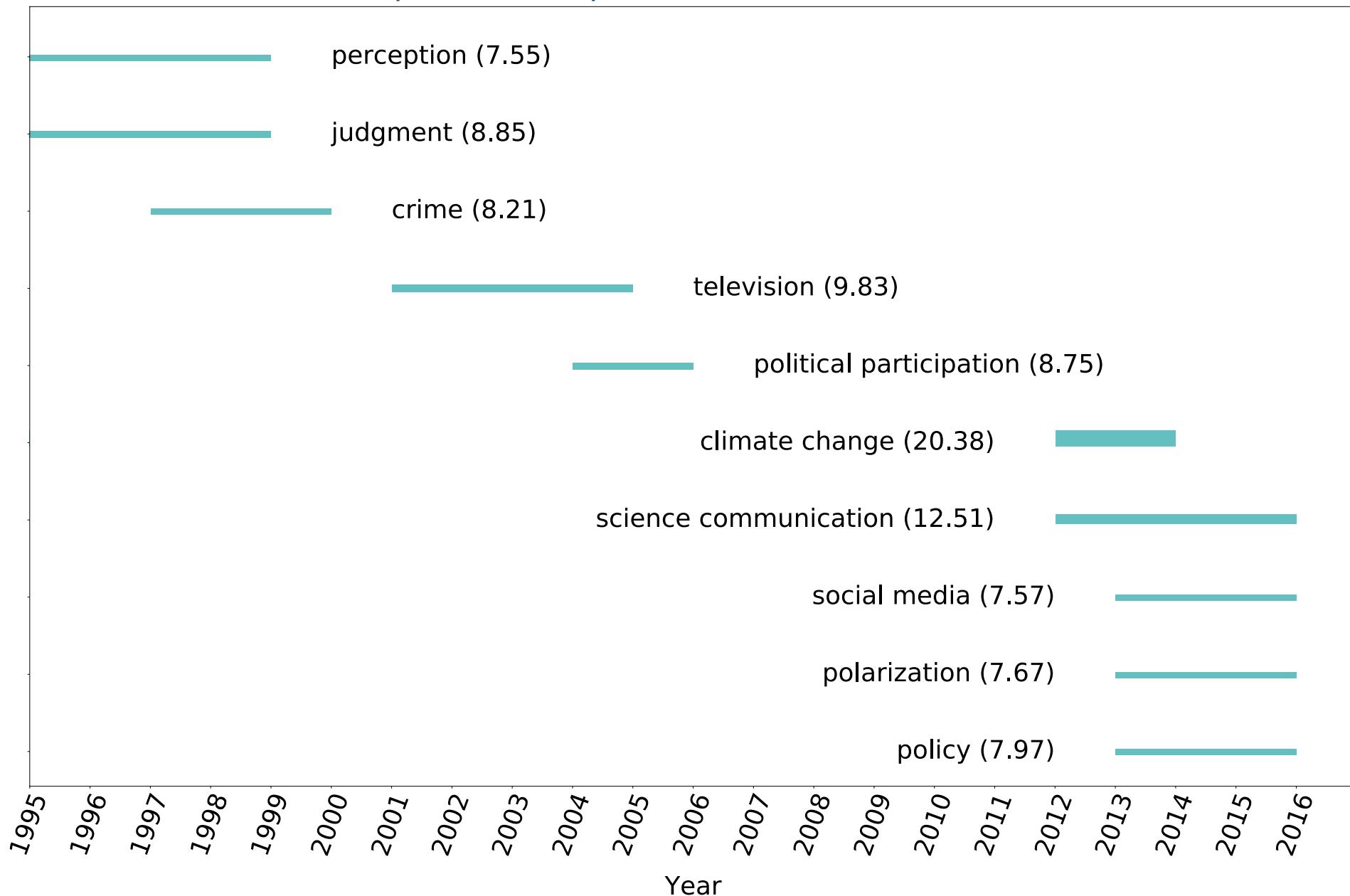
Most frequent keywords

Keyword	Freq	Keyword	Freq
Information	142	Behavior	46
Communication	90	Perception	46
Attitudes	87	Trust	46
Knowledge	78	Policy	44
Science	73	Decision-Making	44
Risk	72	Climate Change	42
Perceptions	66	Risk Perception	42
Model	63	News	38
United-States	59	Media	37
Impact	50	Mass-Media	37

*There were 4,466 unique keywords in the set



Popular Keywords Over Time



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