

Climate Actions from Individual to Collective

Dr Cameron Brick

Assistant Professor, University of Amsterdam

Associate Professor (20%), Inland Norway University of Applied
Sciences

Talk slides CC-0 osf.io/d2esc
Papers www.cameronbrick.com





Climate Change 2022: Mitigation of Climate Change



Addressing the Climate Crisis: An Action Plan for Psychologists

Report of the APA Task Force on Climate Change

American Psychological Association

February 2022

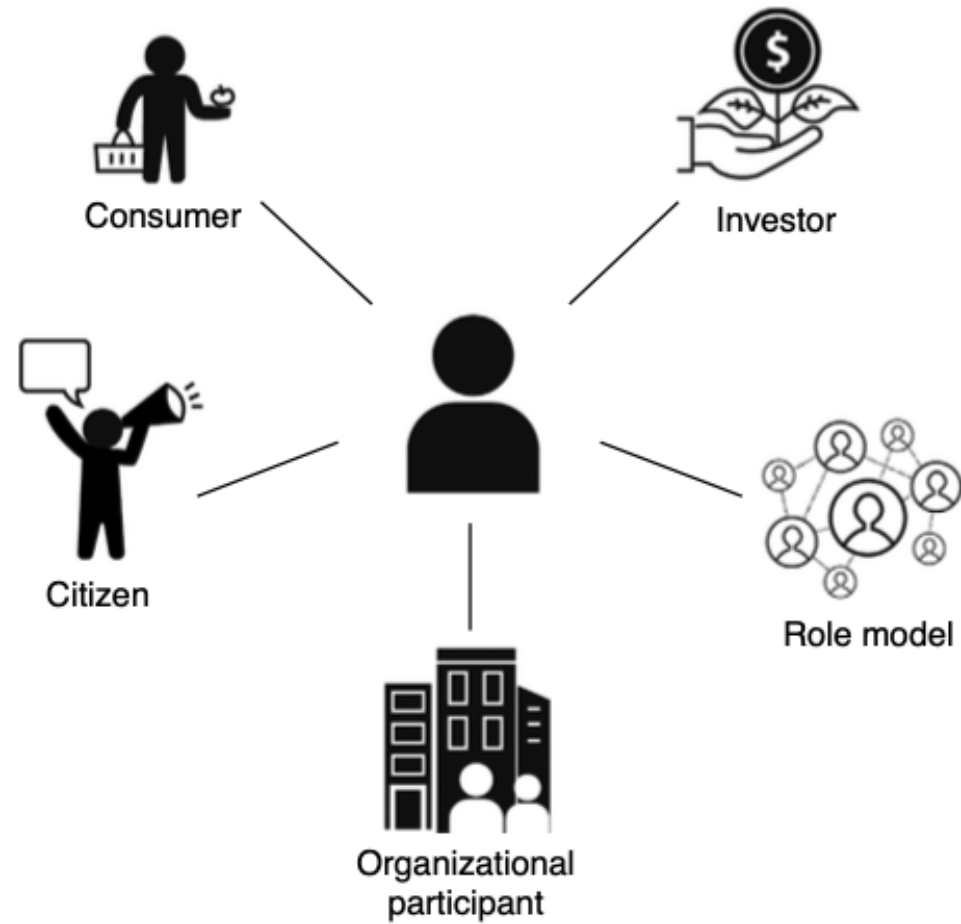


Fig. 1 | Five roles through which people of high SES can influence GHG emissions. People with high SES have disproportionate climate influence via their roles as consumers, investors, role models within their social networks and for others who observe their choices, participants in organizations and citizens seeking to influence public policies or corporate behaviour. Image credit: Emma Li Johansson (Lilustrations) and the Noun Project (<https://thenounproject.com/>).

NATURE ENERGY

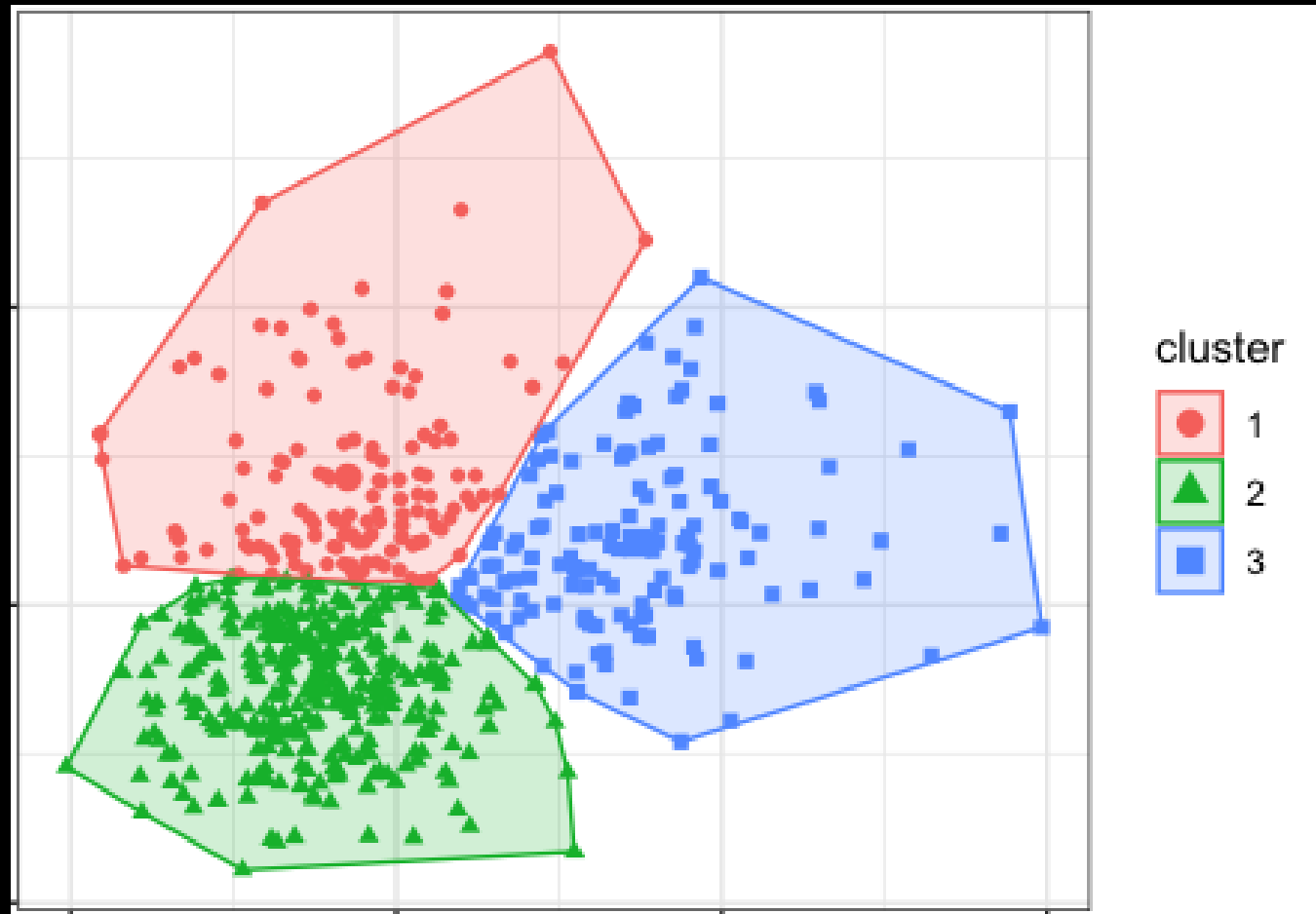
10.1038/s41560-021-00900-y



Dr Kristian Nielsen

Four Europes: Climate Change Attitudes

Latent Class Analysis



ESS
Climate
Module
2016

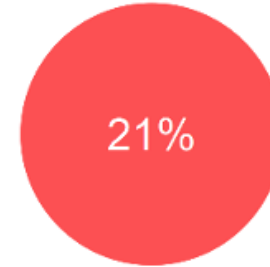
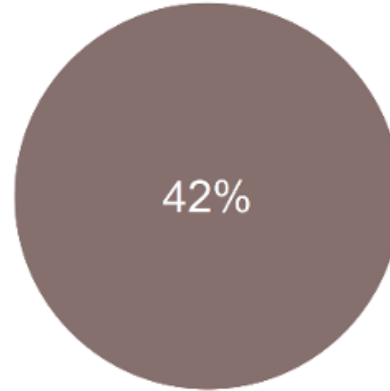
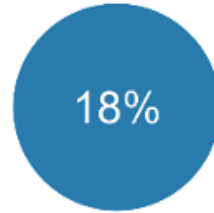
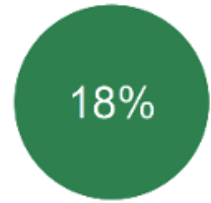
Important to care for nature and environment (1: like me)	Personal values
Think world's climate is changing (1: definitely changing)	Climate change beliefs
Thought about climate change before today (5: great deal)	Climate change beliefs
Climate change caused by natural processes, human activity, or both (5: humans; 6: not happening)	Climate change beliefs
Climate change good or bad impact across world (11: extremely good)	Climate change beliefs
Worried about climate change (5: worried)	Climate concern
Feel personal responsibility to reduce climate change (11: great deal)	Pro-environmental personal norms
Confident you could use less energy than now (11: confident)	Efficacy beliefs
Imagine large numbers of people limit energy use: how likely to reduce climate change (11: likely)	Efficacy beliefs
How likely large numbers of people limit energy use (11: likely)	Efficacy beliefs
How likely governments take action to reduce climate change (11: likely)	Efficacy beliefs
How likely limiting own energy use to reduce climate change (11: likely)	Efficacy beliefs

Engaged

Pessimistic

Indifferent

Doubtful

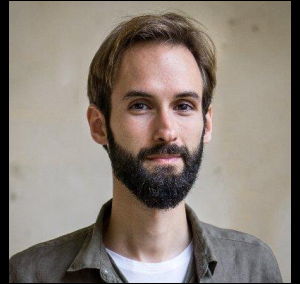


Highest Belief
Highest Concern
Highest Action

Lowest Belief
Lowest Concern
Lowest Action



Confirmatory Sample N = 22,189

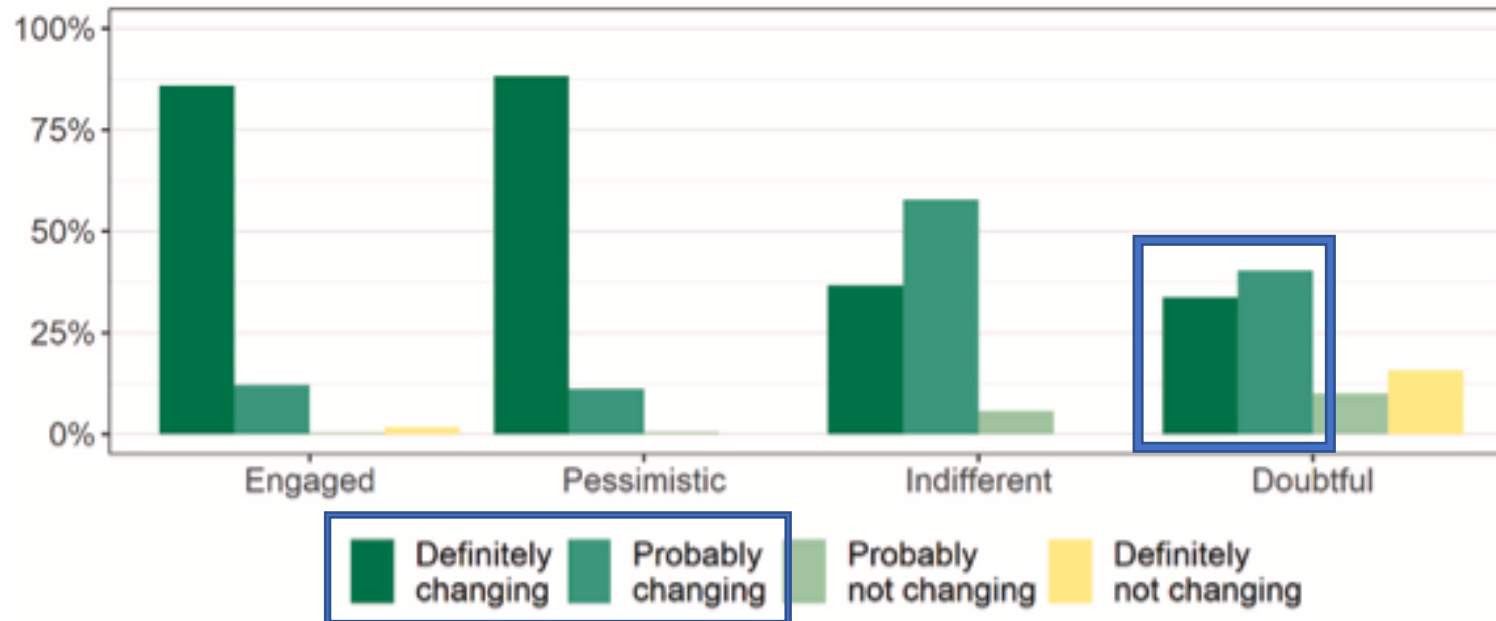


Ondřej Kácha, MPhil

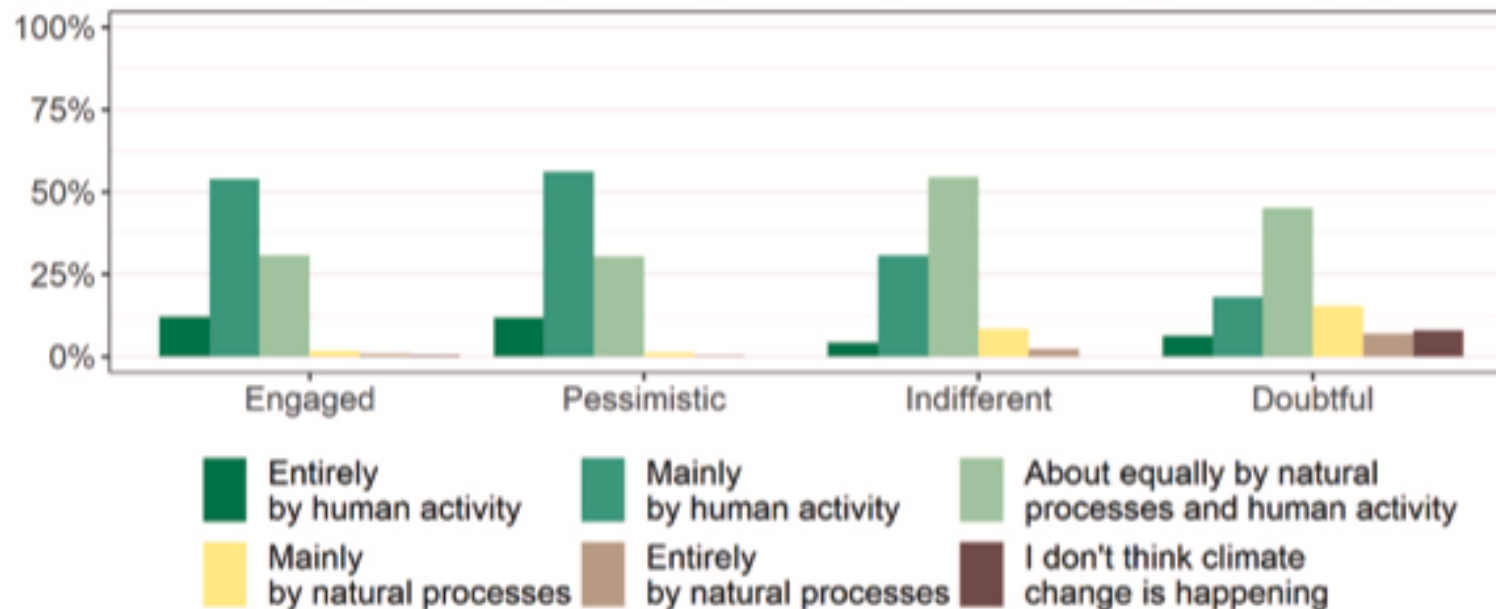
Four Europes: Climate Change Attitudes

Kacha et al., 2022, *Journal of Environmental Psychology*

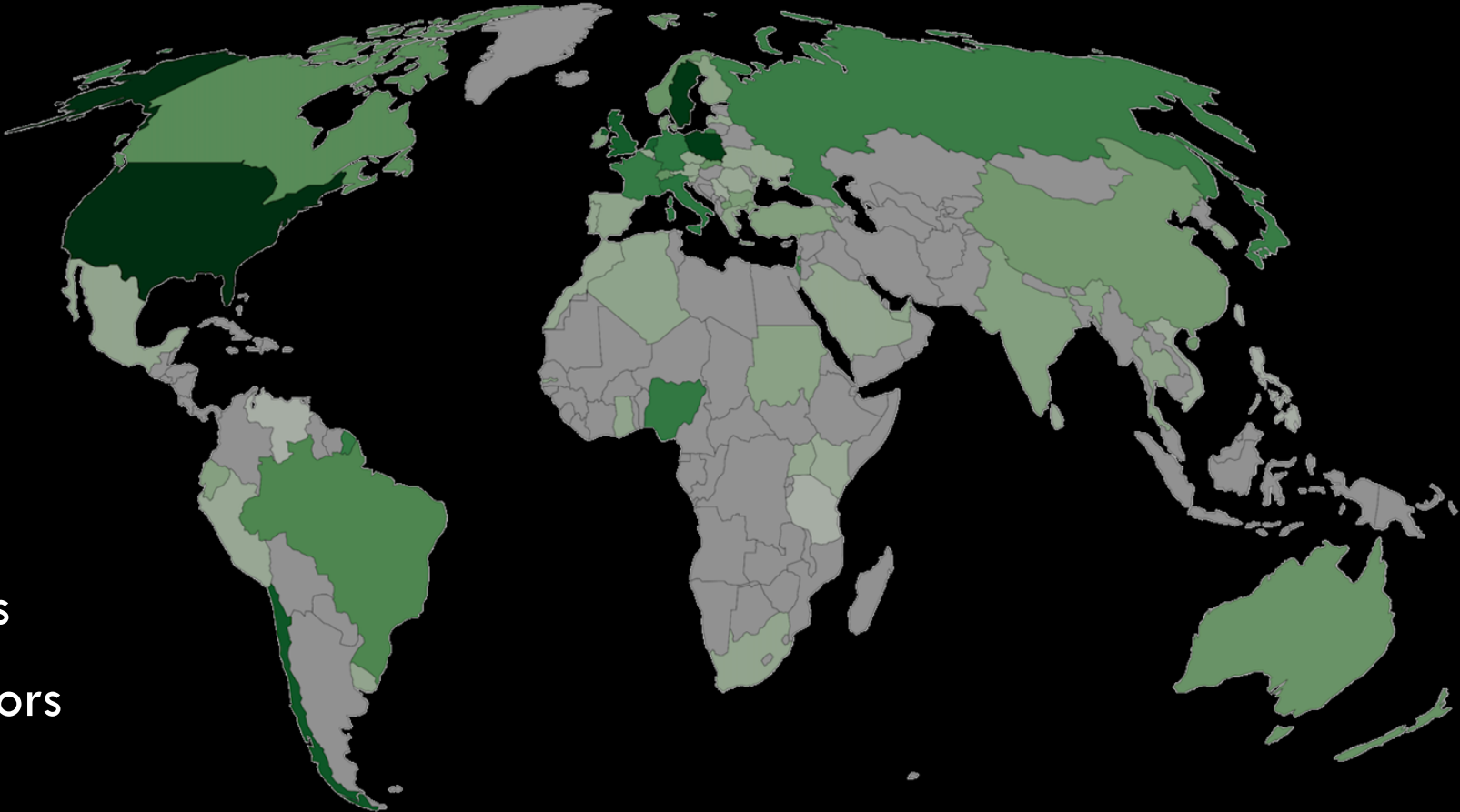
Do you think world's climate is changing (1-4)



Climate change caused by natural processes, human activity, or both (1-5)



Climate Change Manylabs Megastudy



11 interventions
256 collaborators
63 countries
N = 59,440



Sample Size



Dr Kim Doell



Dr Madalina
Vlasceanu

Interventions

“What intervention would you like to see tested?”



36 interventions

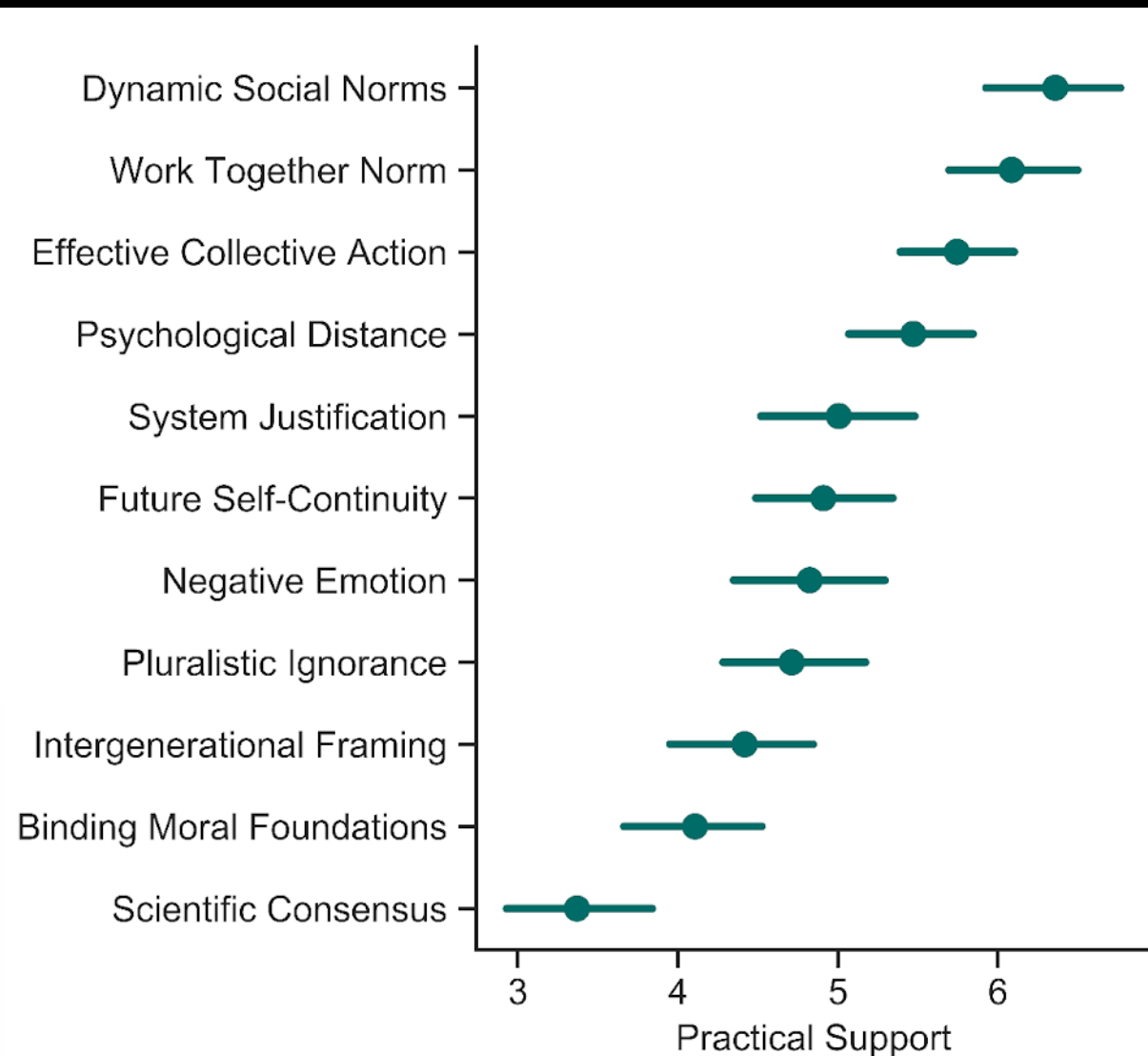
Screened to ensure they could be tested (e.g., no videos)



11 interventions

“Please rank order these interventions in terms of:

- **practical support** (i.e., will it be successful?)
- Theoretical support (is it interesting to test?)”



Outcome: Social Media

Willingness to share information on social media:
(Intention-like measurement)



Kim Doell
@kim_doell

Did you know that removing meat and dairy for only two out of three meals per day could decrease food-related carbon emissions by 60%? It is an easy way to fight [#ClimateChange](#) [#ManyLabsClimatePilot](#)

Emmenide @Gotedirosa · 9 Dec 2022
Sapevi che togliere carne e latticini per solo due pasti su tre al giorno potrebbe ridurre del 60% le emissioni di carbonio legate agli alimenti? È un modo semplice per combattere il [#ClimateChange](#) [#ManyLabsClimate11](#) fonte:

1日3食のうち2食だけ肉と乳製品を抜けば食品に関連する二酸化炭素排出量を60%削減できることをご存知ですか？それは [#気候変動](#) と戦うための簡単な方法です。 [#ManyLabsClimate4](#)
情報ソース:

Marlene Louise Kruse @n...
Vidste du, at udlade kød og mælkeprodukter fra kun to av tre måltider om dagen kan reducere fødevarerrelaterede karbonutslipp med 60%? Det er en nem måde at kæmpe mod klimaendringene på. [#ClimateChange](#)
Sapevi che togliere carne e latticini per solo due pasti su tre al giorno potrebbe ridurre del 60% le emissioni di carbonio legate agli alimenti? È un modo semplice per combattere il [#ClimateChange](#) [#ManyLabsClimate4](#) fonte:

RAELIDIS @rafaelidis · 16 Dec 2022
Αφαιρώντας το κρέας και τα ναλακτοκομικά προϊόντα για 2 από τα 3 γεύματα ημερησίως, μπορείτε να μειώσετε τις εκπομπές άνθρακα σχετικά με την τροφή σας κατά 60%. Είναι ένας εύκολος τρόπος να καταπολεμήσετε το κλίμα. [#ClimateChange](#) [#ManyLabsClimate7](#)
seulement deux repas par jour pourrait réduire de 60 % les émissions de carbone liées à l'alimentation ? C'est un moyen facile de lutter contre le [#ChangementClimatique](#) [#ManyLabsClimate9](#)

OGHENECHUKO NANI @ufy_nani · 15 Dec 2022
Did you know that removing meat and dairy for only two out of three meals per day could decrease food-related carbon emissions by 60%? It is an easy way to fight [#ClimateChange](#) [#ManyLabsClimate12](#) source:

Tatiane @Tatiane955 · 7 Dec 2022
que a remoção de carne e laticínios em apenas duas das três refeições por dia pode diminuir as emissões de carbono relacionadas aos alimentos em 60%. É uma maneira fácil de combater a mudança climática. [#ClimateChange](#) [#ManyLabsClimate6](#) source:

obkū pouze ze dvou ze tří jídel každý den může snížit s jídlem o 60 %? Je to jednoduchý způsob, jak se vypořádat s klimatickou změnou. [#ClimateChange](#)
og meieriprodukter fra kun to av tre måltider om dagen kan reducere fødevarerrelaterede karbonutslipp med 60%? Det er en nem måte at kjempe mot klimaendringene på. [#ClimateChange](#)

Outcome: Time Spent on Boring Task

The Work for Environmental Protection Task (WEPT)

Lange, & DeWitte, 2021,
Behavior Research Methods

Identify all those stimuli with an even first digit and an odd second digit. For example, you should click on "25", because the first digit (2) is even and the second digit is odd (5).

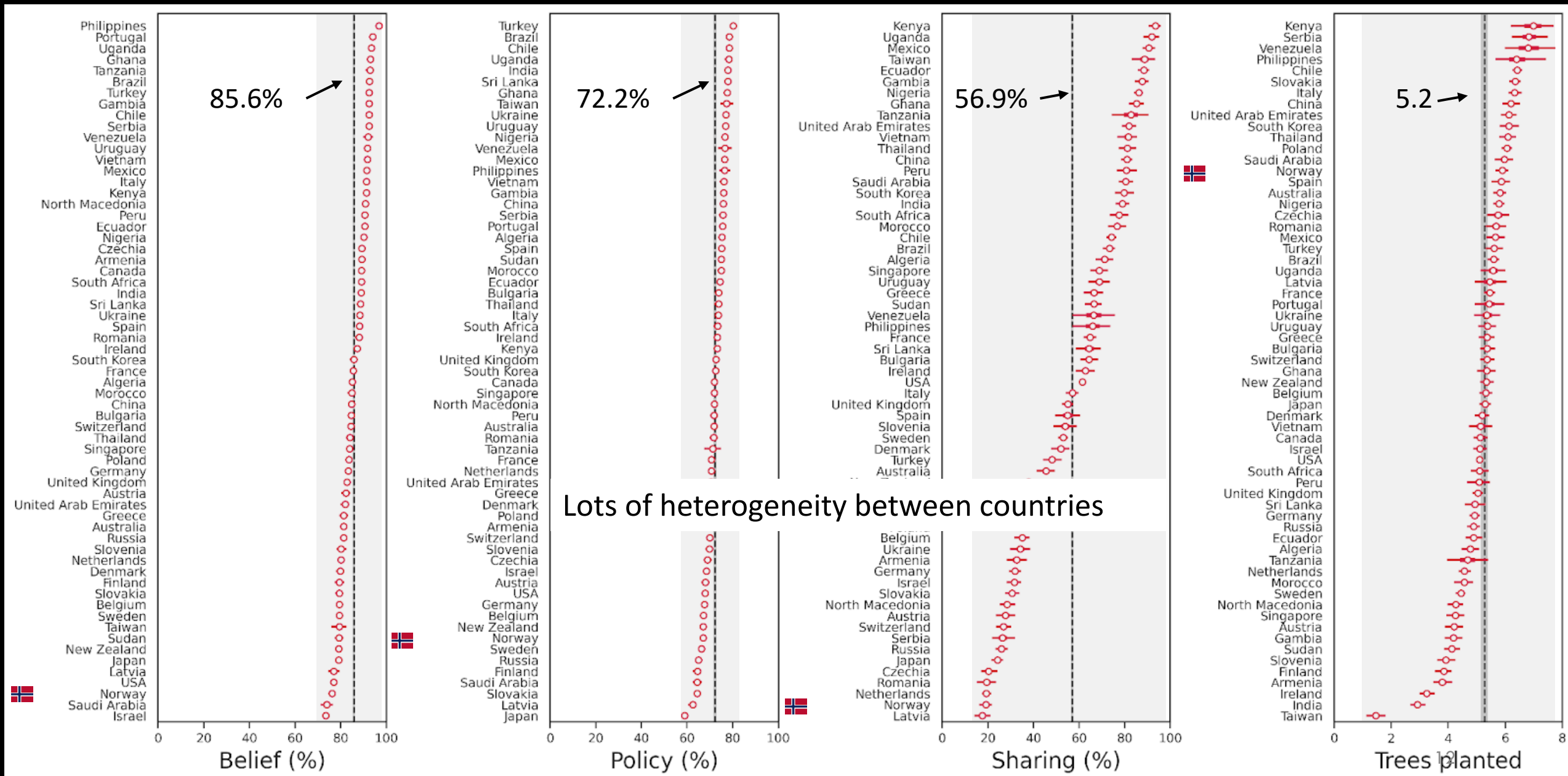
48	21	68	13	19	63	24	27	22	63
18	88	37	73	39	66	43	27	93	22

60 numbers per page, up to 8 pages



Eden
Reforestation
Projects

333,333 trees planted





Scientist Rebellion Italy 2022



Extinction Rebellion

April 2019, London

1150 arrests



Hundreds of climate activists gather in The Hague, block the A12

Uncategorized



January 28, 2023



Hundreds of demonstrators took part in the blockade. Photo: Marco de Swart ANP

Hundreds of climate activists blocked the A12 motorway in The Hague in both directions on Saturday afternoon in protest at government subsidies for fossil fuels such as oil and gas.

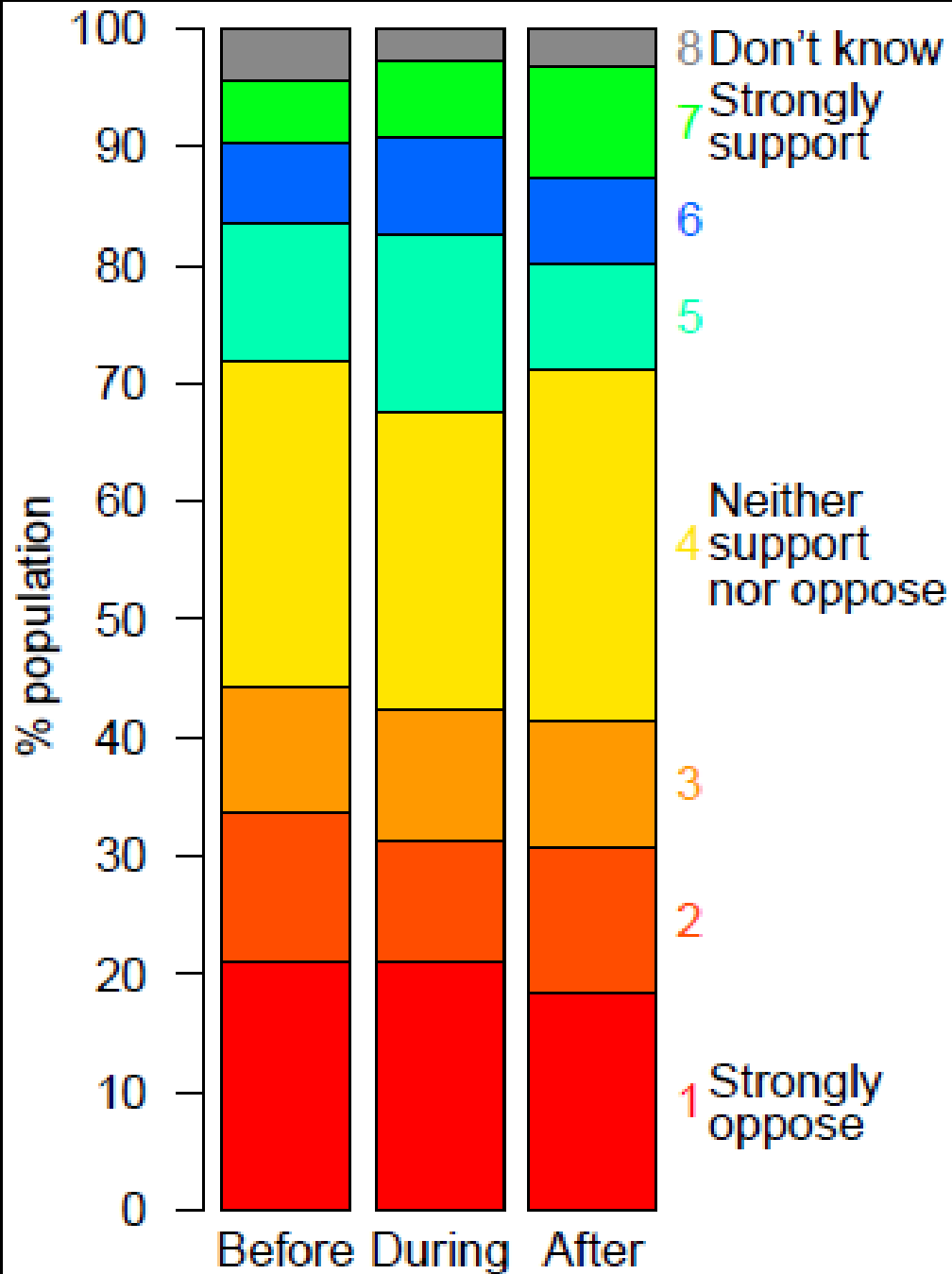
Public Support is Rising (UK)

Do you think that disruptive civil disobedience is necessary to force Government action on climate change and ecological breakdown?

Do you support or oppose the disruptive civil disobedience being carried out in London by the Extinction Rebellion?
(1 = Strongly Oppose, 7 = Strongly Agree)

Increase in strong support (lime green)
from Before (5%) to After (9%);

generalises to **+2.2 million**
95% CI of 0.6 to 3.8 million.



Dr Ben Kenward

Discovering the psychological building blocks underlying climate action—a longitudinal study of real-world activism

Anna Castiglione¹, Cameron Brick², Stefanie Holden¹,
Ella Miles-Urdan¹ and Adam R. Aron¹



Anna Castiglione,
MA

**ROYAL SOCIETY
OPEN SCIENCE**

- Registered Report
- Longitudinal
- Effortful intervention (12 long videos)
- Objective measure of activism

(d) intervention period (videos + event bulletin)



week 7

2 × 20 m



climate activism
events this week:

- event 1
- event 2
- event 3

week 8

2 × 20 m



climate activism
events this week:

- event 1
- event 2
- event 3

...

week 12

2 × 20 m

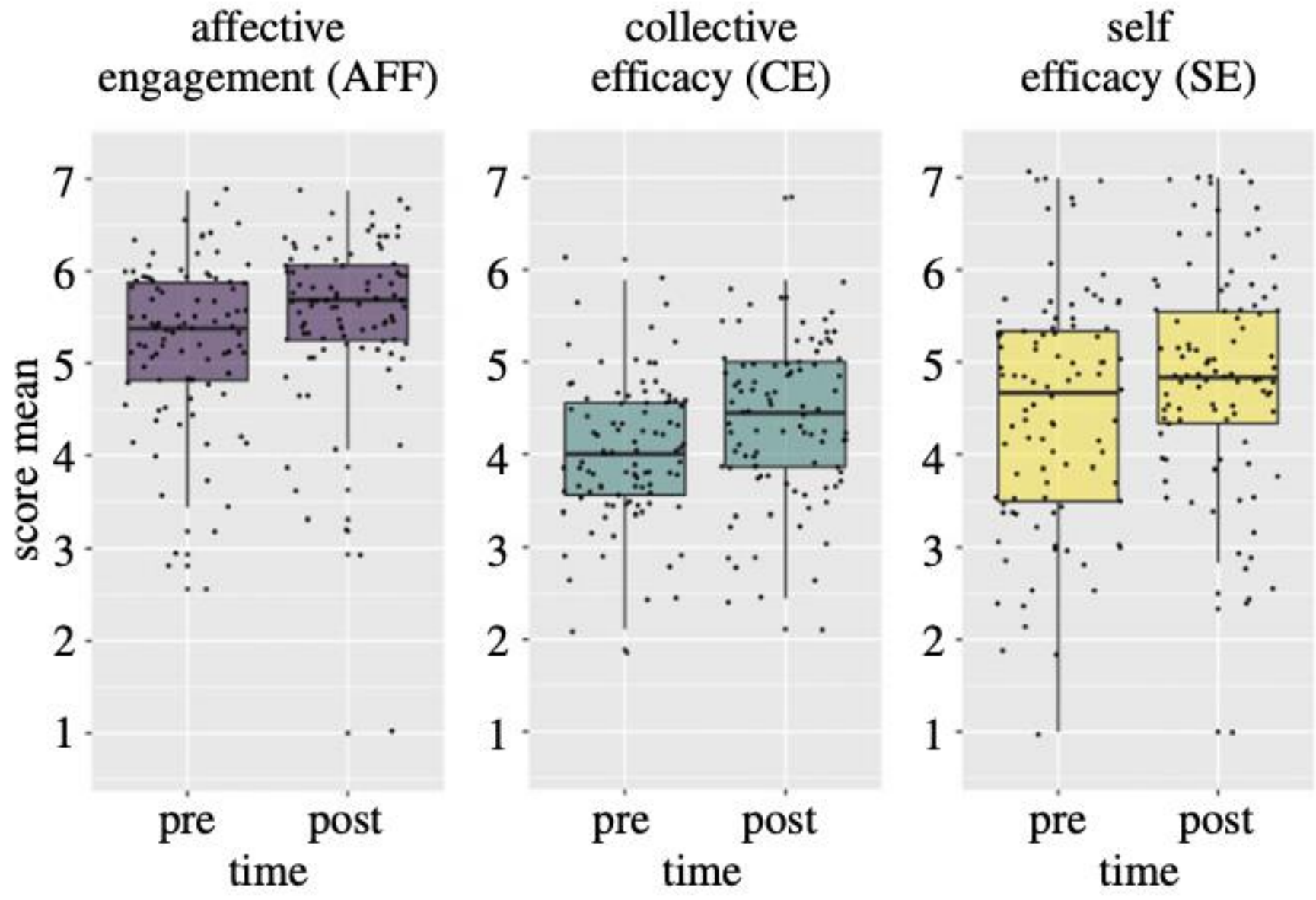


climate activism
events this week:

- event 1
- event 2
- event 3

objective outcome: number of events attended

N = 170

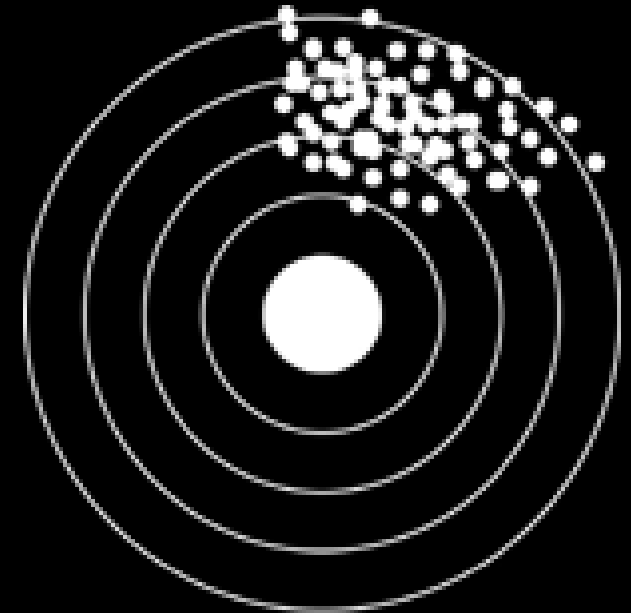


Pro-Environmental Behavior



PROBLEM

Self-reported pro-environmental behavior only explains
21% of the variance in objective behavior (meta-analysis:
Kormos & Gifford, 2014)



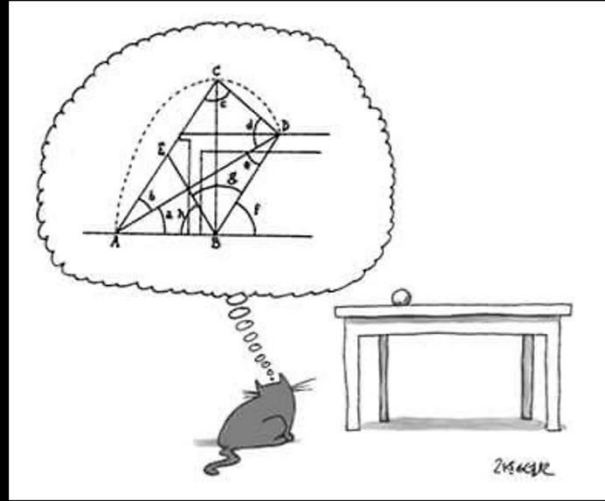
Reliable but Not Valid

Impact-focused Conservation

Nielsen, K. S., Cologna, V., Lange, F., Brick, C., & Stern, P. C. (2021). The case for impact-oriented environmental psychology. *Journal of Environmental Psychology*, 74, 101559. [10.1016/j.jenvp.2021.101559](https://doi.org/10.1016/j.jenvp.2021.101559). [PDF](#)

1. Identify behaviors with high impact
2. Map contexts and actors
3. Evaluate non-psychological determinants
4. Extend to other behaviors
5. Synthesize and theorize

Theory vs. impact?



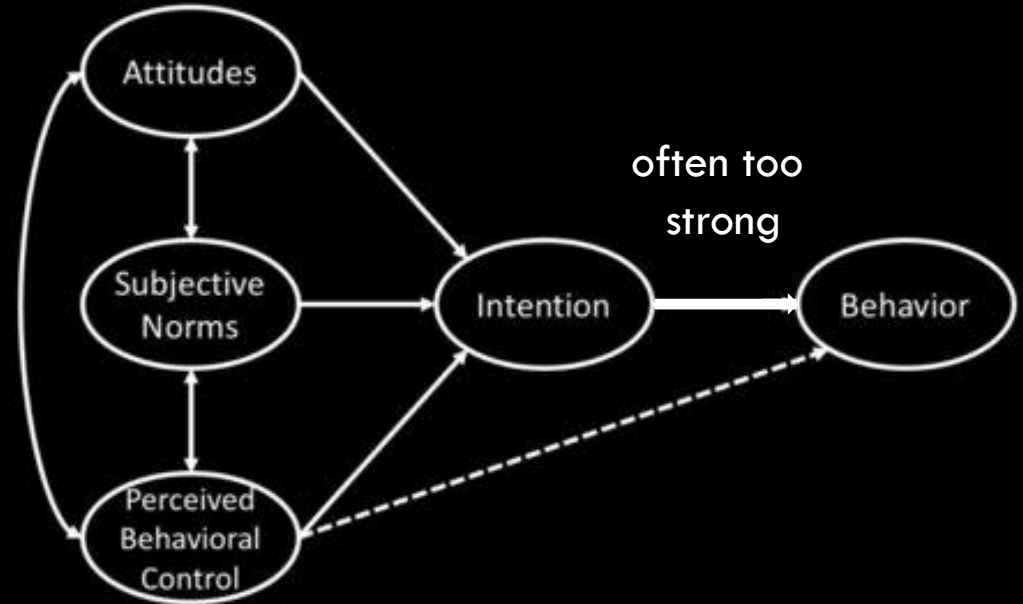
Both are important and compatible! But not exchangeable.

E.g., how residents think about frequent pro-env. actions is a poor measure of household resource use.

Take-away: Match the outcome measure to the research question

TENSION

How should we measure pro-environmental behavior?



- Shared measurement variance
- Item selection driven by measurement ease
 - a. Frequency (1 *never*, 5 *always*)
 - b. normal distribution

Specific behaviors •
L water, kWh energy, kg CO₂ •



Classic social science

Impact

Pro-Environmental Behavior: Operationalization

Behavioral Traces

(kWh energy, L water...)

High-impact self-report

(carbon footprint...)

Low validity?

Consequential Tasks

(CET, WEPT, PEBT...)

Precise self-report

(count, EMA...)

Classic self-report

(most Likert-type scales)

Low impact?

$n = 4,591$

German, Poland,
Sweden, US

What predicts pro-environmental clothing behavior?

Outcomes

1. Environmental Apparel Scale (EAC), e.g., “[I buy] clothing made from organically grown natural fibers”
2. Greenhouse gas emissions from purchasing and washing (life cycle assessment)

Psychological predictors

Goals, self-efficacy, awareness of need to address the env. consequences of clothing, ascription of responsibility to address the env. consequences through one’s personal clothing consumption, attitudes, intentions, personal norms, social norms, perceived behavioral constraints

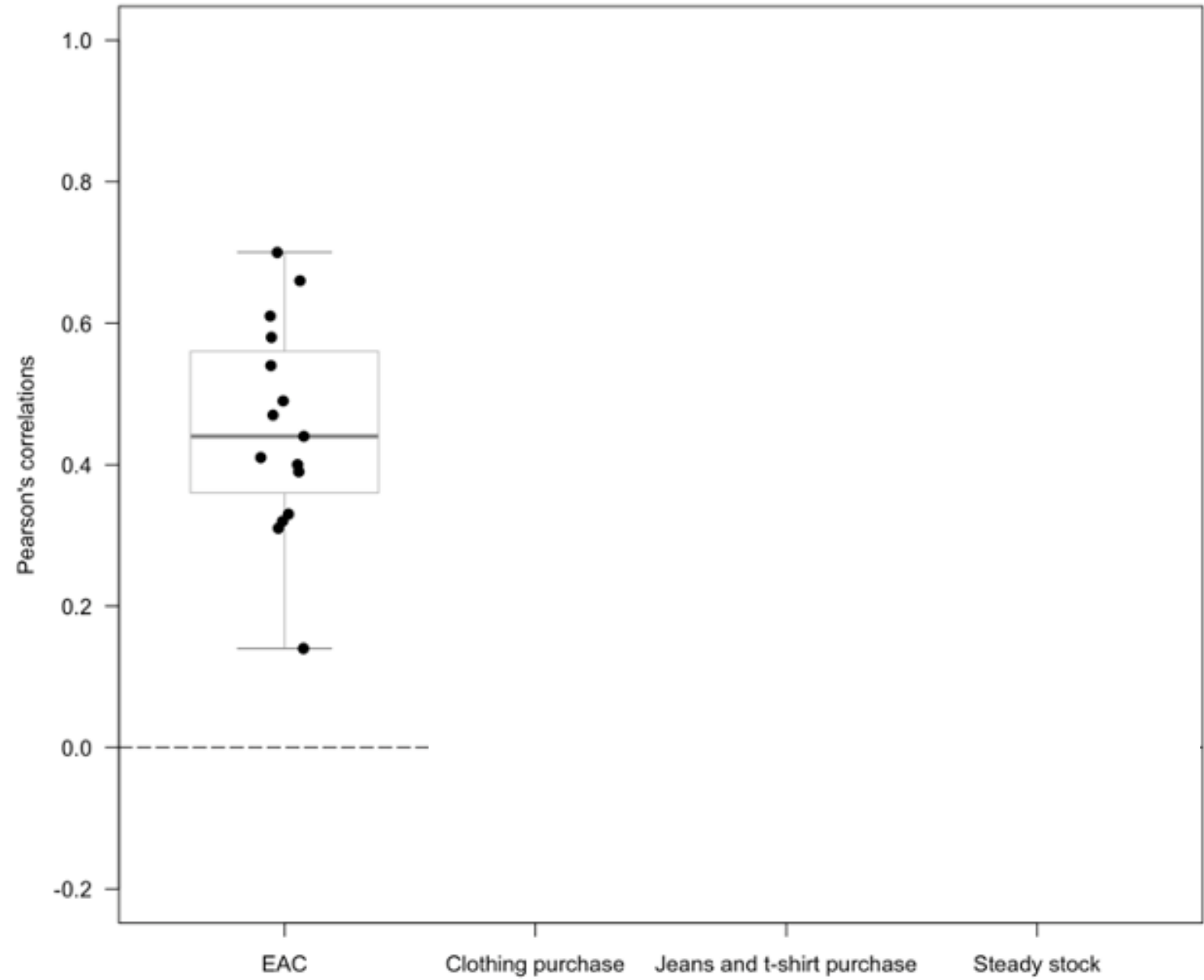


Fig. 1. Correlations between psychological factors and clothing behaviors.

How managers can reduce household water use through communication:
A field experiment

JOURNAL OF
POLICY ANALYSIS
AND
MANAGEMENT



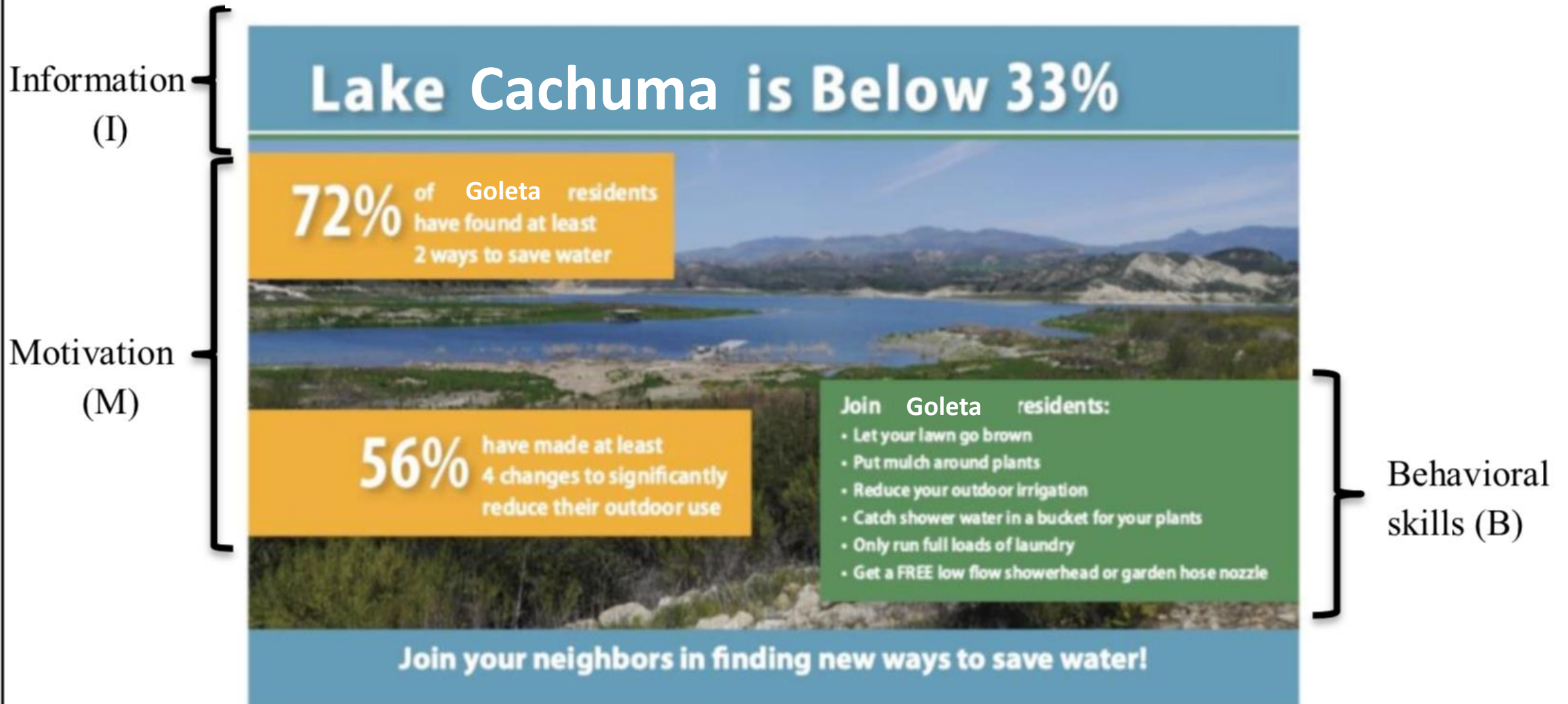
Dr Heather
Hodges



WBP Research Group
UC Santa Barbara Water Use, Behavior, and Policy



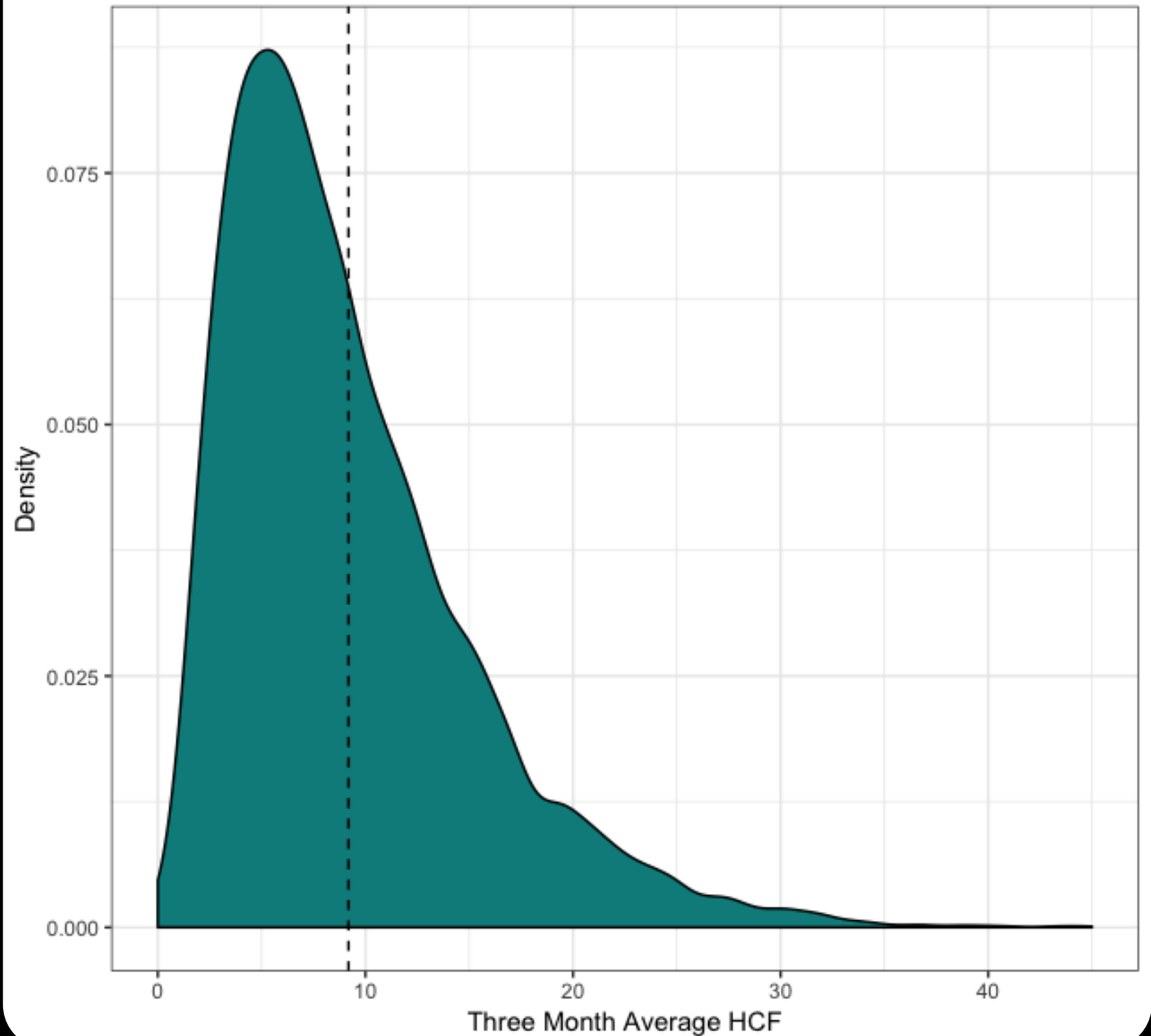
IMB Model

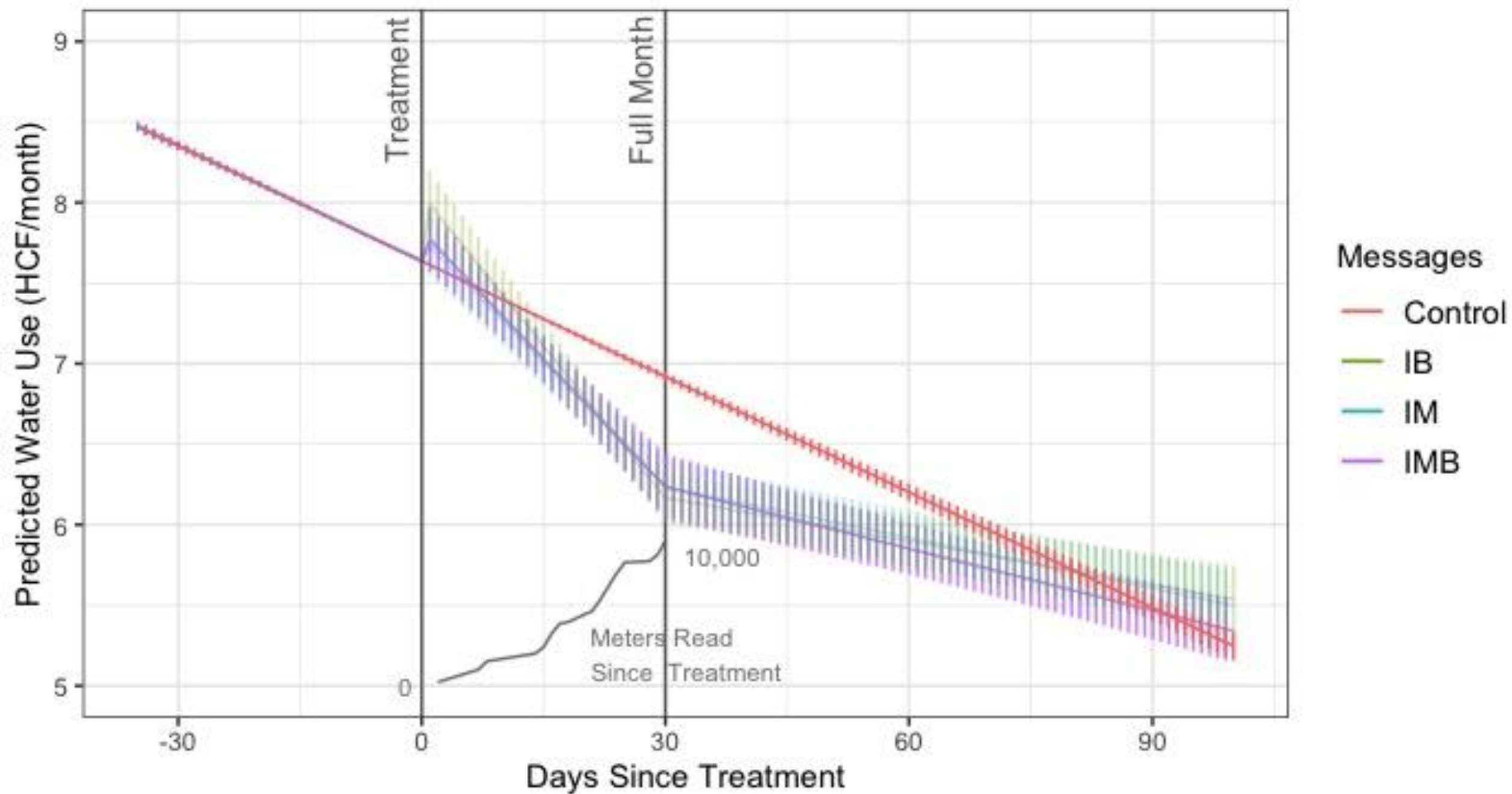


Average water use
(skewed)

Mode
17.000 L / month

Sample Water Usage Distribution
Previous Three Month Average





4-Country Study on Mobile Phones



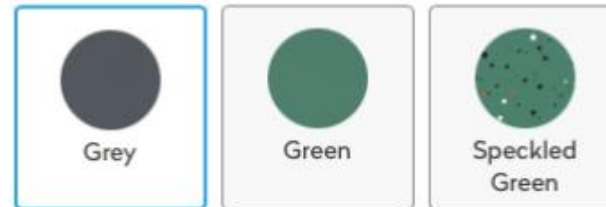
Fairphone 4

Our most sustainable phone yet, now with 5G speed, 5-year warranty and electronic waste neutral. Choose the Fairphone for you.

£499.00

Including taxes and duties. Excluding shipping costs.

Color: Grey



Storage / memory: 128GB, 6GB RAM



DE, FR, NL, UK:
Low familiarity with brand
1.5 - 3 out of 7

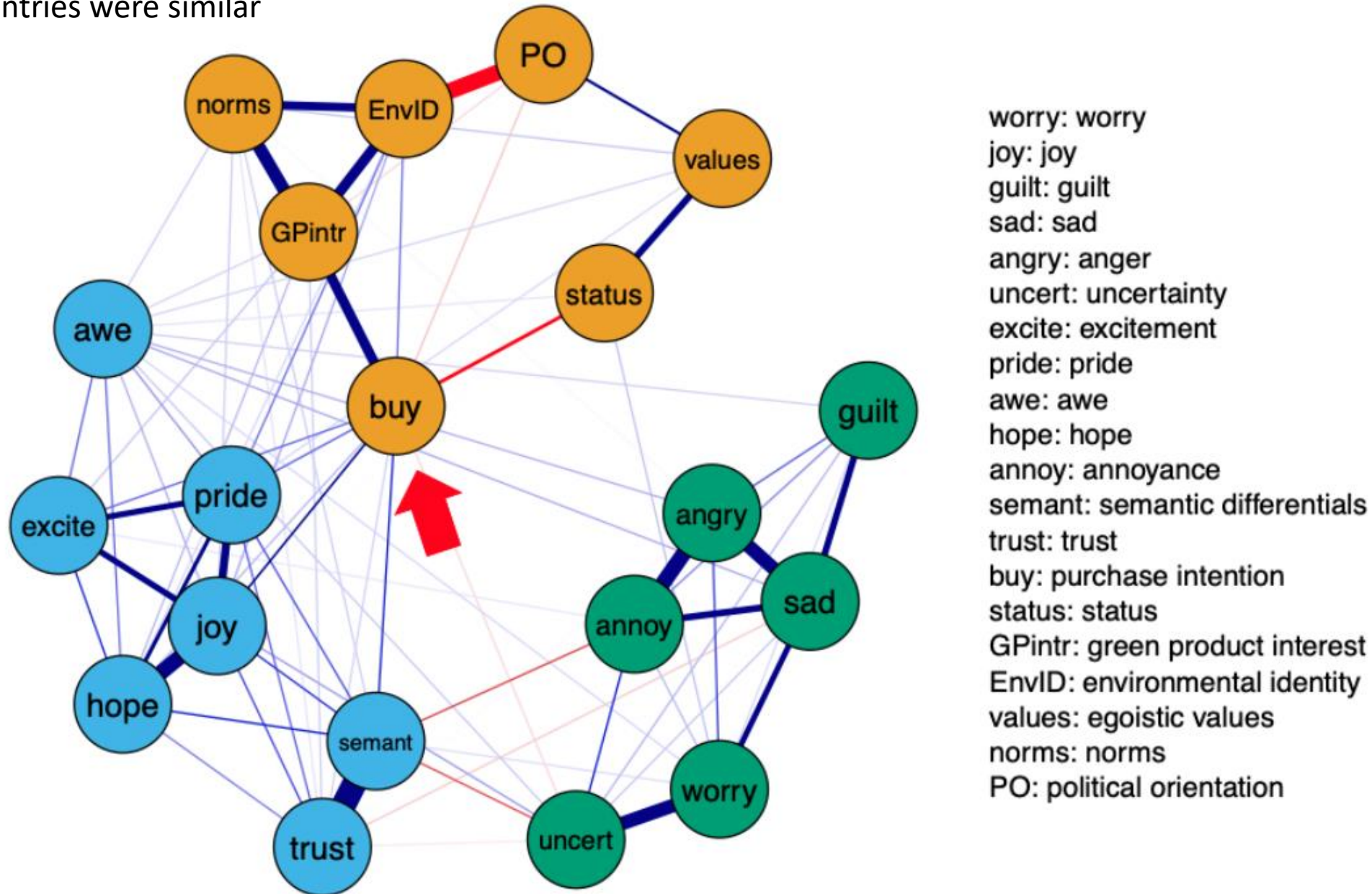


Dr Maria Zwicker

Figure 4. Dutch Attitude Network.

NETHERLANDS

Other countries were similar



List of free data: bit.ly/2FifRWp



Open psychological datasets ☆

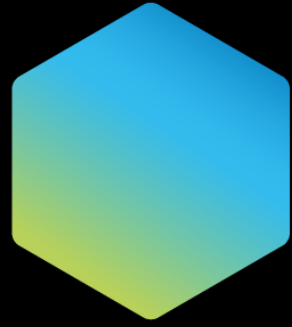
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	A	B	C	D	E	F	G	H	I	J	
1	DOI 10.17605/OSF.IO/TH8EW	Twitter announcement									
2	Making free, open psychological datasets more accessible and useful for research and teaching										
3	Can you help find information? EDIT DIRECTLY or contact Cameron Brick c.brick@uva.nl . Also see the other tabs. Please don't color or resize columns.										
4	DATASETS (with hyperlinks)	General themes	Notes/Keywords	Notable	Abbrev.	Countries	Waves	Years	N (# only)	N descriptive text	Access R
30	Cohort and Longitudinal Studies Enhancement Resources				CLOSER	UK					
31	Common Cold Project	epidemiology, psychological function	8 categories of measures that were collected		CCP	USA, UK	5	2011-2016	1,415	Study 1: 399 Study 2: 399	Registration
32	CONNECT Study	personality and social relationships	Field-based study		CONNECT	Germany			131		Application
33	Danish Twin Registry					Denmark					
34	Dutch Parliamentary Election Studies	health, psychology, values	Dutch Parliamentary Election Studies (DPEES)		DPES	Netherlands	50	1970-now			Open
35	Early Childhood Longitudinal Studies	child development; school experience	3 cohorts		ECLS	USA					
36	EEG dataset										
37	English Longitudinal Study of Aging	ageing, health, well-being, financial, cognition, biomarkers, longitudinal			ELSA	UK	8		16	12,099	12099 at wave 1
38	European Social Survey	attitudes, beliefs and behaviour patterns	Academically driven cross-national	X	ESS	36 countries in Europe	8 (every 2 years)	2002 - now (every 2 years)	330,342	330342 (number of respondents)	The data are available
39	European Values Study	attitudes, beliefs, values concerning	Large-scale, cross-national, representative	X	EVS	Europe	5	1981-now	221,365	cases in the integrated dataset	Data are available
40	Family Life, Activity, Sun, Health, and Eating (FLASHE) study				FLASHE						YES: Sign
41	Finnish Twin Registry				FINNTWIN	Finland			25,932		Unclear if
42	Fragile Families & Child Wellbeing Study	population birth cohort with both genetic and imaging data									
43	General Social Survey	attitudes, beliefs, demographics, household composition, occupational		X		USA		1972-now (annual)	3,000	1500 per year from 1972-1990	openly available
44	Genetic Links to Anxiety and Depression Study				GLAD						
45	German Socio-Economic Panel	household composition, occupational biographies, employment, earnings		X		Germany		1984 - now (every 2 years)	30,000	30000 respondents	available on
46	GESIS		ongoing, bimonthly data collection, open access for researchers			Germany	29 (07/2013 - now)	2013 - now	5,000		anonymized



Global Environmental Psychology

- Free open-access journal for authors and readers
- Funding: PsychOpen GOLD, Leibniz Institute for Psychology (ZPID)
- Theoretical and applied work on the relationship between people and their environment
- Quantitative and qualitative

gep.psychopen.eu

Current Funding



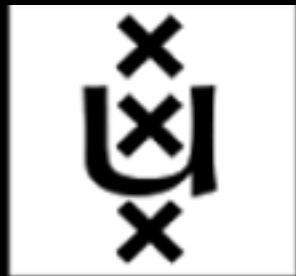
Ministry of Education, Culture and
Science of the Netherlands

- OCW Starting Grant



**HORIZON
EUROPE**

- MOSAIC



UNIVERSITEIT VAN AMSTERDAM

- FMG RPA
- Sustainable Prosperity
- A Sustainable Future



**Høgskolen
i Innlandet**

Inland Norway University
of Applied Sciences

- Travel funding



- KIC
- SSH-XS



Thank you

@CameronBrick

cameron.brick@inn.no