Going Beyond Research: Climate Change Engagement of Scientists

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Institute for Advanced Study

University of Amsterdam

APA Division 34 Virtual Conference

27th September, 2024

Sixth Assessment Report

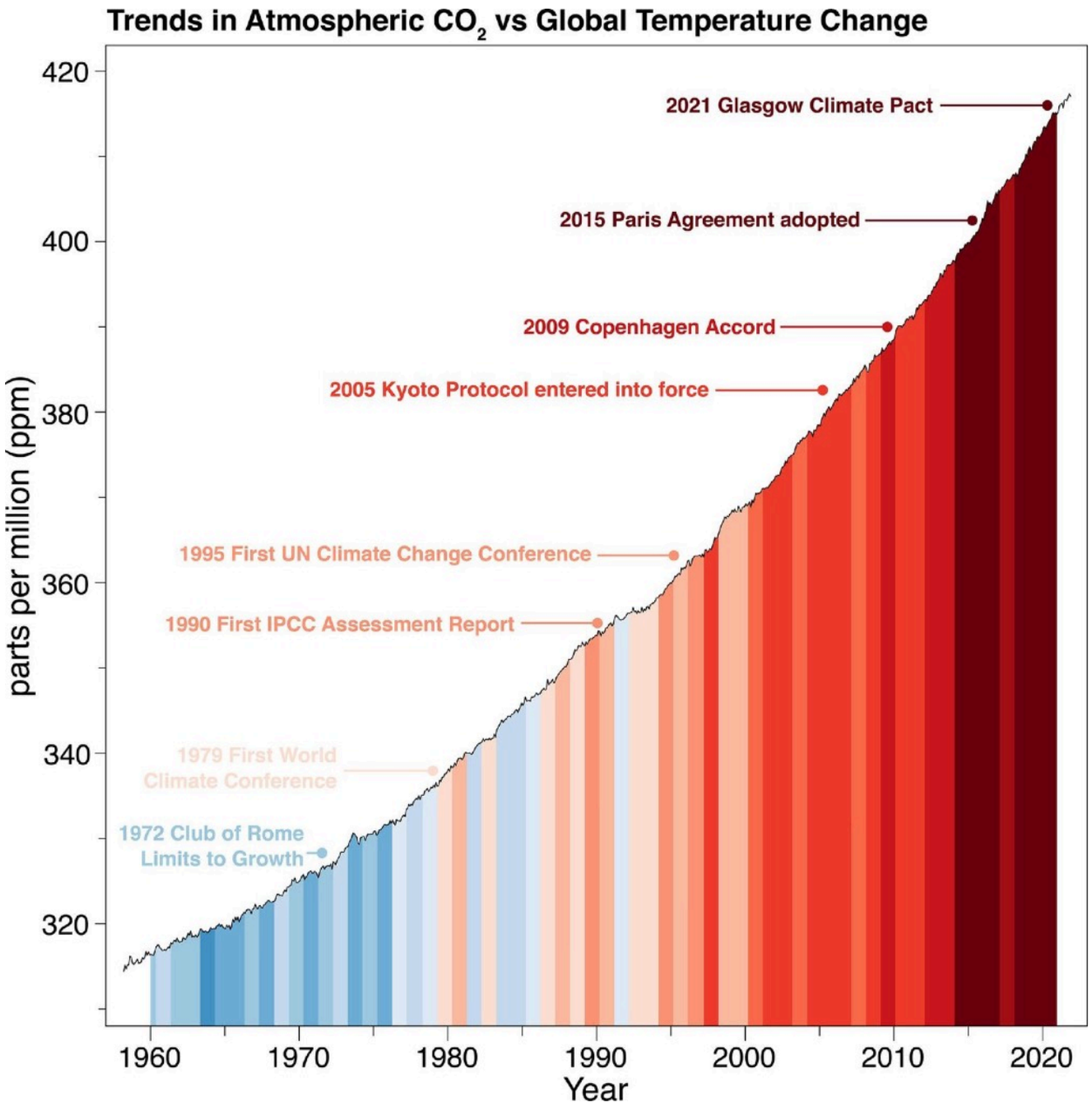
Synthesis Report

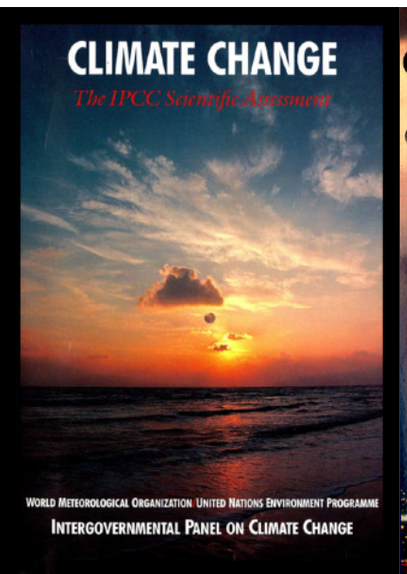
20 March 2023

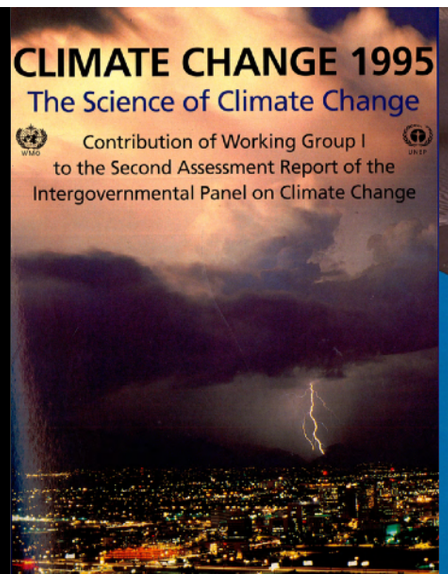
ipcc
INTERGOVERNMENTAL PANEL ON climate change

“There is a rapidly closing window of opportunity to secure a liveable and sustainable future for all.”

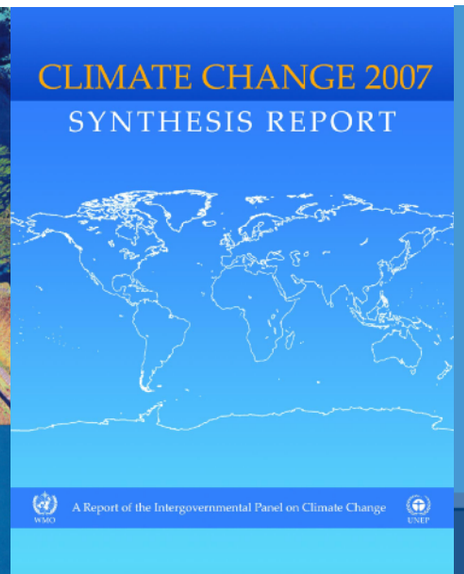

DR HANSEN

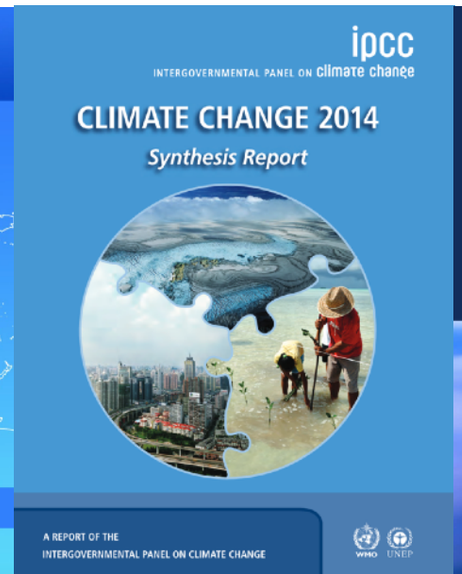

Trends in Atmospheric CO_2 vs Global Temperature Change
parts per million (ppm)
420
400
380
360
340
320
1960
1970
1980
1990
2000
2010
2020
Year
2021 Glasgow Climate Pact
2015 Paris Agreement adopted
2009 Copenhagen Accord
2005 Kyoto Protocol entered into force
1995 First UN Climate Change Conference
1990 First IPCC Assessment Report
1979 First World Climate Conference
1972 Club of Rome Limits to Growth

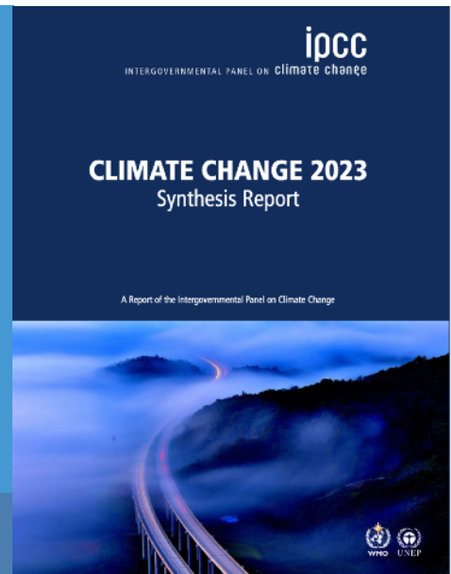

CLIMATE CHANGE
The IPCC Scientific Assessment
World Meteorological Organization United Nations Environment Programme
Intergovernmental Panel on Climate Change

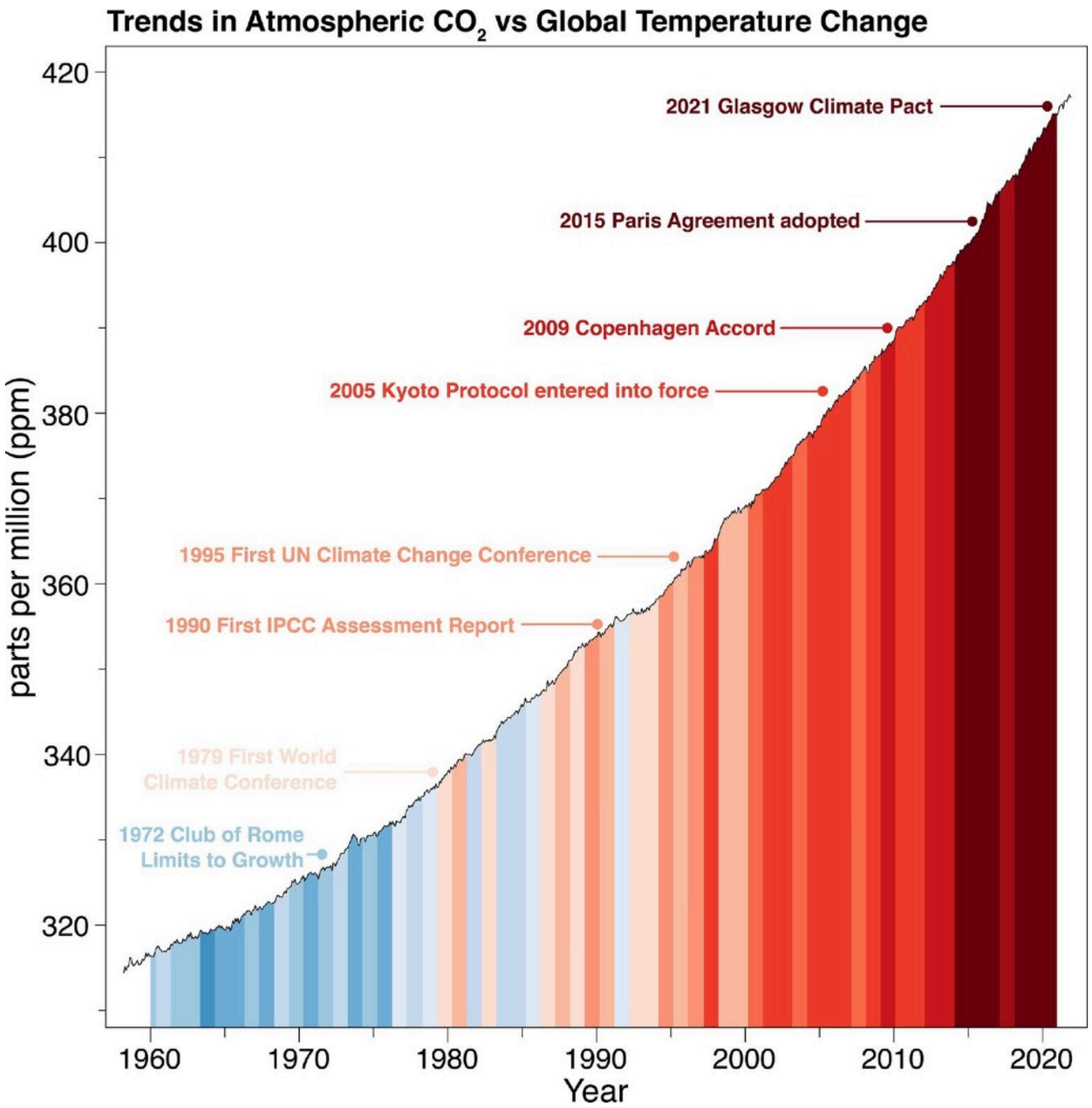

CLIMATE CHANGE 1995
The Science of Climate Change
Contribution of Working Group I
to the Second Assessment Report of the
Intergovernmental Panel on Climate Change


CLIMATE CHANGE 2001
Synthesis Report
Contribution of Working Groups I, II, and III
to the Third Assessment Report of the
Intergovernmental Panel on Climate Change


CLIMATE CHANGE 2007
SYNTHESIS REPORT
A Report of the Intergovernmental Panel on Climate Change


ipcc
Intergovernmental Panel on climate change
CLIMATE CHANGE 2014
Synthesis Report
A REPORT OF THE
INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE

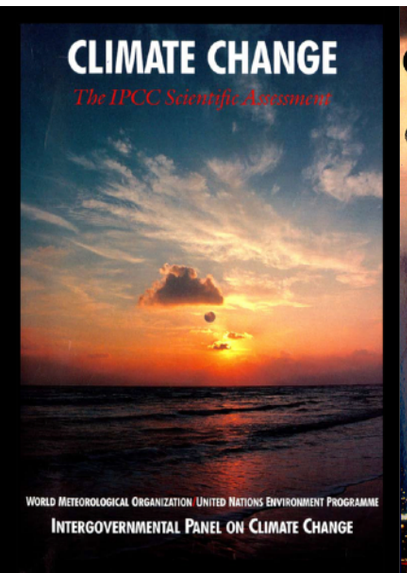

ipcc
Intergovernmental Panel on climate change
CLIMATE CHANGE 2023
Synthesis Report
A Report of the Intergovernmental Panel on Climate Change

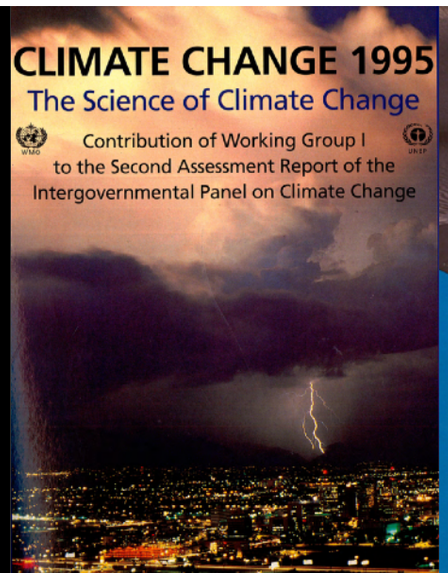


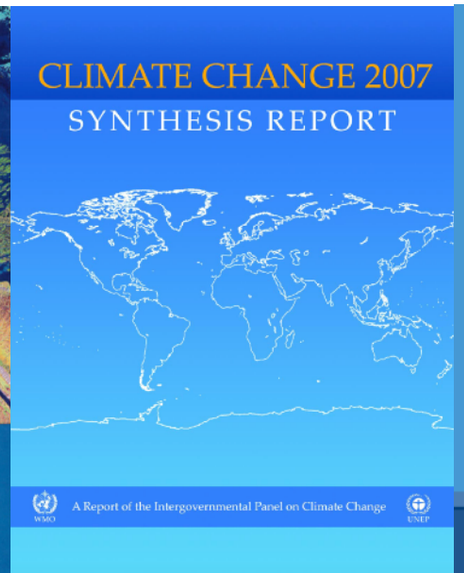
UN environment programme

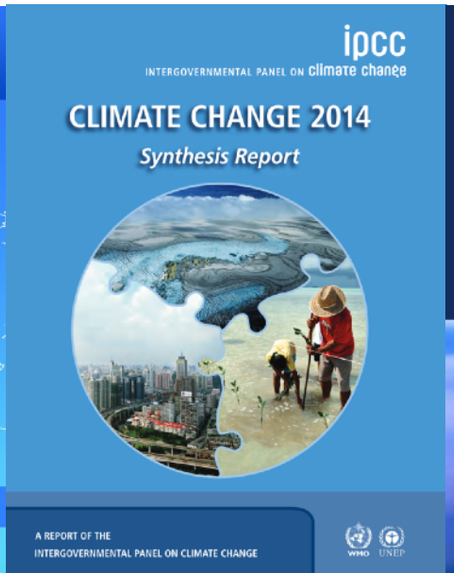
Broken Record

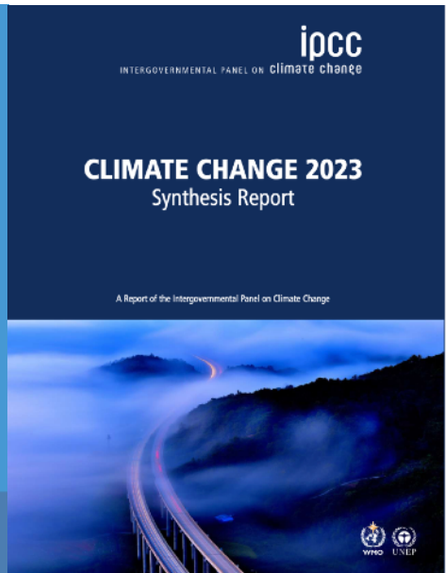
Temperatures hit new highs, yet world fails to cut emissions (again)











Comment | Published: 29 August 2022

Civil disobedience by scientists helps press for urgent climate action

Stuart Capstick, Aaron Thierry, Emily Cox, Oscar Berglund, Steve Westlake & Julia K. Steinberger

Nature Climate Change **12**, 773–774 (2022) | Cite this article

Scientists must act on our own warnings to humanity

Charlie J. Gardner & Claire F. R. Wordley

Nature Ecology & Evolution **3**, 1271–1272 (2019) | Cite this article

Perspective | Published: 20 September 2024

Scientist engagement and the knowledge–action gap

Léonard Dupont, Staffan Jacob & Hervé Philippe

Nature Ecology & Evolution (2024) | Cite this article

From Publications to Public Actions: The Role of Universities in Facilitating Academic Advocacy and Activism in the Climate and Ecological Emergency

Charlie J. Gardner[1*] Aaron Thierry[2] William Rowlandson[3] Julia K. Steinberger[4]

Less Talk, More Walk: Why Climate Change Demands Activism in the Academy

Jessica F. Green

Daedalus (2020) 149 (4): 151–162.

Point of View: The biospheric emergency calls for scientists to change tactics

Fernando Racimo, Elia Valentini, Gaston Rijo De León, Teresa L Santos, Anna Norberg, Lane M Atmore, Myranda Murray, Sanja M Hakala, Frederik Appel Olsen, Charlie J Gardner, Julia B Halder « see less

POINT OF VIEW

Rethinking academia in a time of climate crisis

ANNE E URAI* AND CLARE KELLY*

A better knowledge is possible: Transforming environmental science for justice and pluralism ☆

Esther Turnhout

SCIENCE POLICY

Pathways for diversifying and enhancing science advocacy

Fernando Tormos-Aponte[1,2]*, Phil Brown[3], Shannon Dosemagen[4], Dana R. Fisher[5], Scott Frickel[6], Norah MacKendrick[7], David S. Meyer[8], John N. Parker[9]

A role for provocative protest

The Lancet Planetary Health

Open Access • Published: November, 2022 • DOI: https://doi.org/10.1016/S2542-5196(22)00287-X •

deVolkskrant

Opinie: Een geslaagde energietransitie begint met minder in plaats van meer

nrc›

Een optimistisch klimaatverhaal kunnen we goed gebruiken, maar het moet wel kloppen

Onze leiders doen veel te weinig voor het klimaat. Daarom zijn wij nu zelf aan zet

Het Parool
Vrij, Onverveerd

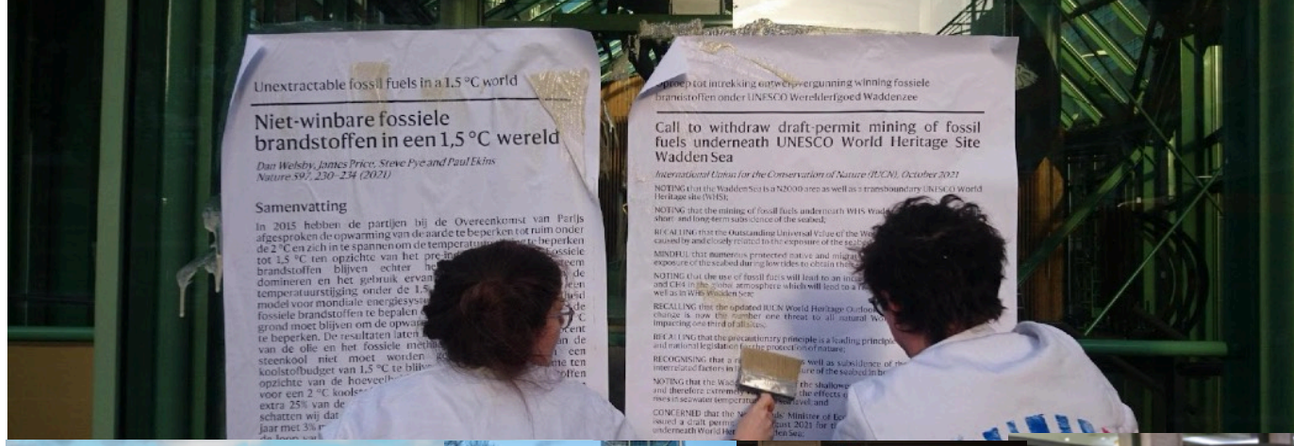
Opinie: 'Er is geen koolstofbudget meer voor rijke landen, stop met koolstofgraaien'

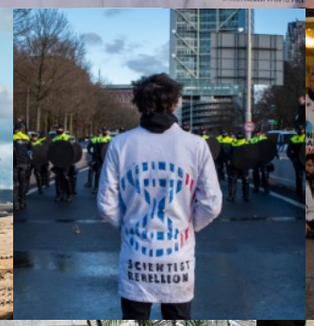
nature

Scientists skip COP28 to demand climate action at home

The Guardian

More than 1,000 climate scientists urge public to become activists





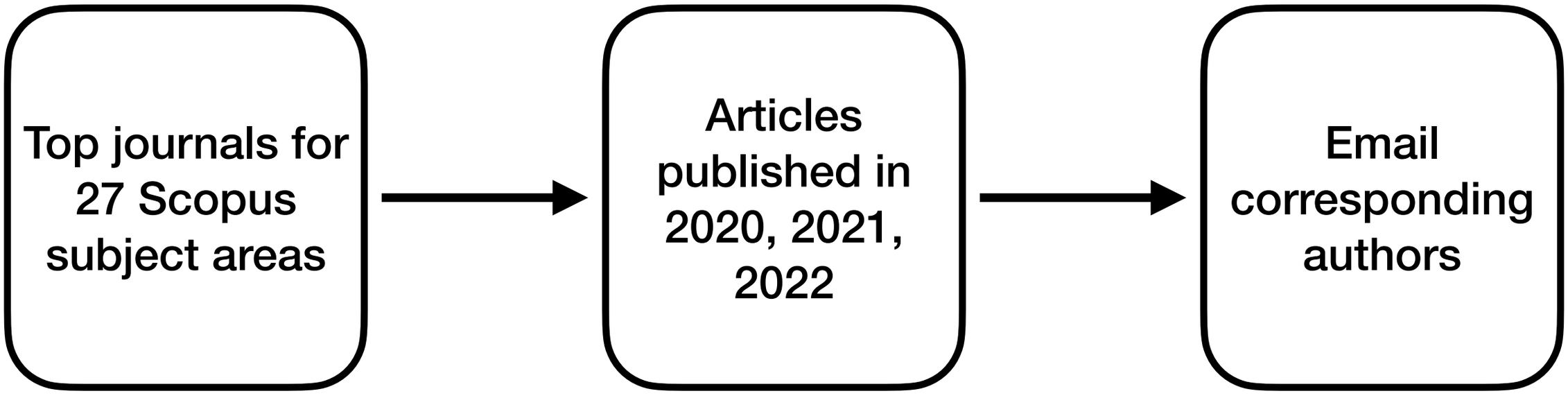
Research questions

1.
What beliefs do scientists
have about climate change
and their role?

2.
To what extent do they
engage in climate action?

3.
What barriers exist for them to
engage in climate action?

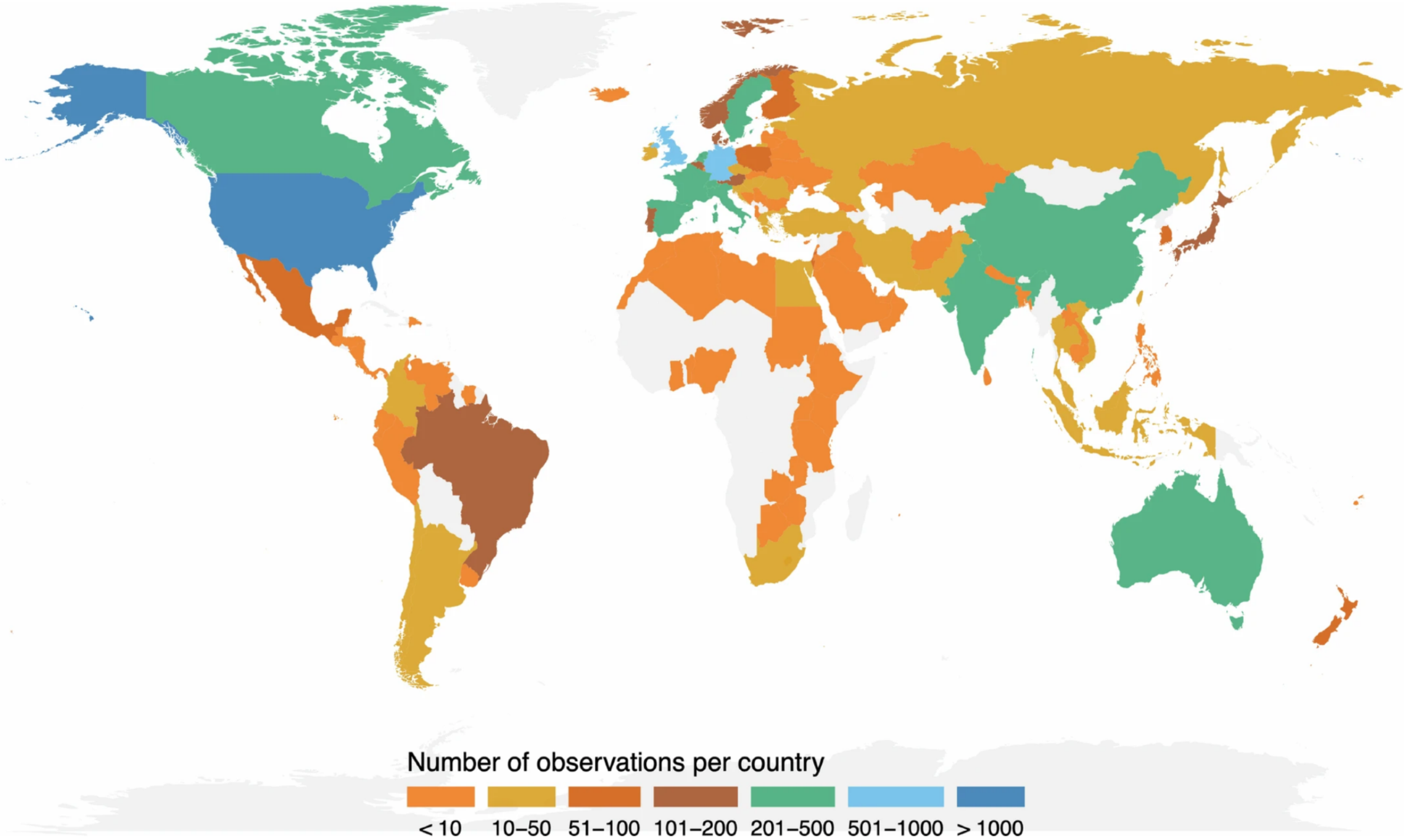
Sampling



250,000 emails sent

N = 9,220

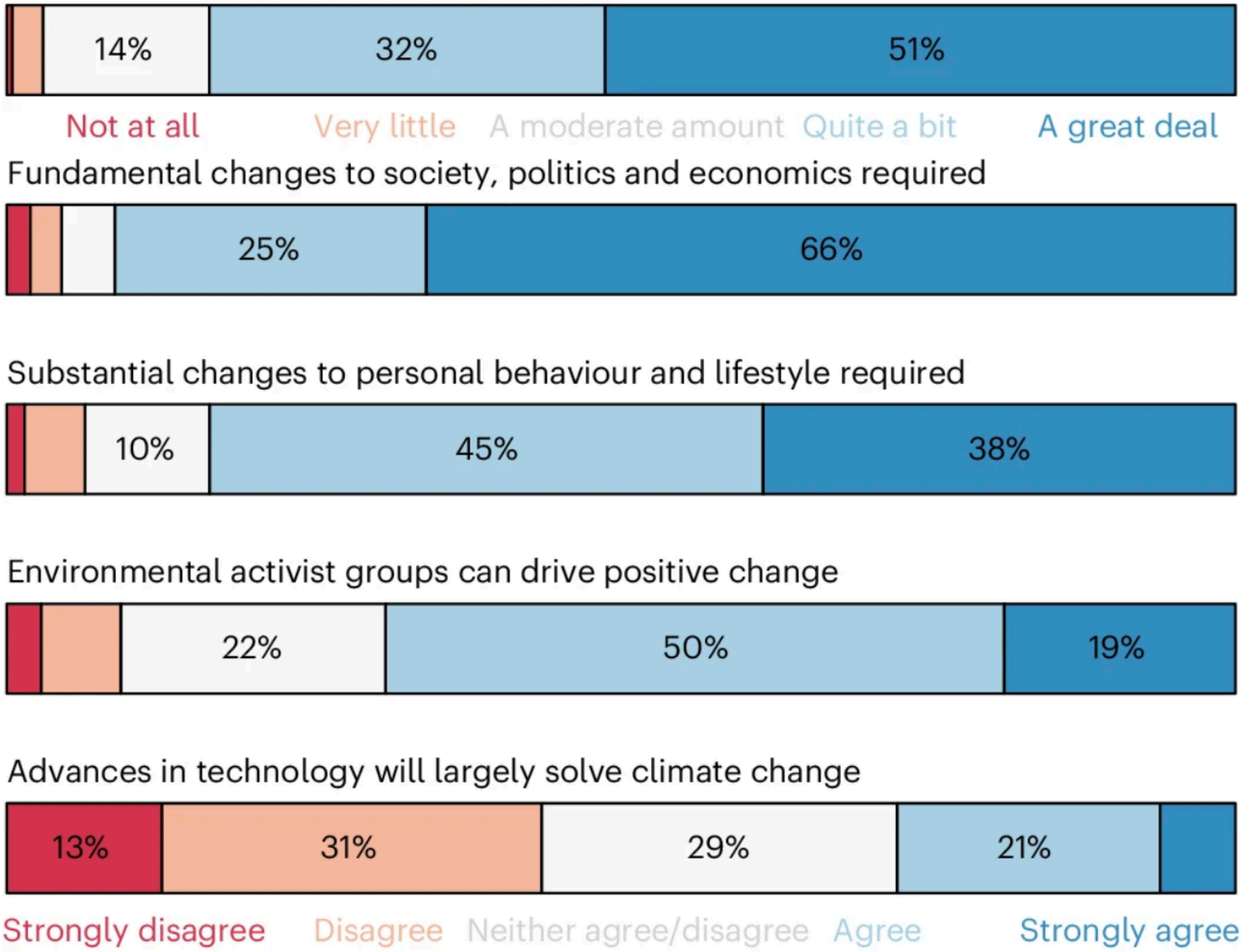
115 countries, virtually all disciplines



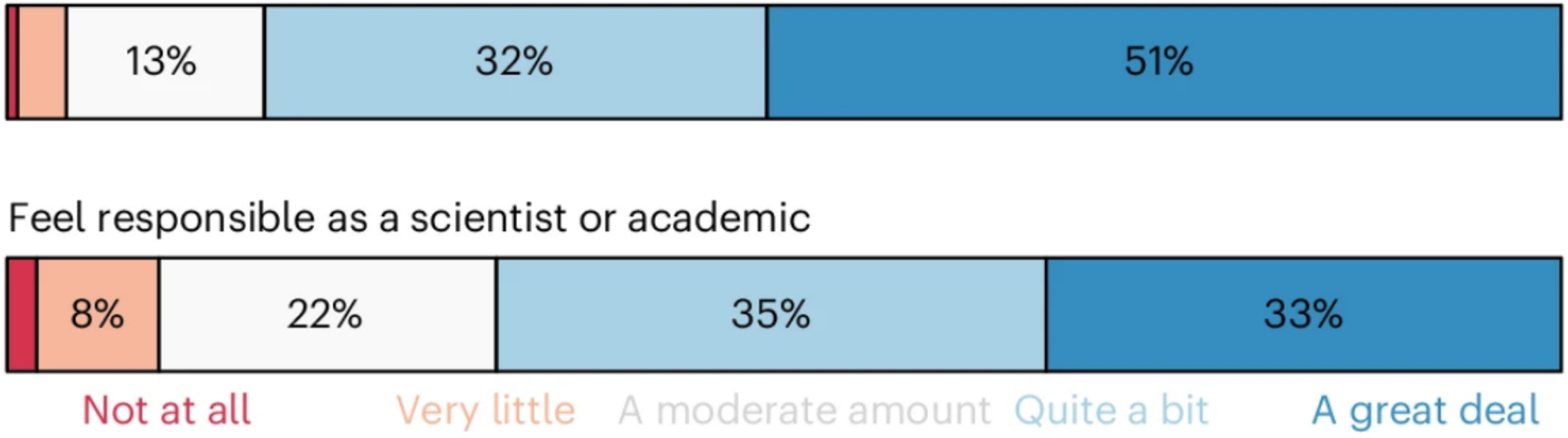
Dablander*, Sachisthal*, …, & Haslbeck* (2024)

Beliefs & Actions

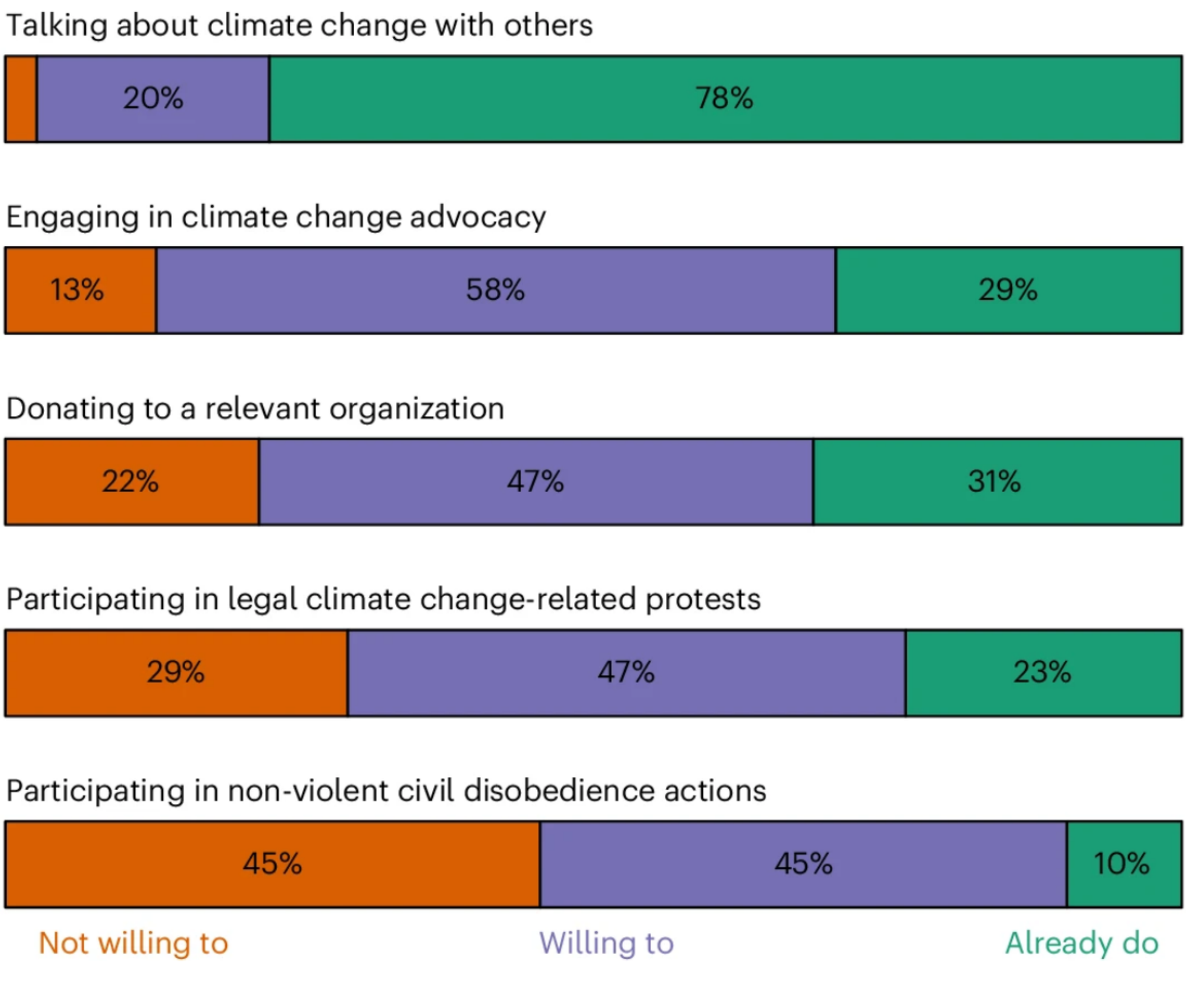
a Beliefs about climate change and solutions

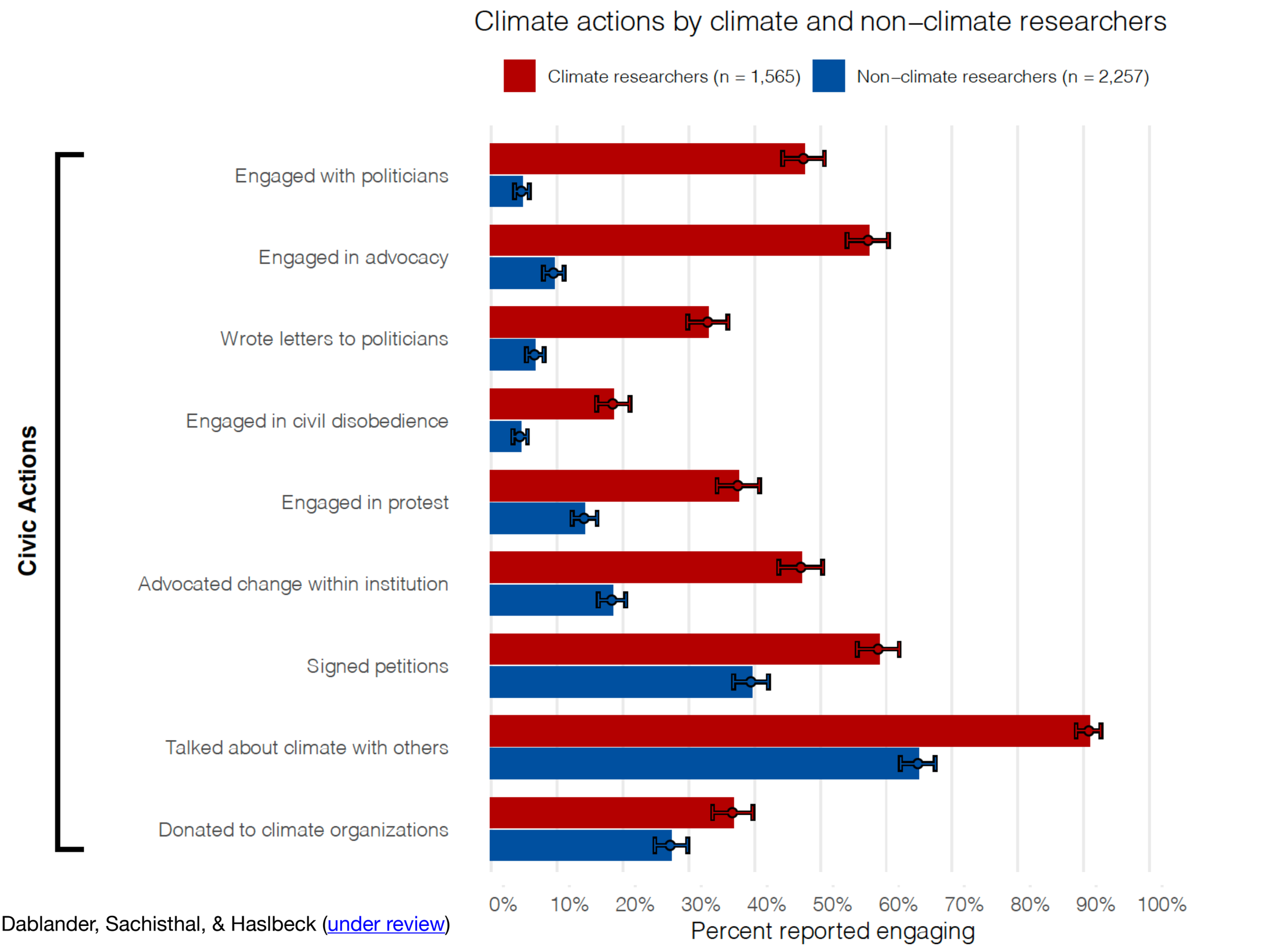


b Responsibility and role of scientists and academics

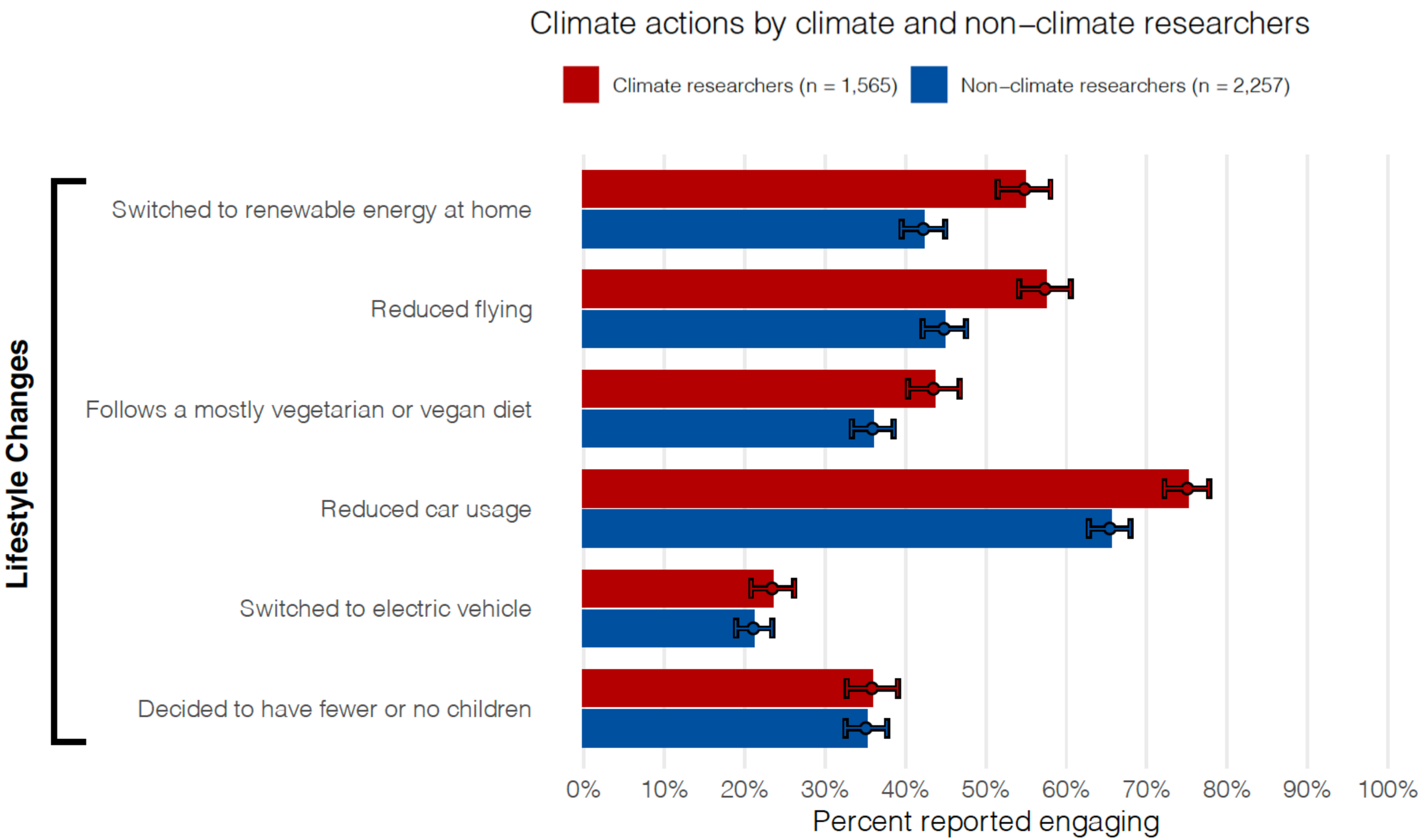


d Advocacy and activism behaviours





Dablander, Sachisthal, & Haslbeck (under review)

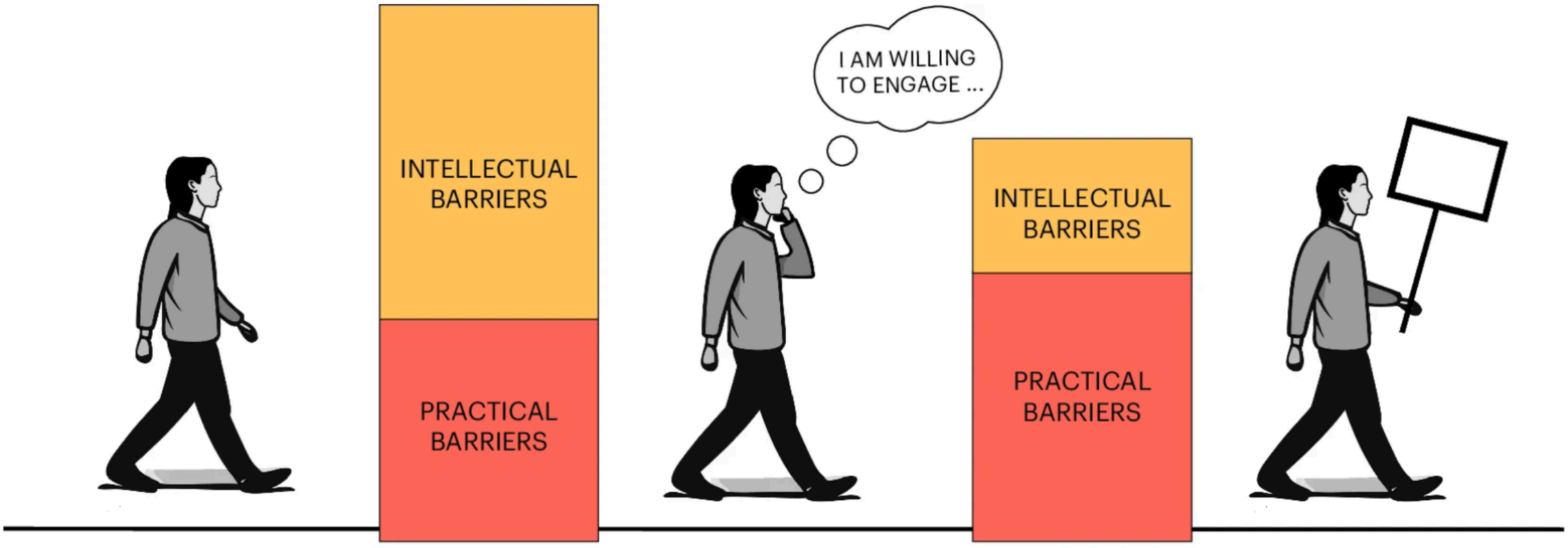


Dablander, Sachisthal, & Haslbeck (under review)

Understanding Barriers

Sample sizes

	Not willing to	Willing to	Already do
Advocacy:	*n* = 1,184	*n* = 5,329	*n* = 2,707
Protest:	*n* = 2,686	*n* = 4,371	*n* = 2,163



Intellectual barriers

- Low levels of worry (A and P)
- Lack of knowledge (A and P)
- Lack of efficacy beliefs (A and P)
- Perceived responsibility (A and P)
- Not the role of scientists (A and P)
- Do not identify with activists (P)
- Disagree with activist ideology and strategy (A and P)

Practical barriers

- Fear of losing credibility (A and P)
- 'Unsuitable' personality (A and P)
- No advocate in inner circle (A and P)
- Lack of skills (A)
- Fear of repercussions (P)

Intellectual barriers

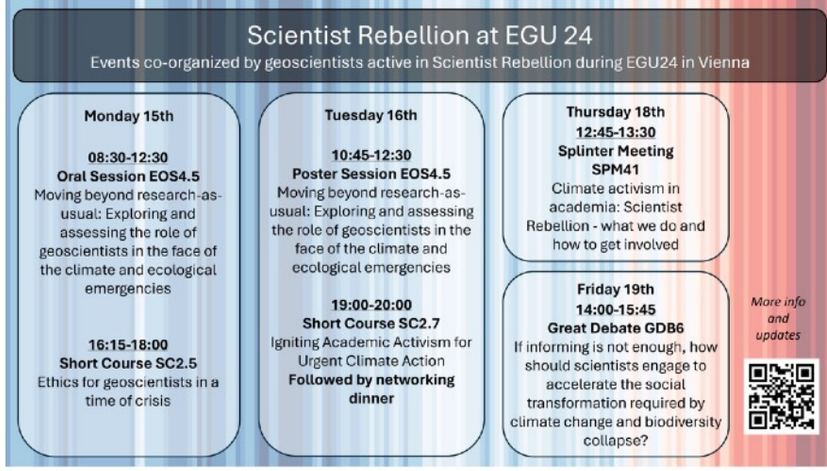
- Not the role of scientists (P)
- Lack of knowledge (A and P)
- Own carbon footprint (A and P)

Practical barriers

- Lack of skills (A)
- Fear of losing credibility (A and P)
- Not knowing any groups (A and P)
- Lack of time (A and P)
- Lack of opportunity (A and P)
- No advocate in inner circle (A and P)

Dablander*, Sachisthal*, …, & Haslbeck* (2024)

Overcoming barriers



- Intellectual
  - Facilitate interaction with those who are worried and engaged
  - Education (changes to curricula)

- Practical
  - Institutional reform (allocate more time to engage with society; reward / normalize climate action)
  - Skill sharing, training for advocacy
  - International groups can help setup local groups

Rethinking academia in a time of climate crisis

ANNE E URAI* AND CLARE KELLY*

From Publications to Public Actions: The Role of Universities in Facilitating Academic Advocacy and Activism in the Climate and Ecological Emergency

Charlie J. Gardner[1*] Aaron Thierry[2] William Rowlandson[3] Julia K. Steinberger[4]

Summary

- A large majority of scientists across disciplines are (very) worried and believe we need fundamental system change

- A majority believes that scientists should engage more

- Many scientists already engage in some lifestyle and civic actions

- We identified a number of intellectual and practical barriers to engage in advocacy and protest

- See fabiandablander.com for links to the slides, paper, etc.

Thank you!

nature climate change

Article

https://doi.org/10.1038/s41558-024-02091-2

Climate change engagement of scientists

Received: 19 December 2023

Accepted: 14 July 2024

Published online: 05 August 2024

Check for updates

Fabian Dablander[1,2,13] ✉, Maien S. M. Sachisthal[3,13], Viktoria Cologna[4,5], Noel Strahm[6], Anna Bosshard[3], Nana-Maria Grüning[7], Alison J. K. Green[8], Cameron Brick[3,9], Adam R. Aron[10] & Jonas M. B. Haslbeck[11,12,13]

Climate change is one of the biggest threats to humanity. Scientists are well positioned to help address it beyond conducting academic research, yet little is known about their wider engagement with the topic. We investigate scientists' engagement with climate change using quantitative and qualitative analyses of a large-scale survey ($N = 9{,}220$) across 115 countries, all fields and all career stages. Many scientists already engage in individual lifestyle changes, but fewer engage in advocacy or activism. On the basis of our quantitative and qualitative results, we propose a two-step model of engagement to better understand why. Scientists must first overcome intellectual and practical barriers to be willing to engage, and then overcome additional barriers to actually engage. On the basis of this model, we provide concrete recommendations for increasing scientists' engagement with climate change.

Link

Joint work with

Maien Sachisthal

Nana-Maria Grüning

Viktoria Cologna

Noel Strahm

Alison Green

Cameron Brick

Adam Aron

Jonas Haslbeck

Appendix

Sample sizes

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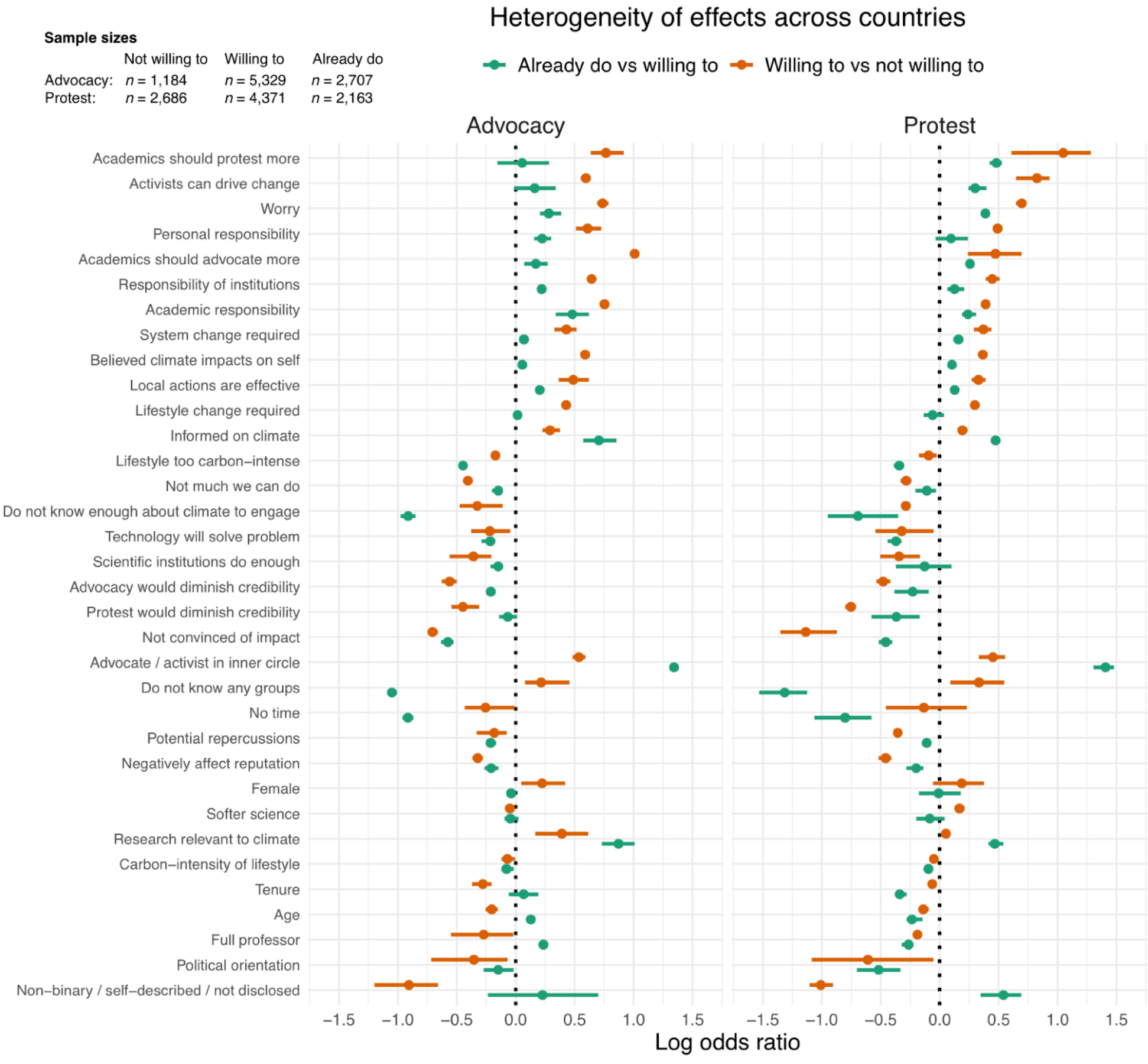

Log odds ratios across research relatedness to climate change

Sample sizes

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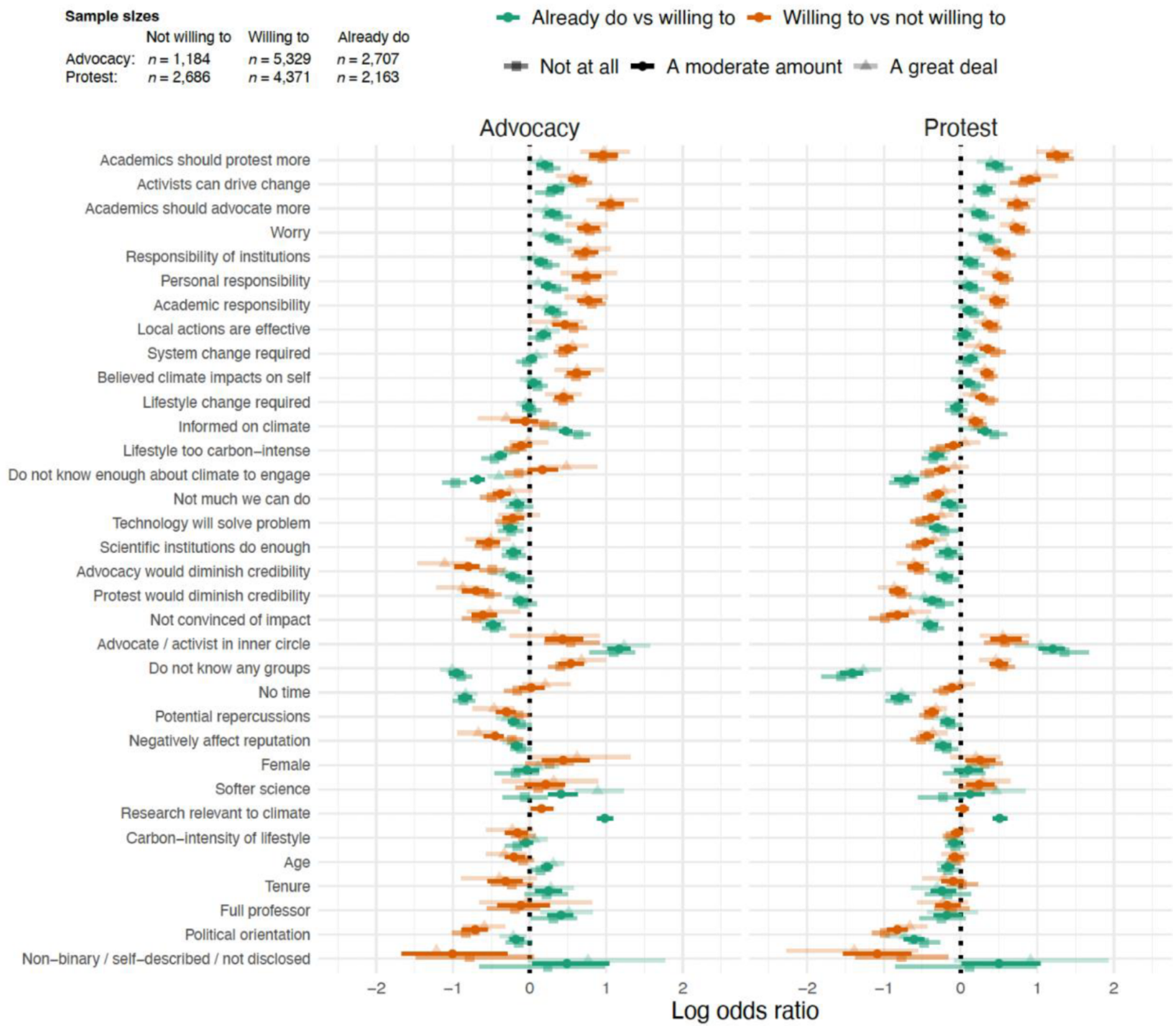

Civil disobedience results

	Not willing to	Willing to	Already do
Sample sizes	*n* = 4,189	*n* = 4,131	*n* = 900

Already do vs willing to Willing to vs not willing to

Individual regressions

Multiple regression

Academics should protest more
Activists can drive change
Academics should advocate more
Worry
Responsibility of institutions
Academic responsibility
System change required
Personal responsibility
Believed climate impacts on self
Local actions are effective
Lifestyle change required
Informed on climate
Not much we can do
Technology will solve problem
Scientific institutions do enough
Advocacy would diminish credibility
Protest would diminish credibility
Advocate / activist in inner circle
Softer science
Female
Research relevant to climate
Carbon–intensity of lifestyle
Age
Full professor
Tenure
Political orientation
Non–binary / self–described / not disclosed

−30 −20 −10 0 10 20 30

Percentage change