BR-UK Research Showcase

Chaired by Professor Linda Bauld and Professor Susan Michie

BR-UK Directors

Behavioural Research UK

BR-UK is supported by the Economic and Social Research Council [grant number ES/Y001044/1]

Welcome to our webinar

This webinar will be recorded.

The recording (and slides presented) will made publicly available after the event.

The video feed and audio for participants is disabled today.

The Q&A box will not be visible on the recording but your name may be included when questions are read out in the Q&A section today.

You may submit questions anonymously in this webinar.

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BR-UK is supported by the Economic and Social Research Council [grant number ES/Y001044/1]

Key Points

Today's webinar will last approx. 90 minutes.

The chat, audio and video functionality is disabled for today's session.

Please submit your questions via the Q&A box, indicating who your question is for and use the upvote function to highlight relevant questions you would particularly like to see answered today. Please note that questions are visible to all participants.

If you require closed captioning, but cannot see this on your screen automatically, please click the CC box on your zoom menu bar.

Agenda

Time	Topic	Speaker
13:05	Behavioural interventions to reduce speeding among drivers and riders of motor vehicles	Dr Shaun Helman, TRL
13:15	Leveraging the benefits of ontologies for behavioural research	Dr Harriet Baird, University of Sheffield
13:25	From Segmentation to Strategy: Identifying Population Segments and Regional Patterns of Environmental Behaviour to Enhance Policy Transfer	Dr Guanyu Yang, University College London
13:35	Questions and Answers	
13:45	Statistics vs Anecdotes: Assessing the effect of evidence types on policy support	Dr Amy Rodger, University of Edinburgh
13:55	Translating behavioural science advice into policy during a public health emergency; a behavioural perspective	Dr Lucy Porter, University College London
14:05	Questions & Answers	

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Reducing speeding

Real-World application of ontologies for evidence reviews, and on-road pilot

Shaun Helman, George Beard, Jill Weekley, Arnold Cheung, Ching-Yi Chen, Ilaria Marino, Chris Redfern, Jack Hitchings (TRL Ltd.)

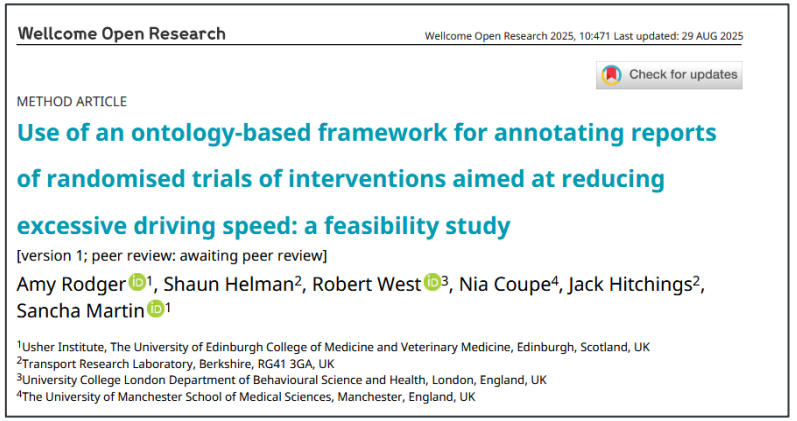
Amy Rodger, Sancha Martin (The University of Edinburgh)

Robert West (University College London)

Nia Coupe (The University of Manchester)

Work so far

- Evidence review using ontological approach (Rodger et al., 2025).



Wellcome Open Research — Wellcome Open Research 2025, 10:471 Last updated: 29 AUG 2025

Check for updates

METHOD ARTICLE

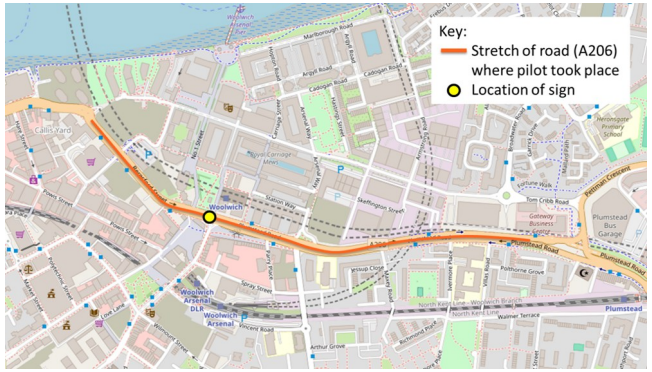
Use of an ontology-based framework for annotating reports of randomised trials of interventions aimed at reducing excessive driving speed: a feasibility study

[version 1; peer review: awaiting peer review]

Amy Rodger[1], Shaun Helman[2], Robert West[3], Nia Coupe[4], Jack Hitchings[2], Sancha Martin[1]

[1]Usher Institute, The University of Edinburgh College of Medicine and Veterinary Medicine, Edinburgh, Scotland, UK
[2]Transport Research Laboratory, Berkshire, RG41 3GA, UK
[3]University College London Department of Behavioural Science and Health, London, England, UK
[4]The University of Manchester School of Medical Sciences, Manchester, England, UK

- On-road pilot to test methods of measuring speeds.



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Rodger, A., Helman, S., West, R., Coupe, N., Hitchings, J. & Martin, S. (2025). Use of an ontology-based framework for annotating reports of randomised trials of interventions aimed at reducing excessive driving speed: a feasibility study. Wellcome Open Research, 10, 471.https://wellcomeopenresearch.org/articles/10-471/v1

Background

- Speeding increases collisions and injuries (Elvik, Vadeby, Hels & Van Schagen, 2019; Elvik, 2005; 2013).
- Part of the solution is to change beliefs, so slower speeds are seen as the norm (Singh et al., 2025).
- We need better understanding of actual behaviour – especially for calculating ROI (Thomas et al., 2025).
- The on-road pilot tested two methods of real-world measurement, and used an intervention informed from the review.

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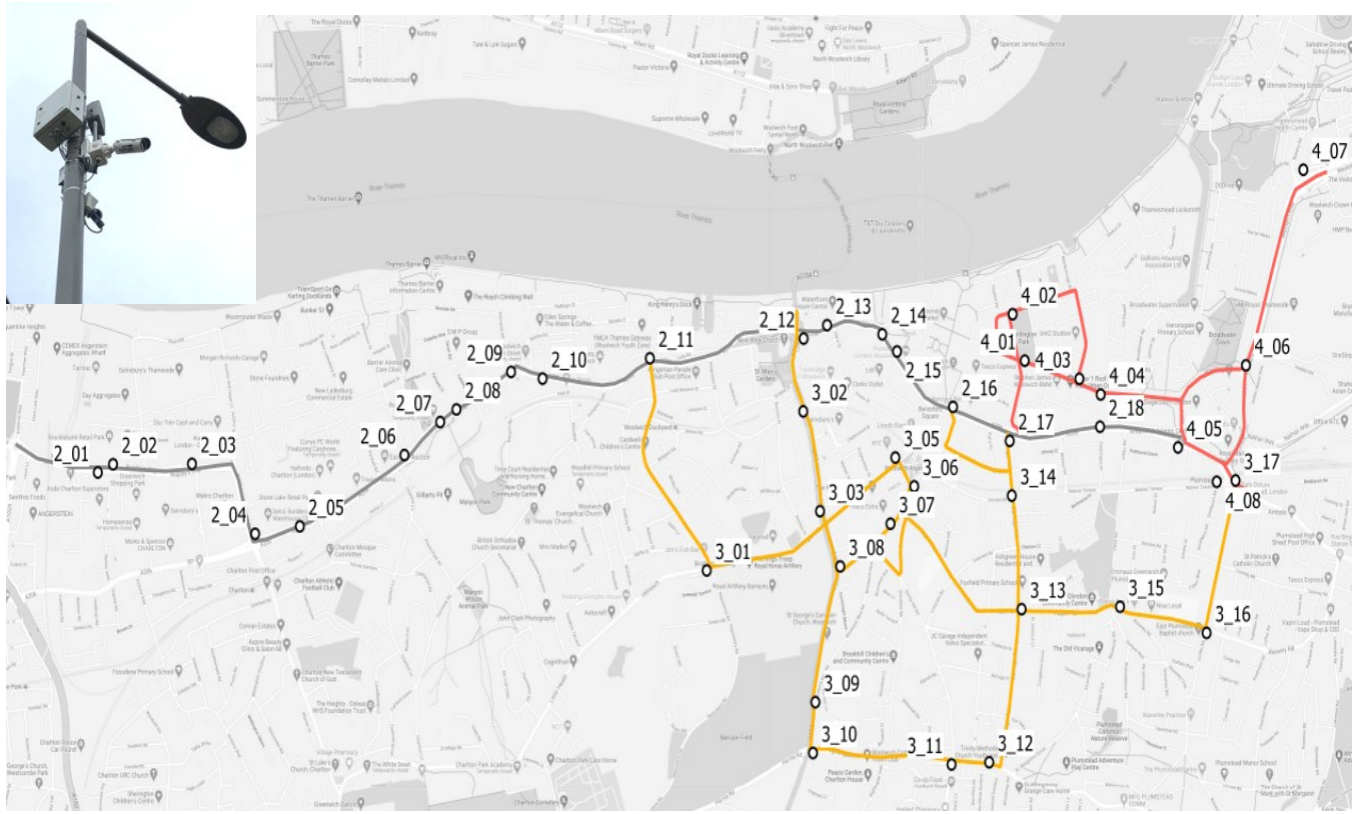
- Elvik R, Vadeby A, Hels T, *et al.*: Updated estimates of the relationship between speed and road safety at the aggregate and individual levels. *Accident Analysis & Prevention.* 2019; 123: 114–122.
- Elvik R: Speed and road safety: synthesis of evidence from evaluation studies. *Transportation Research Record.* 2005; 1908(1): 59–69.
- Elvik R: A re-parameterisation of the Power Model of the relationship between the speed of traffic and the number of accidents and accident victims. *Accident Analysis & Prevention.* 2013; 50: 854–860.
- Singh, P., Bhaumik, S., Brown, J., & Jagnoor, J. (2025). Accelerating risk: a qualitative evidence synthesis on facilitators and barriers to speeding. *Injury Prevention*.
- Thomas, P., Welsh, R., Morris, A., & Reed, S. (2025). Validating self-reported driving behaviours as determinants of real-world driving speeds. *Ergonomics*, *68*(8), 1192-1206.

TRL's Smart Mobility Living Lab (SMLL)

Smart Mobility Living Lab London

- Real-world testbed in a dense urban environment.
- 24km instrumented routes.
- Real-time **object detection algorithm** to track vehicles and measure speeds.
- This data still being analysed.



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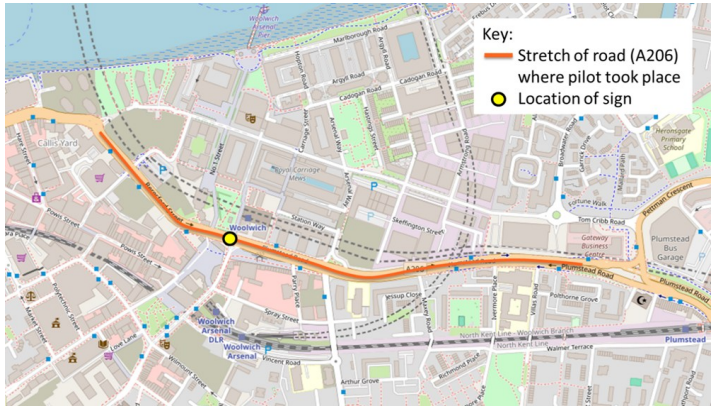
Connected vehicle data (third party)

- Real-time/historical data from vehicles, capturing movements, behaviours, and interactions for transportation analytics.
- Trajectories, vehicle type, G-forces, Vehicle ID (anonymised).

Source	Every single vehicle	Every location	All time (incl. real-time and historical)
Tube counts	✅	❌	❌
Cameras	✅	❌	✅
Fixed count sites	✅	❌	✅
Gantries	✅	❌	✅
Compass	❌	✅	✅

Design

- Control: Westbound carriage of the A206 (1)
- Trial: Eastbound carriageway of the A206
  - Downstream of the sign (2)
  - Upstream of the sign (3)
- Two weeks before installation of sign with ‘Descriptive Norm’ message
- Two weeks after installation of the sign



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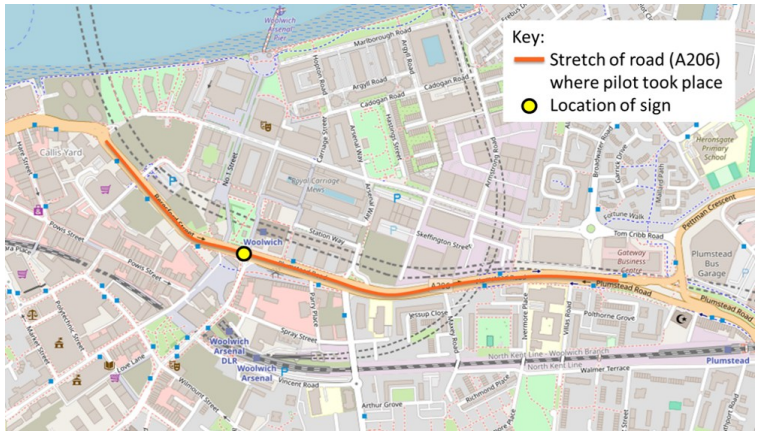
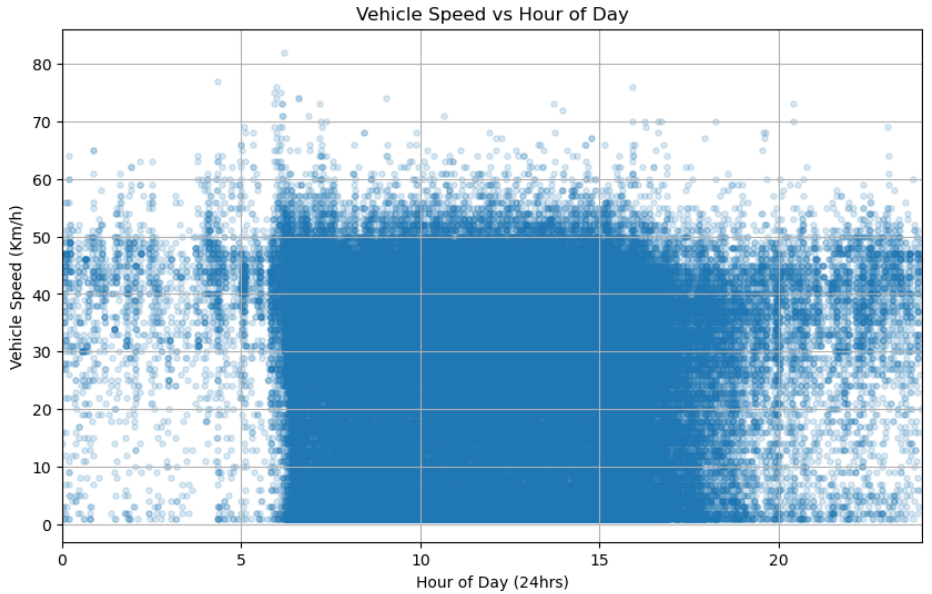
- Cialdini, R. B. (2003). Crafting Normative Messages to Protect the Environment. *Current Directions in Psychological Science*, *12*(4), 105-109. https://doi.org/10.1111/1467-8721.01242

Connected vehicle data – Key findings so far

- Finding 1: Aggregated vehicle data mapped neatly to pilot location.



- Finding 2: Vehicle speed distribution matched expected range.



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Connected vehicle data – Key findings

- Finding 3: Speed values showed good alignment with GPS data.
  - (Haversine formula – straight line great circle distance for 103,799 records with multiple sequential entries – 98% within 10%).
- Finding 4: Characteristics of data when using for testing hypotheses – work in progress.

Next steps

- Engage local communities to understand attitudes and beliefs influencing speeding behavior.
- Co-design tailored interventions with community input – active listening, analytical mindset, critical thinking skills, descriptive norms (O'Mahony et al., 2023).
- Deploy and adapt interventions over time to foster lasting change with ongoing community engagement and reinforcement – learning lessons from literature on conspiracy theory debunking.
- Evaluate using methods being developed in this on-road pilot, and informed by the evidence review.

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- O'Mahony, C., Brassil, M., Murphy, G., & Linehan, C. (2023). The efficacy of interventions in reducing belief in conspiracy theories: A systematic review. Plos one, 18(4), e0280902.

Ontology use in real-world evidence review

- Behaviour Change Intervention Ontology (and others) used to annotate reports related to speeding interventions
- 30 studies, 88 study conditions, 2097 individual annotations
- This will be an important part of improving the use of behavioural change research and good practice in road safety (e.g. Fylan, 2017; Sullman, 2017)

Document ID	Document label	Document type	Group ID	Group name	Entity type	Confidence	Entity URL	Entity label
EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	100	Control (Unrelated	Participants incl type of journey	High		non-speeder population statistic
EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	0	all	Methodology incl sample size	High	https://bciosearch.org/BCIO_011011	television mode of delivery
EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	1	Advertisement 1 (Pizza)-High	Methodology incl sample size	High	https://bciosearch.org/BCIO_011001	informational mode of delivery
EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	1	Advertisement 1 - High	Intervention incl BCT, mode of delivery	High	https://bciosearch.org/BCIO_007055	demonstrate the behaviour BCT
EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	1	Advertisement 1 - High	Intervention incl BCT, mode of delivery	High	https://bciosearch.org/BCIO_007068	increase salience of
EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	1	Advertisement 1 - High	Intervention incl BCT, mode of delivery	Marginal	https://bciosearch.org/BCIO_007069	consider pros and cons BCT
EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	1	Advertisement 1 - High	Intervention incl BCT, mode of delivery	High	https://bciosearch.org/BCIO_007075	present information from
EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	1	Advertisement 1 - High	Intervention incl BCT, mode of delivery	Marginal	https://bciosearch.org/BCIO_007179	inform about negative health
EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	2	Advertisement 1 (Pizza)-Low	Methodology incl sample size	High	https://bciosearch.org/BCIO_011001	informational mode of delivery
EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	2	Advertisement 1 - Low	Intervention incl BCT, mode of delivery	High	https://bciosearch.org/BCIO_007068	increase salience of
EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	2	Advertisement 1 - Low	Intervention incl BCT, mode of delivery	Marginal	https://bciosearch.org/BCIO_007179	inform about negative health
EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	3	Advertisement 2 (Pram)-High	Methodology incl sample size	High	https://bciosearch.org/BCIO_011001	informational mode of delivery
EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	3	Advertisement 2 - High	Intervention incl BCT, mode of delivery	High	https://bciosearch.org/BCIO_007068	increase salience of
EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	3	Advertisement 2 - High	Intervention incl BCT, mode of delivery	High	https://bciosearch.org/BCIO_007069	consider pros and cons BCT
EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	3	Advertisement 2 - High	Intervention incl BCT, mode of delivery	Marginal	https://bciosearch.org/BCIO_007075	present information from
EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	4	Advertisement 2 (Pram)-Low	Methodology incl sample size	High	https://bciosearch.org/BCIO_011001	informational mode of delivery
EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	4	Advertisement 2 - Low	Intervention incl BCT, mode of delivery	Marginal	https://bciosearch.org/BCIO_007179	inform about negative health
EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	4	Advertisement 2 - Low	Intervention incl BCT, mode of delivery	High	https://bciosearch.org/BCIO_007068	increase salience of
EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	5	Advertisement 3 (Trike)-High	Methodology incl sample size	High	https://bciosearch.org/BCIO_011001	informational mode of delivery
EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	5	Advertisement 3 - High	Intervention incl BCT, mode of delivery	High	https://bciosearch.org/BCIO_007068	increase salience of
EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	5	Advertisement 3 - High	Intervention incl BCT, mode of delivery	High	https://bciosearch.org/BCIO_007069	consider pros and cons BCT
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EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	6	Advertisement 3 (Trike)-Low	Methodology incl sample size	High	https://bciosearch.org/BCIO_011001	informational mode of delivery
EX_258_2004_Thornton	The Effectiveness of Threat-only	Report of RCT	6	Advertisement 3 - Low	Intervention incl BCT, mode of delivery	Marginal	https://bciosearch.org/BCIO_007179	inform about negative health

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- Rodger, A., Helman, S., West, R., Coupe, N., Hitchings, J. & Martin, S. (2025). Use of an ontology-based framework for annotating reports of randomised trials of interventions aimed at reducing excessive driving speed: a feasibility study. Wellcome Open Research, 10, 471.https://wellcomeopenresearch.org/articles/10-471/v1
- Fylan DF: Using Behaviour Change Techniques: guidance for the road safety community. London: RAC Foundation, 2017
- Sullman DM: Young driver safety: a review of behaviour change techniques for future interventions. London: RAC Foundation, 2017

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Find out more in our preprint

Amy Rodger, Shaun Helman, Robert West, Nia Coupe, Jack Hitchings & Sancha Martin

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Leveraging the benefits of ontologies for behavioural research

Harriet Baird, Janna Hastings, Vitaveska Lanfranchi, Fatima Maikore, Suvodeep Mazumdar, Susan Michie, Thomas Webb, Robert West … and others in the BR-UK team and beyond!

Challenges in Behavioural Research

- Data and evidence growing faster than we can keep up with.
- Lack of precision and conceptual clarity.
- Fragmentation of data and theory.
- This makes it difficult to: integrate knowledge, address complex behavioural questions, and translate research into practice.

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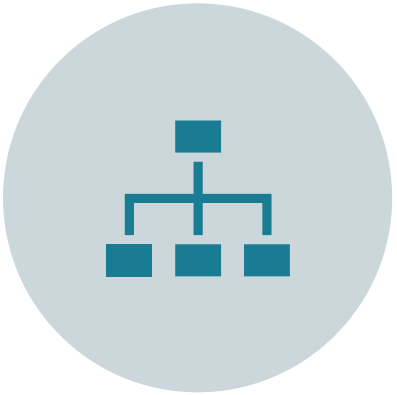
What is an ontology?

- An ontology is a formal representation of knowledge in a domain.
- A structured way of organising constructs within a field, and the relationships between them, using a **shared language.**
- Ontologies allow knowledge to be read and understood by both **humans and machines.**

Identifier	BCIO:036000
Label	Individual human behaviour
Definition	A bodily process of a human that involves co-ordinated contraction of striated muscles controlled by the brain.
Properties	Is-a ‘bodily process’

Why we need ontologies

Provide precise and structured ways of describing the things we study



Enable linking of data, evidence, and theory across topics and disciplinary silos

Enable our data and knowledge to be understood and integrated by humans and machines

Ontologies help us represent information with **clarity, consistency,** and **coherence,** allowing us to **connect** ideas and build cumulative knowledge.

Using ontologies to make behavioural science more precise and connected

1. Identify ontologies that might be relevant to our work and where ontologies might overlap.

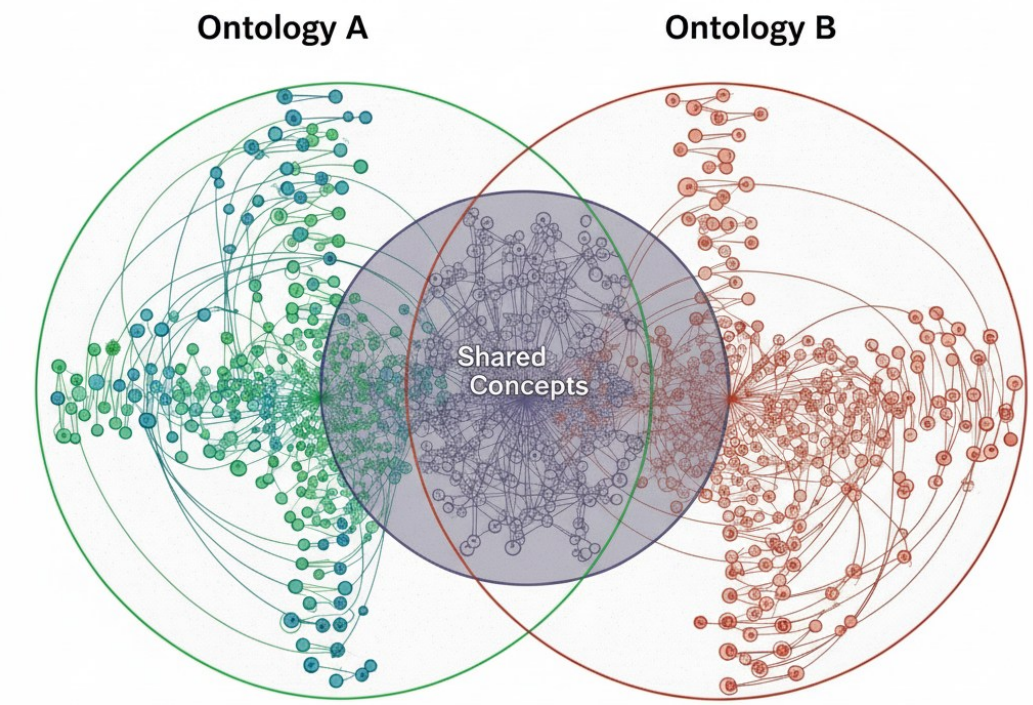
2. Use ontologies to find and integrate relevant datasets.

3. Use ontologies to compare and integrate theories of behaviour.

Identifying ontologies that might overlap

- Different ontologies are developed to capture different aspects of behaviour and social science.

- However, ontologies may overlap and share the same or similar constructs and ideas.



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Identifying ontologies that might overlap

Are these constructs the same, similar, or different?

OMRSE: 00000278

"Social identity"

Definition: "A subjective representation of its bearer as being a member of some social category."

ADDICTO:0001087

"Social identity"

Definition: "A self-identity that represents a relation between oneself and another person or group."

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Read more about our work and access our guide:

Wellcome Open Research

Wellcome Open Research 2025, null:null Last updated: 10 SEP 2025

Check for updates

RESEARCH ARTICLE

A Method for Evaluating the Interoperability of Ontology Classes in the Behavioural and Social Sciences

Thomas L. Webb[1], Harriet M. Baird[1], Fatima S. Maikore[2], Robert West[3], Janna Hastings[4-6], Suvodeep Mazumdar[7], Vitaveska Lanfranchi[2], Susan Michie[8]

[1]School of Psychology, The University of Sheffield, Sheffield, UK
[2]School of Computer Science, The University of Sheffield, Sheffield, UK
[3]University College London Department of Behavioural Science and Health, London, UK
[4]Faculty of Medicine, University of Zurich, Zurich, Switzerland
[5]University of St Gallen School of Medicine, St. Gallen, St. Gallen, Switzerland
[6]Swiss Institute of Bioinformatics, Lausanne, Vaud, Switzerland
[7]School of Information, Journalism and Communication, The University of Sheffield, Sheffield, UK
[8]University College London Centre for Behaviour Change, London, UK

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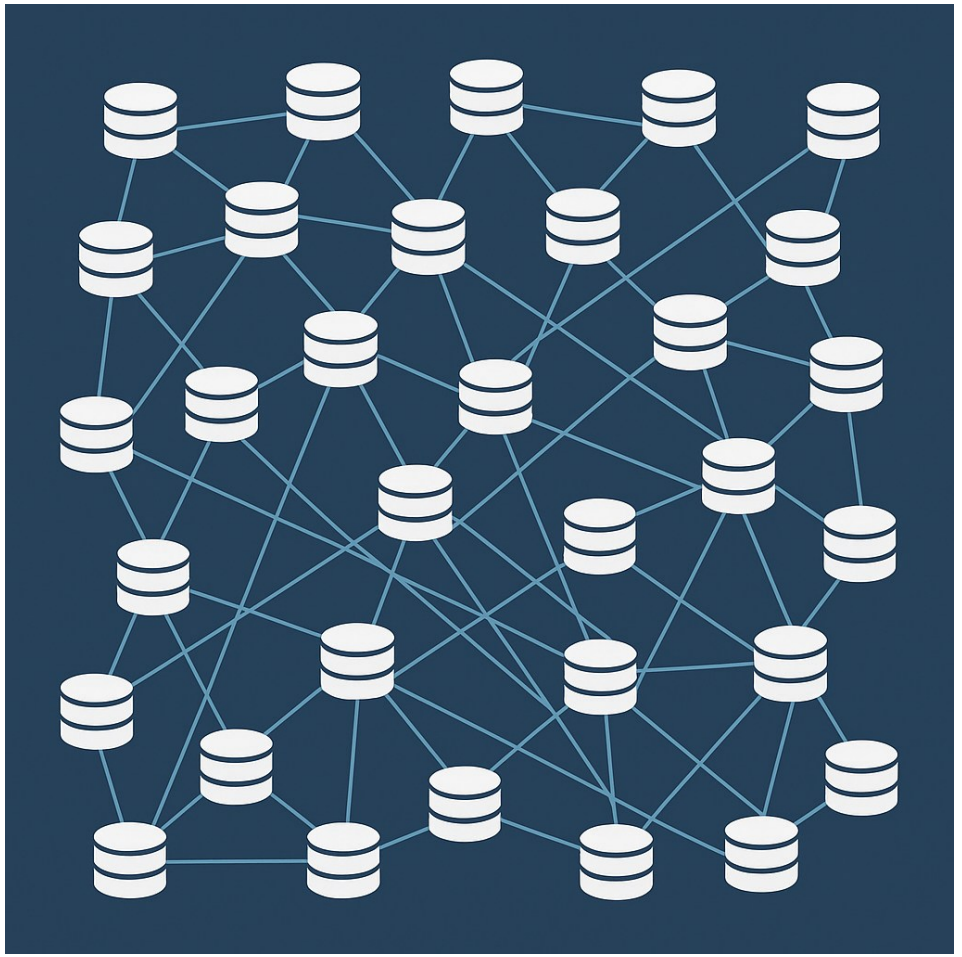
https://wellcomeopenresearch.org/articles/10-525

Using ontologies to identify and integrate data

We have hundreds of thousands of datasets, and every day this number gets bigger…

But we struggle to:

- Find datasets that include the constructs we care about.
- Figure out what each variable really means and how it links to those constructs we are interested in.
- Combine similar variables from different datasets to build integrated knowledge.



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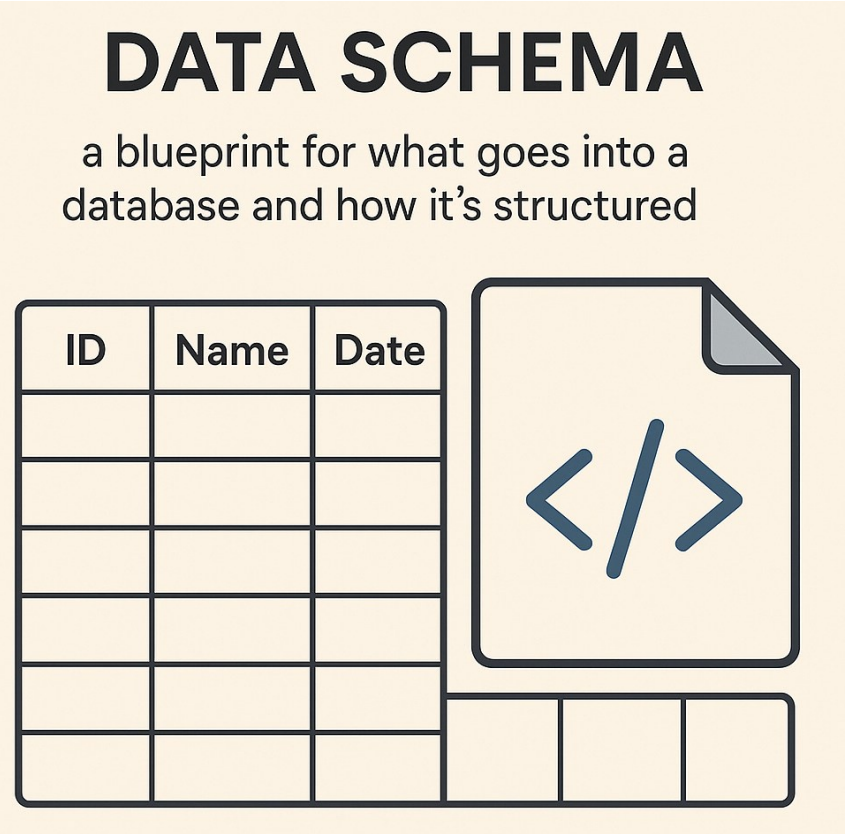
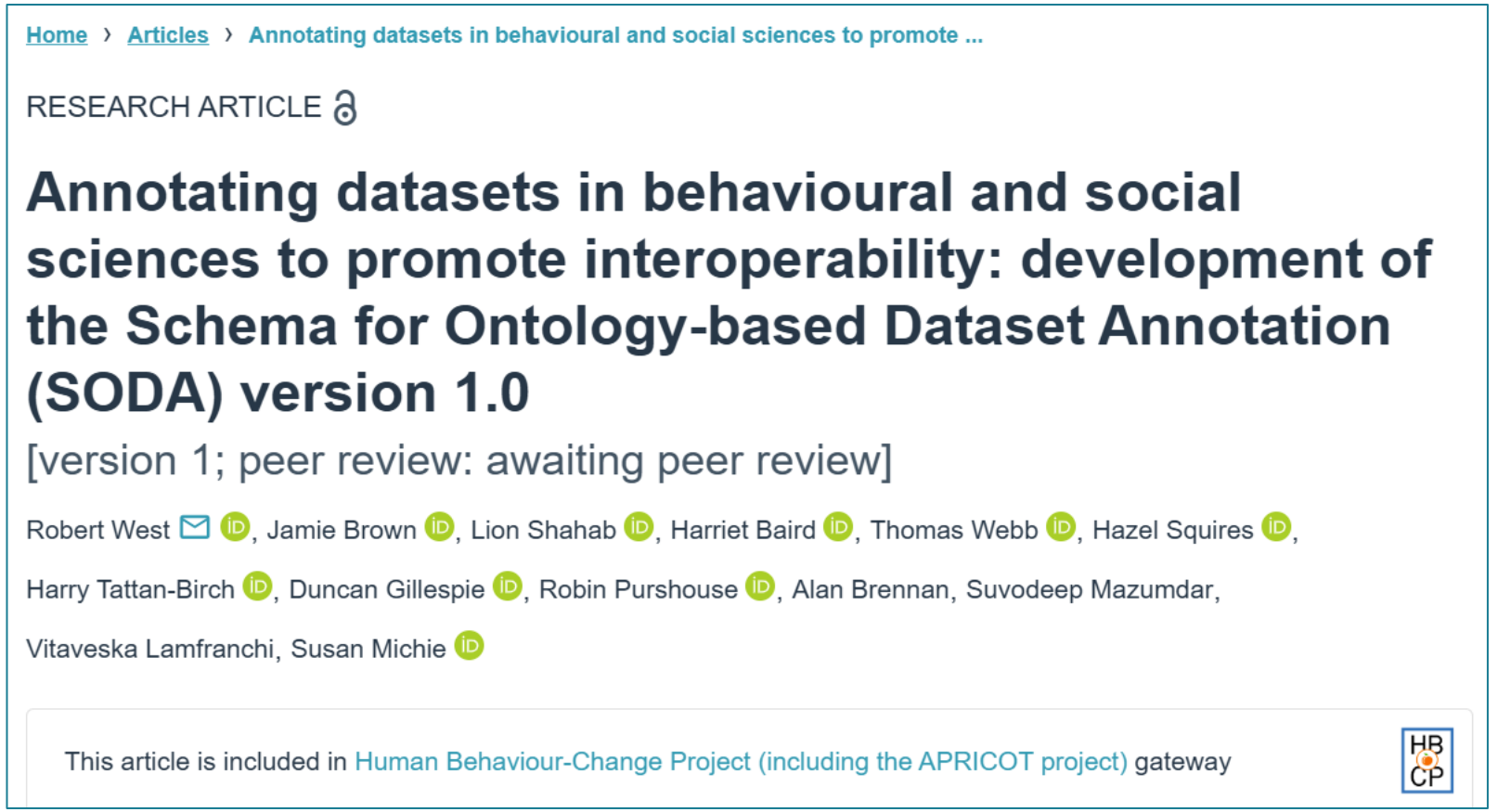
Ontologising datasets can address these problems

- **SODA**: Schema for Ontology-Based Dataset Annotation.

- We can use SODA to:
  - Label our own datasets
  - Search for datasets that may be of interest to our own work
  - Combine data in meaningful and useful ways



Read more about our work



https://wellcomeopenresearch.org/articles/10-455

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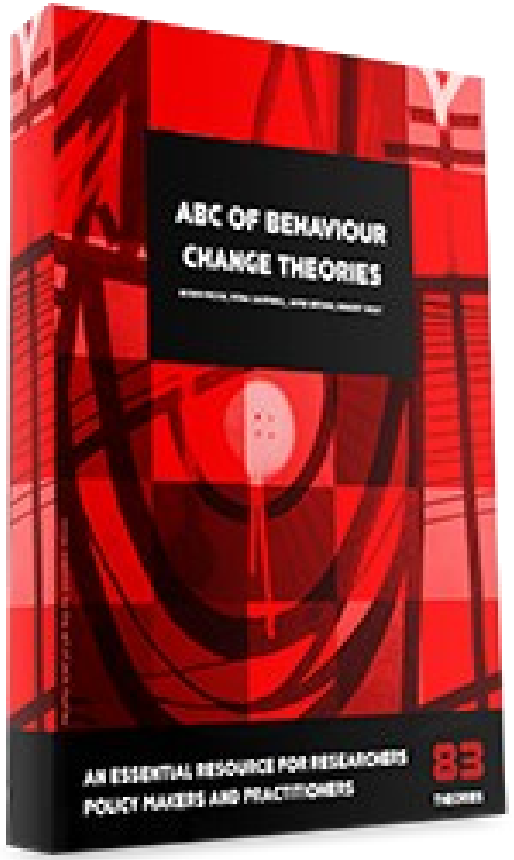
Using ontologies to compare and integrate theories

- Theories summarise what we know and help build cumulative knowledge.

- But there are **83+ theories of behaviour**
  - Many overlap
  - Most are described imprecisely

- This creates problems for:
  - Comparing and synthesising theories
  - Applying and testing theories to advance the field



https://www.behaviourchangetheories.com/
Davis et al (2015), *Health Psychol Rev*.

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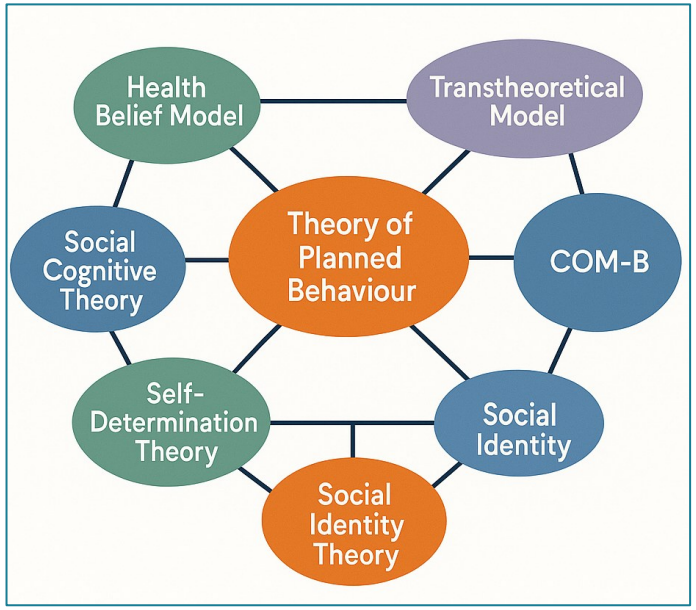
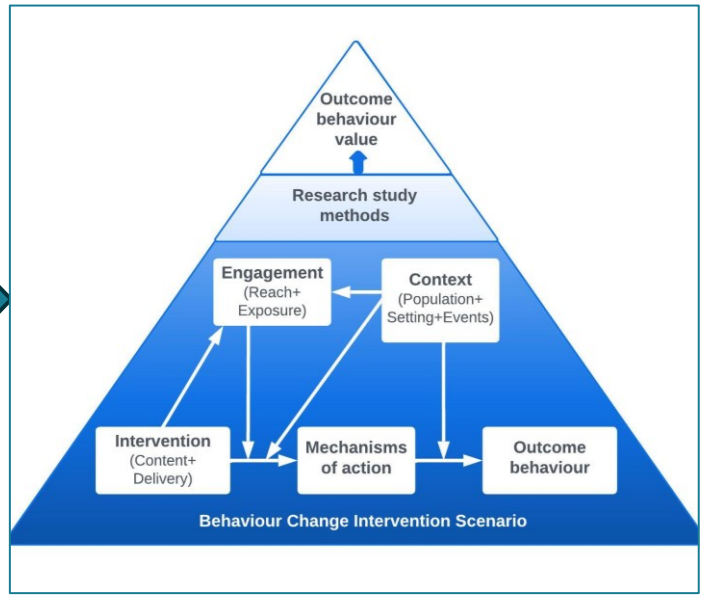
Using ontologies to compare and integrate theories





From 76 theories

Extracted 1,459 constructs

Mapped to the Behaviour Change Intervention Ontology (BCIO)
www.BCIOntology.org

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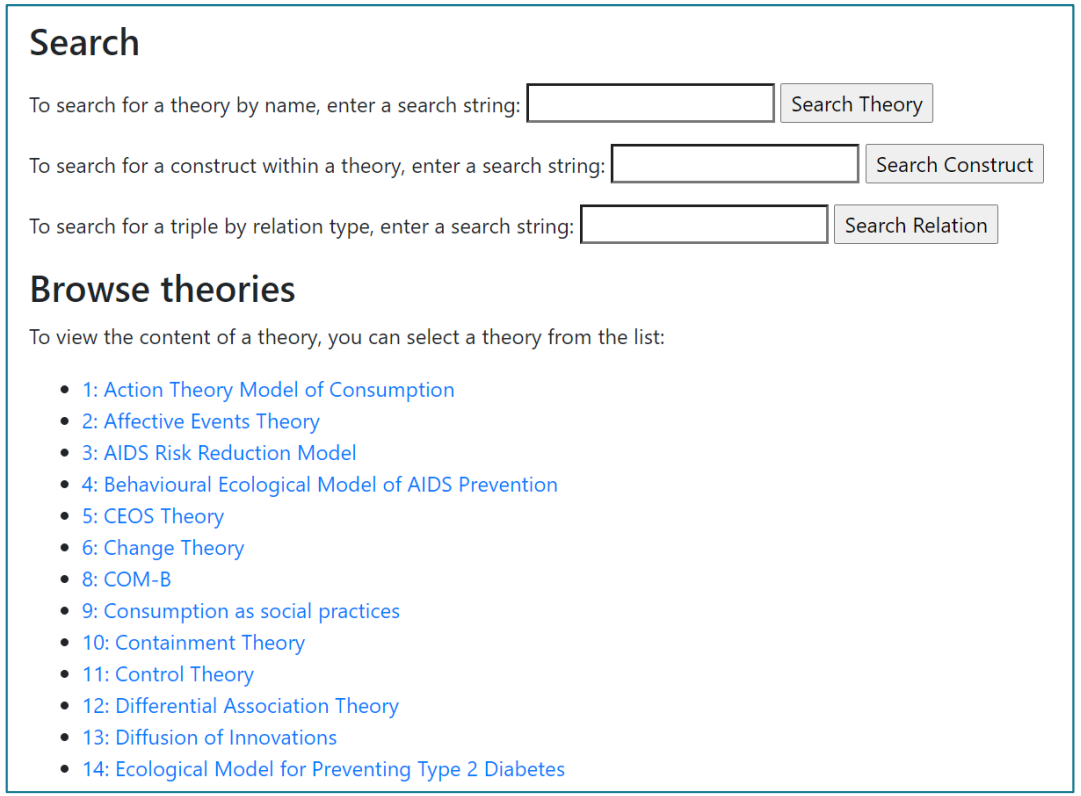
Integration would make theories more useful and useable

- Generated a searchable database



https://theory-database.hbcptools.org/

Identifier	BCIO:006051
Label	Social Identity
Definition	A self-identity in which the representation involves a relation between the identity holder and another person or group.
Properties	Is-a ‘self-identity’

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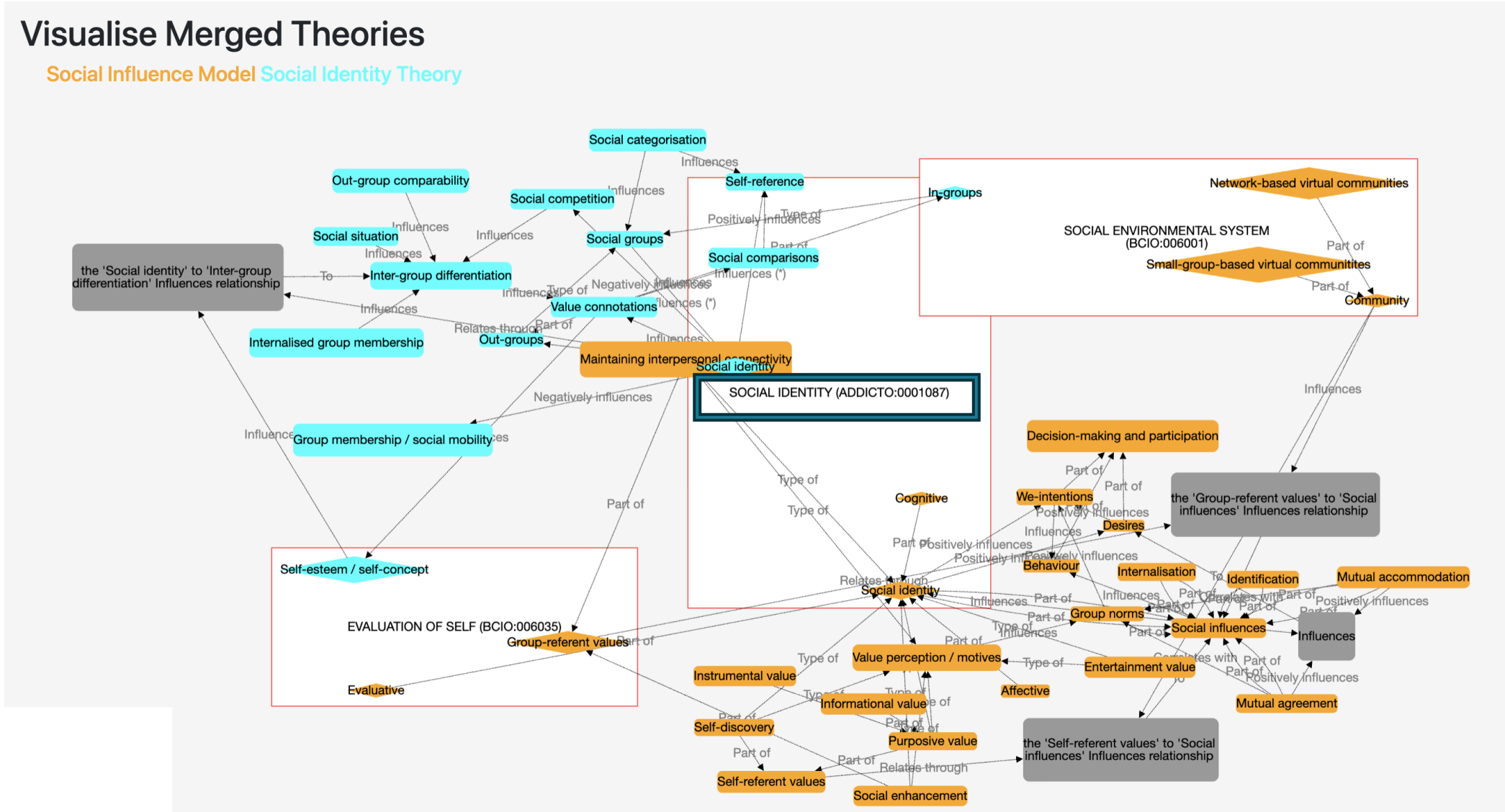
Integration would make theories more useful and useable



Read more about our work:

Wellcome Open Research

Wellcome Open Research 2020, 5:177 Last updated: 08 JUL 2025

Check for updates

RESEARCH ARTICLE

An ontology-based modelling system (OBMS) for representing behaviour change theories applied to 76 theories

[version 1; peer review: 2 approved]

Joanna Hale[1], Janna Hastings[1], Robert West[2], Carmen E. Lefevre[1], Artur Direito[1], Lauren Connell Bohlen[1,3], Cristina Godinho[1,4,5], Niall Anderson[1,6], Silje Zink[1], Hilary Groarke[1], Susan Michie[1]

[1]Centre for Behaviour Change, University College London, London, UK
[2]Research Department of Epidemiology & Public Health, University College London, London, UK
[3]Department of Behavioral and Social Sciences, Brown University School of Public Health, Providence, Rhode Island, USA
[4]Católica Research Centre for Psychological, Family and Social Wellbeing, Universidade Católica Portuguesa, Lisboa, Portugal
[5]Center for Research and Social Intervention, Instituto Universitário de Lisboa, Lisboa, Portugal
[6]NIHR Health Protection Research Unit in Behavioural Science and Evaluation, University of Bristol, Bristol, UK

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Future work will be taken forward in BR-UK and The APRICOT Project www.humanbehaviourchange.org

How can you learn more and start working with ontologies?

Resource	URL
Human Behaviour-Change Project	www.humanbehaviourchange.org/
Behaviour Change Intervention Ontology Website and Training	www.bciontology.org/ www.bciontology.org/training
Publications	www.wellcomeopenresearch.org/collections/humanbehaviourchange
Webinar Series	www.youtube.com/@BehaviouralResearchUK www.youtube.com/@humanbehaviourchangeproject
	www.bssofoundry.org/

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Population Segments and Regional Patterns of Environmental Behaviour

Guanyu Yang, Amy Rodger, Elif Naz Çoker, David Shipworth

Policy transfer challenges

Climate crisis

Energy, transport, food sectors – major contributors

Population segments

What segments of behavioural patterns exist? What predicts them?

Policy dilemma

Policy transfer with population heterogeneity in behaviour

Regional distribution

How are these segments distributed regionally?

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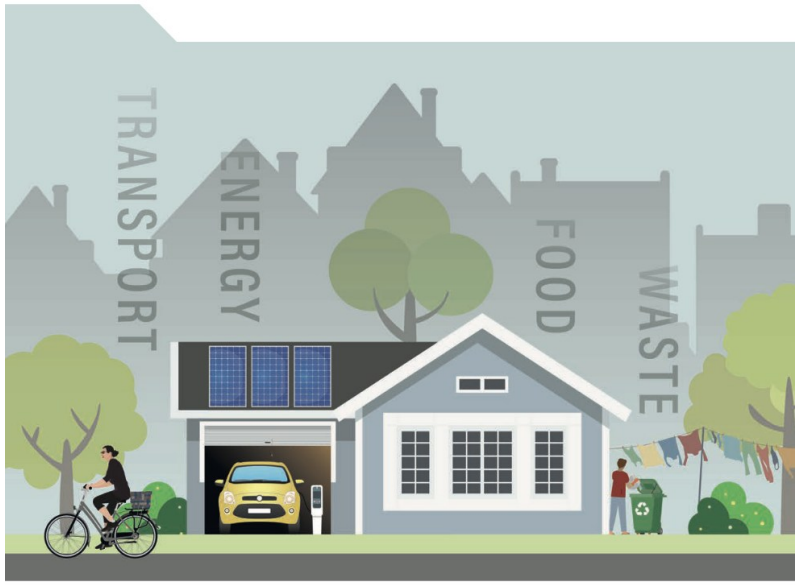
Multilevel segmentation analyses of OECD EPIC survey

2022 OECD Survey on Environmental Policies and Individual Behaviour Change (EPIC)



OECD

17,215
respondents

61
country regions

US, Canada, UK, Sweden, Switzerland, Netherlands, France, Belgium, Israel

Sector-specific behavioural indicators

Energy, transport, and food (respondents assigned to see two sectors each)

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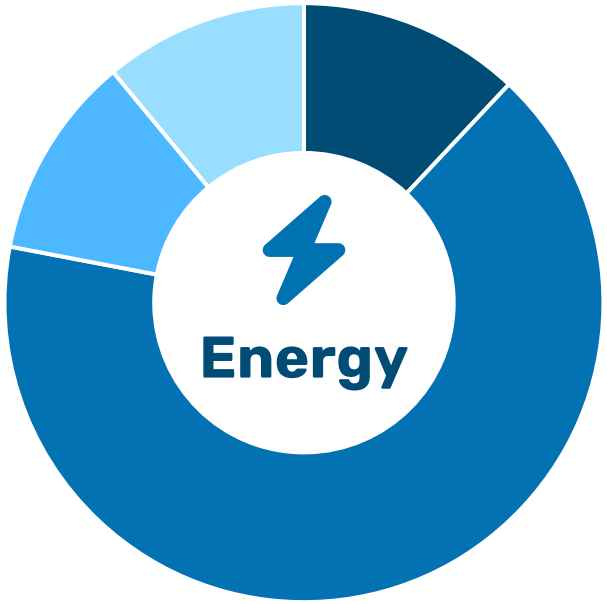
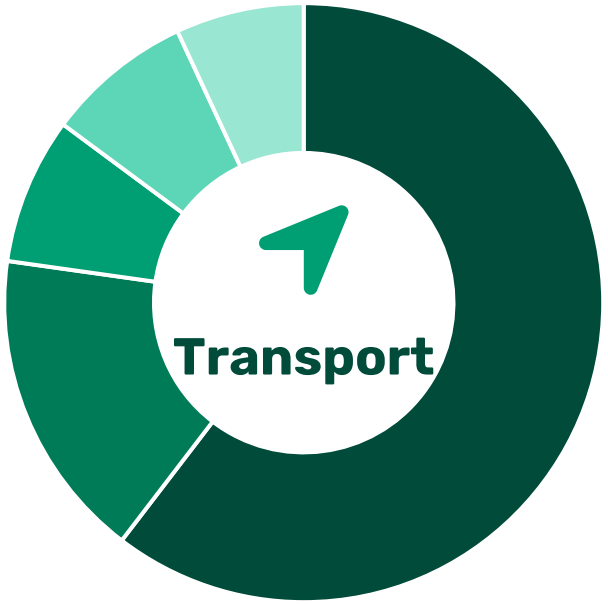
We used multi-level latent class analysis as a segmentation approach.

Most people fall into the LEAST sustainable segments



12% Disengaged energy users

66% Energy investors



61% Auto travellers

51% Non-sustainable food consumers & purchasers

These segments had lower policy support than more sustainable ones

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Determined by latent class analysis for each sector and OLS logistic regression

Behavioural patterns are associated across sectors

Membership in the least sustainable segment in one sector more likely to be a lesser sustainable segment in another

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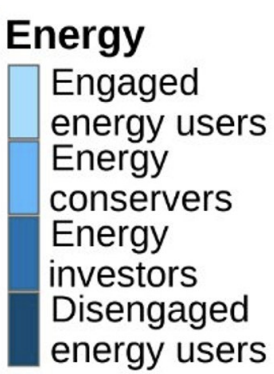
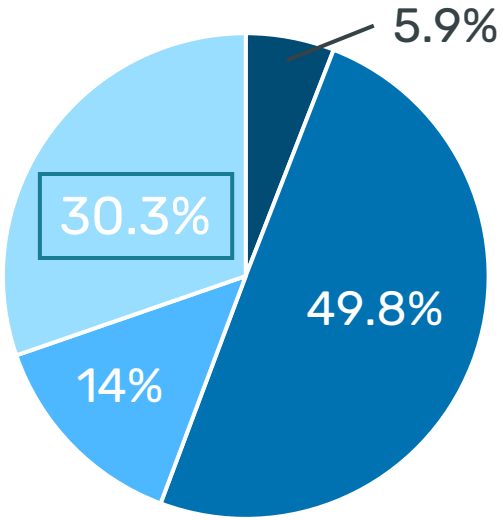
Determined by OLS logistic regression and chi-square test of independence

Regional patterns: national contexts matter

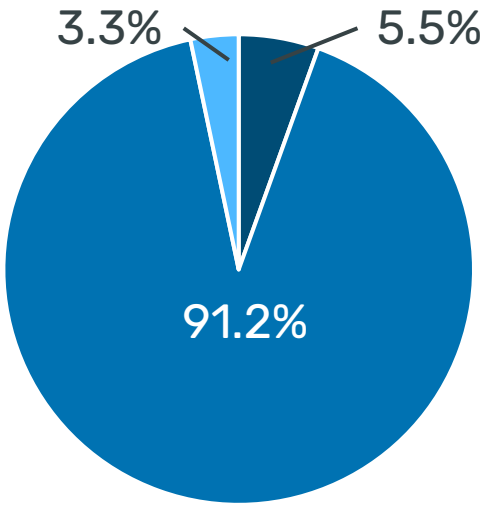


Energy Region Group D



UK, France, Netherlands: smart metering policy & advanced infrastructure

Energy Region Group A



Belgium: had no set target for smart-metering

Having a smart meter is a key behaviour of **engaged energy users**

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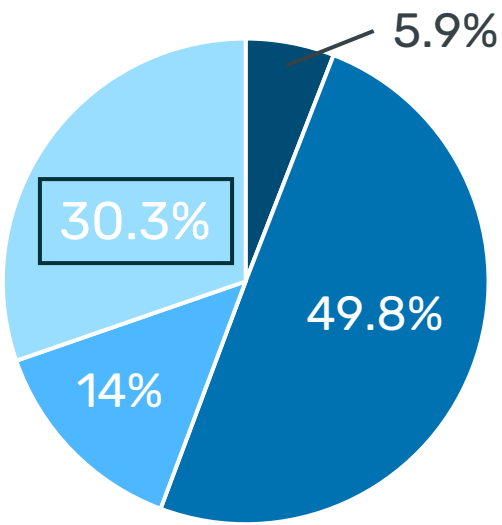
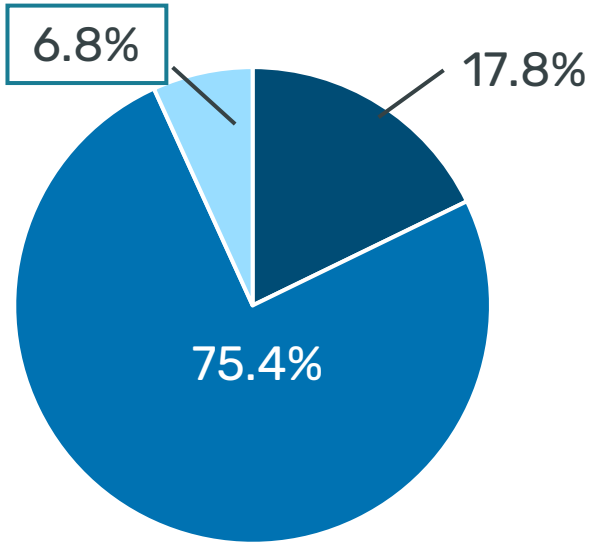
Regional patterns: within-country differences exist

Energy Region Group D



British Columbia: more advanced smart-meter roll-out infrastructure

Energy Region Group B



Other Canadian Regions: despite smart grid policy strategy

Having a smart meter is a key behaviour of **engaged energy users**

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Policy implications

Tailored approaches

Behaviour change for the non-sustainable majority

Maintenance for the sustainable minority

Cross-sector coordination

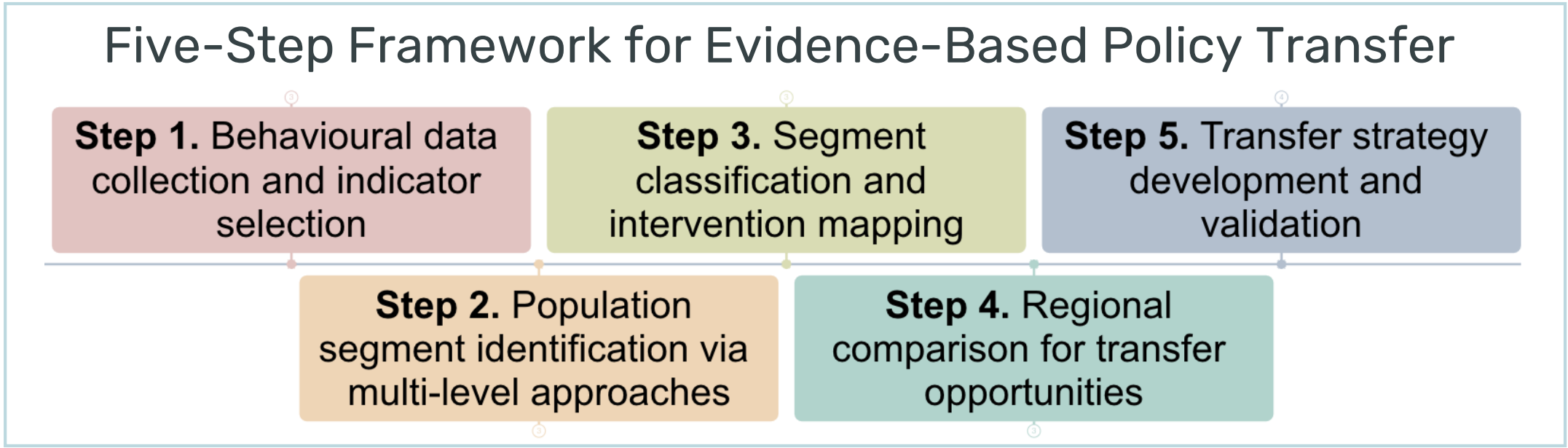
Sustainable/unsustainable behaviours cluster together

Better coordination across sectoral departments

Policy implications

Policy transfer framework

Use multilevel segmentation to identify opportunities



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Find out more in our preprint

Guanyu Yang, Amy Rodger, Elif Naz Çoker, David Shipworth

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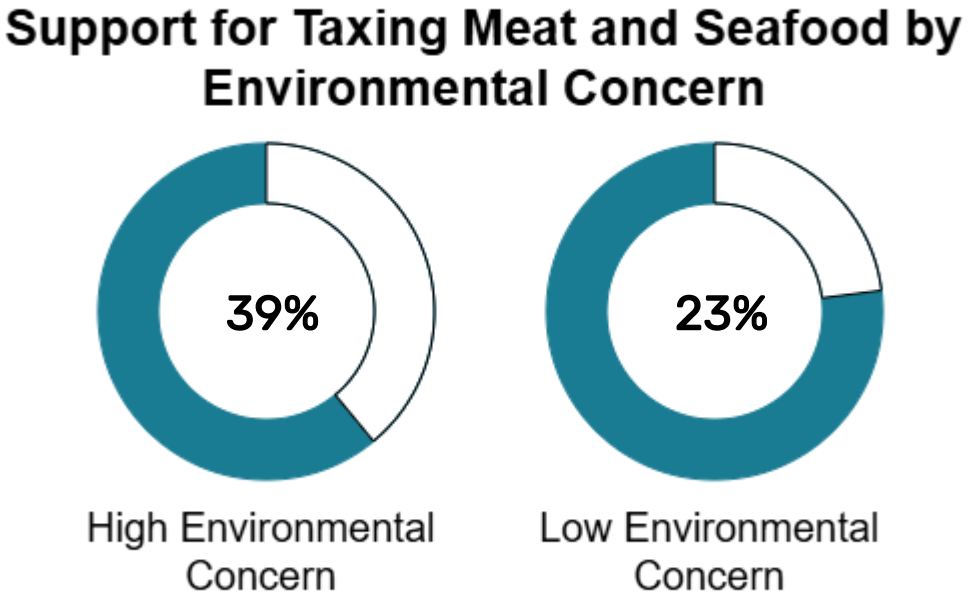
Statistics vs Anecdotes: Assessing the effect of evidence types on policy support

Amy Rodger, Greta Sanna, Vanessa Cheung, Nichola Raihani, & Dave Lagnado

Background

- Societal challenges need policies for behaviour change.
- **Lack of policy support** often hinders these policies.



- OECD. “How Green Is Household Behaviour?,” 2023. https://www.oecd-ilibrary.org/content/publication/2bbbb663-en.

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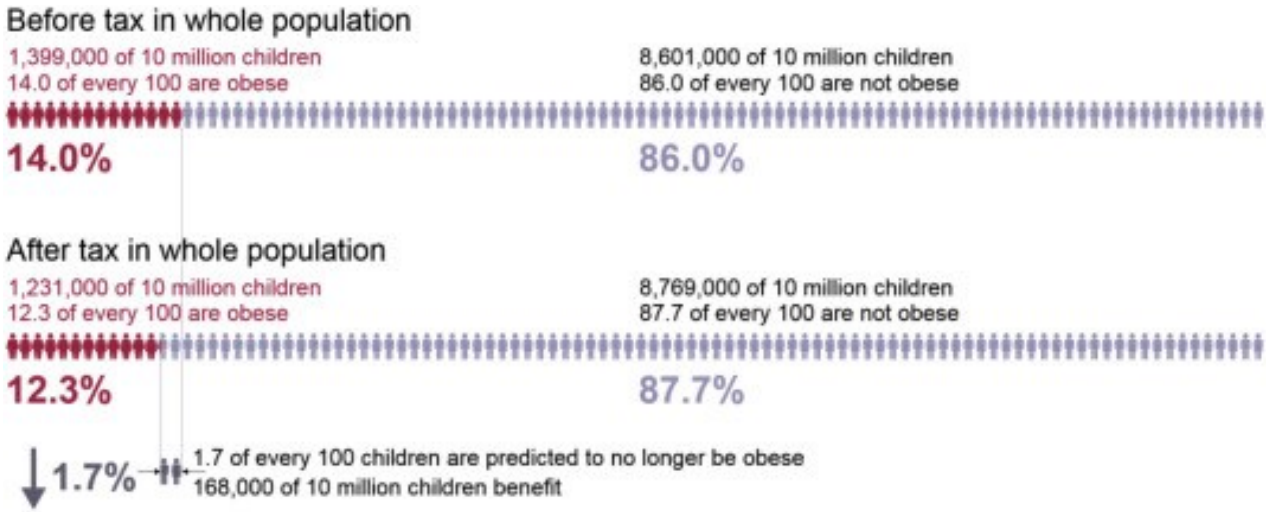
Background

- Communicating evidence on policy effectiveness may enhance policy support.



- Expand on present work by adding a combination of different types of evidence.

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- Reynolds, J. P., K. Stautz, M. Pilling, S. van der Linden, and T. M. Marteau. “Communicating the Effectiveness and Ineffectiveness of Government Policies and Their Impact on Public Support: A Systematic Review with Meta-Analysis.” Royal Society Open Science 7, no. 1 (January 15, 2020): 190522. https://doi.org/10.1098/rsos.190522

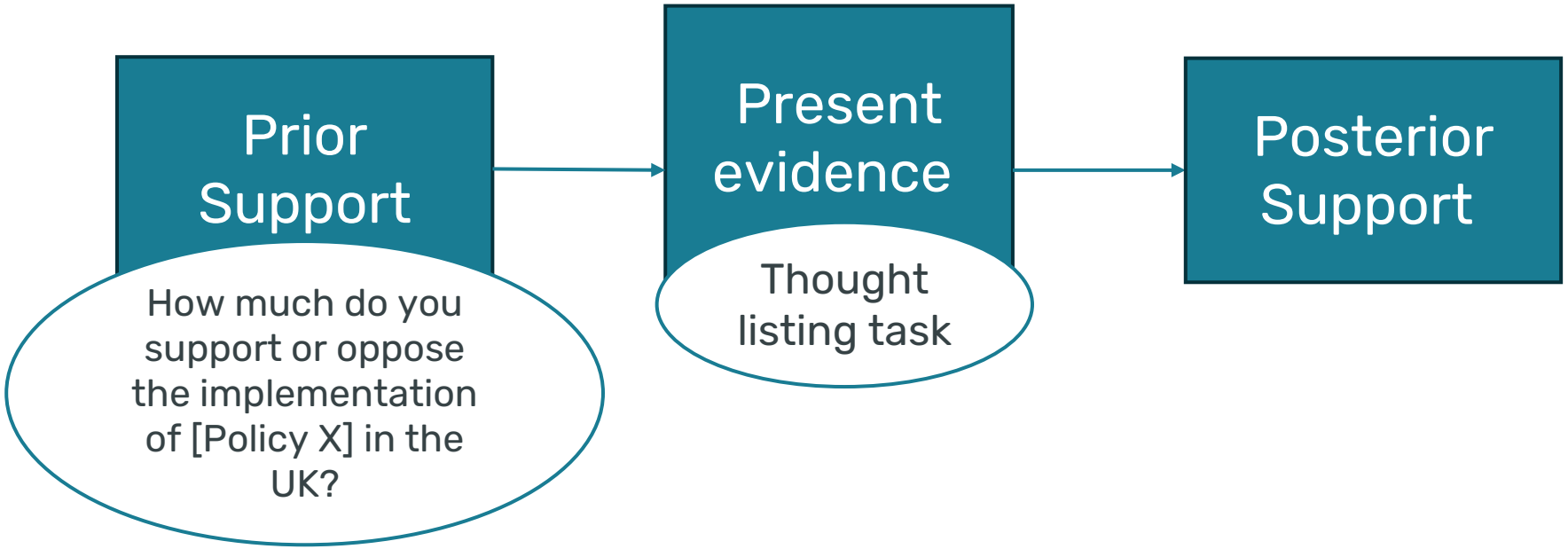
Research Questions

What effect does exposure to different types of evidence about policy effectiveness have on policy support?

How do people reason with different types of evidence about policy effectiveness?

Design

- 3 Experiments
- Representative samples: age, gender, political affiliation
- 7 Evidence conditions & 7 Policies



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Policies & Evidence Conditions

Policies

- Energy quotas
- Meat & seafood tax
- Ban e-cigarettes in public areas
- Restricting merchandising of discretionary foods
- Health warning labels on alcohol
- Reducing speed limits
- Scanning encrypted messages (Study 2 & 3)

Evidence conditions

- Statistic
- Anecdote for
- Anecdote against

Research shows this policy could significantly reduce collisions by 40% annually

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Policies & Evidence Conditions

Policies

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Evidence conditions

- Statistic
- Anecdote for
- Anecdote against

"Even without the police on every corner, I think most drivers will take it on board and slow down. It'll probably work because sensible folk will just get on with it."

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Policies & Evidence Conditions

Policies

- Energy quotas
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Evidence conditions

- Statistic
- Anecdote for
- Anecdote against

"If they lower the speed limit to 20 mph, I doubt it will work. Without police actually enforcing it, people will just ignore the new limit and drive as fast as they want"

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Policies & Evidence Conditions

Policies

- Energy quotas
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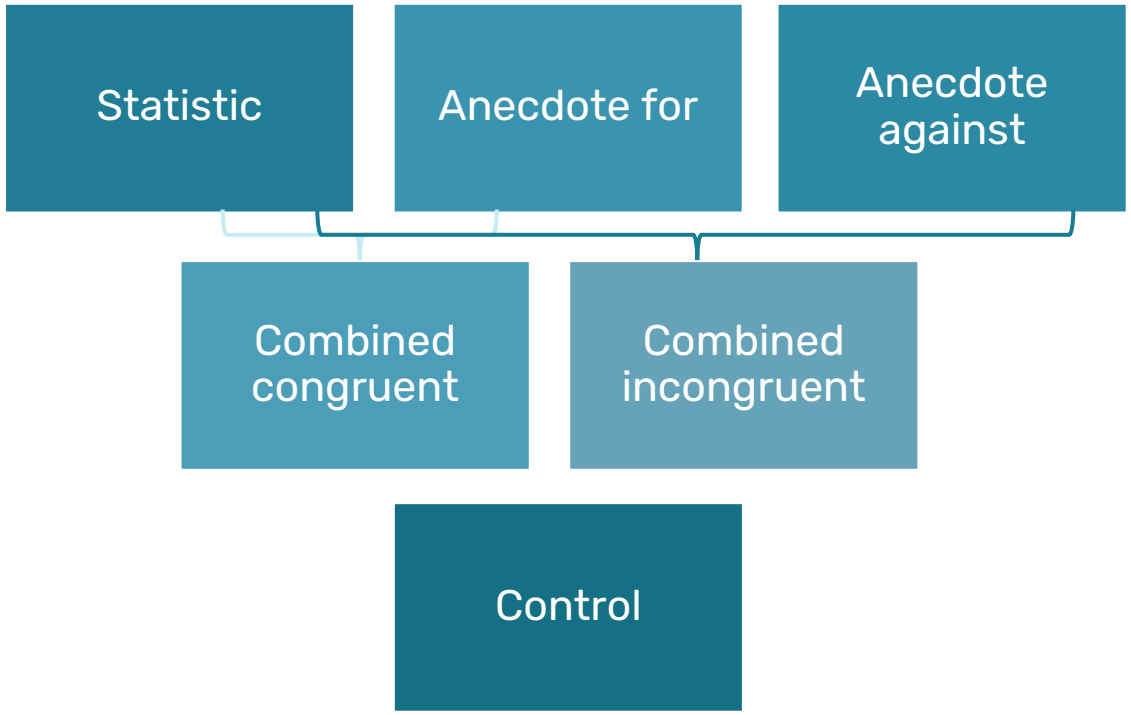

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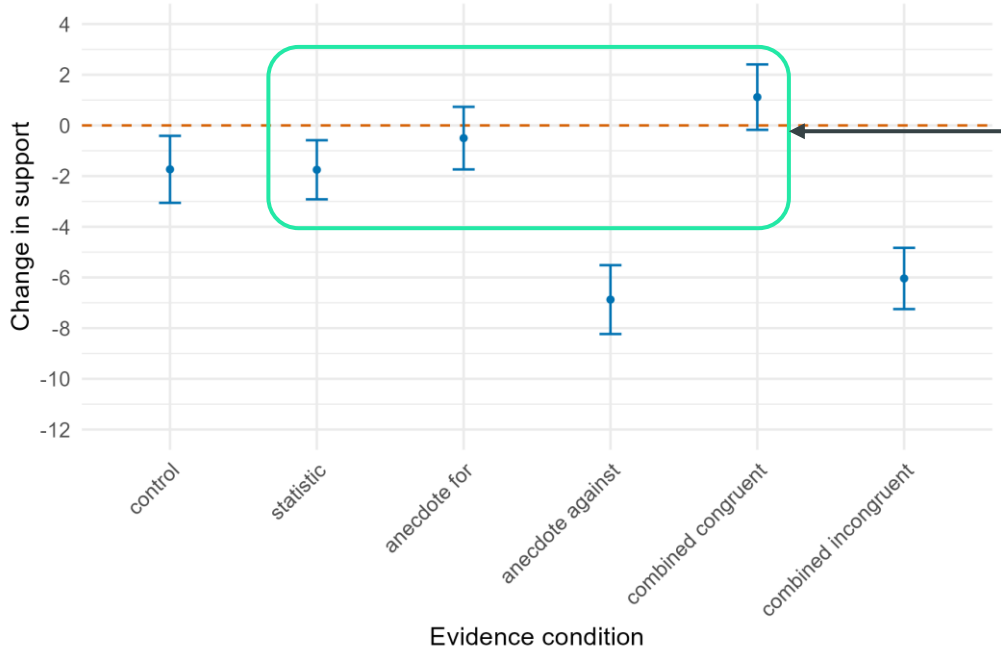
Change in Policy Support

MODEL: Change in support ~ Evidence Condition + (1|participant) + (1|policy)



Across all studies, evidence advocating for policy effectiveness did not significantly change policy support

Research shows this policy could significantly reduce collisions by 40% annually

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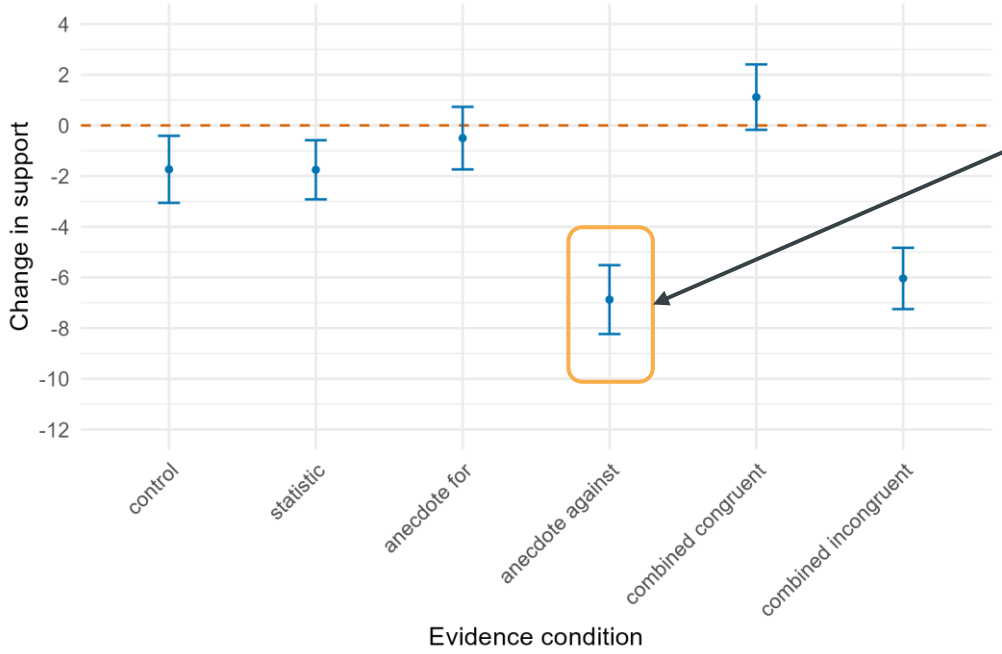
Change in Policy Support

MODEL: Change in support ~ Evidence Condition + (1|participant) + (1|policy)



Across all studies, policy support was **significantly lower** in the anecdote against condition (**5.1 - 7.3 points**)

"If they lower the speed limit to 20 mph, I doubt it will work. Without police actually enforcing it, people will just ignore the new limit and drive as fast as they want"

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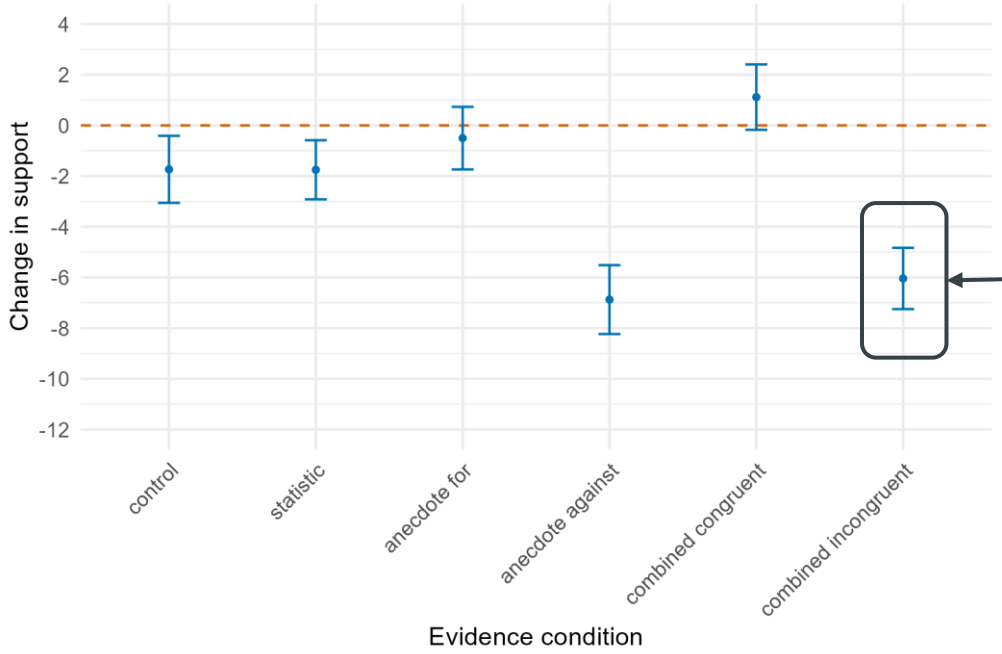
Change in Policy Support

MODEL: Change in support ~ Evidence Condition + (1|participant) + (1|policy)



Pairing the statistic and negative anecdote together had inconclusive results

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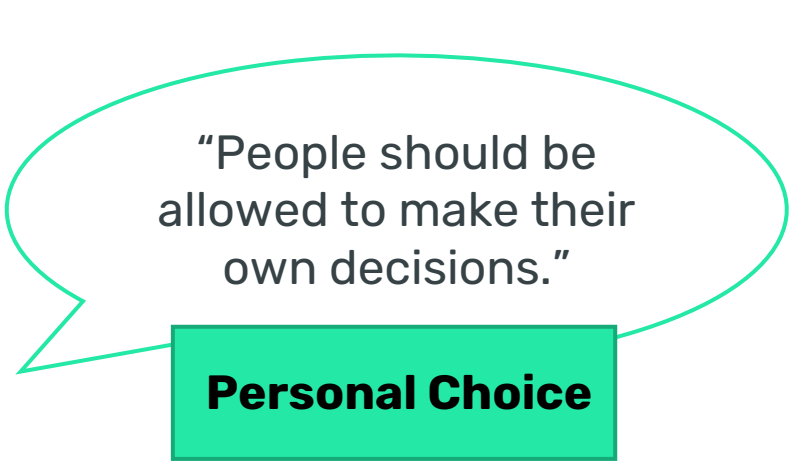
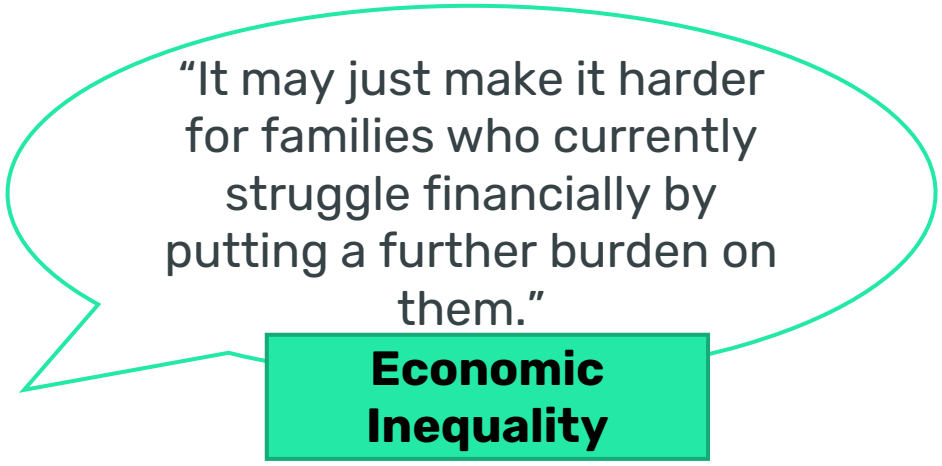
Thought Listing Results

- Participants mention a range of issues beyond policy effectiveness:



Policy: label on alcohol



Policy: Restricting merchandising of discretionary foods

- Public support was difficult to change for policies not universally accepted.
- Negative anecdotes decreased support, but pairing them with statistics may mitigate this effect.
- Reasoning about policies is influenced by factors beyond effectiveness.
- Policy communication interventions should address a broader range of issues than solely effectiveness.

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Find out more in our preprint

Amy Rodger, Greta Sanna, Vanessa Cheung, Nichola Raihani, & Dave Lagnado

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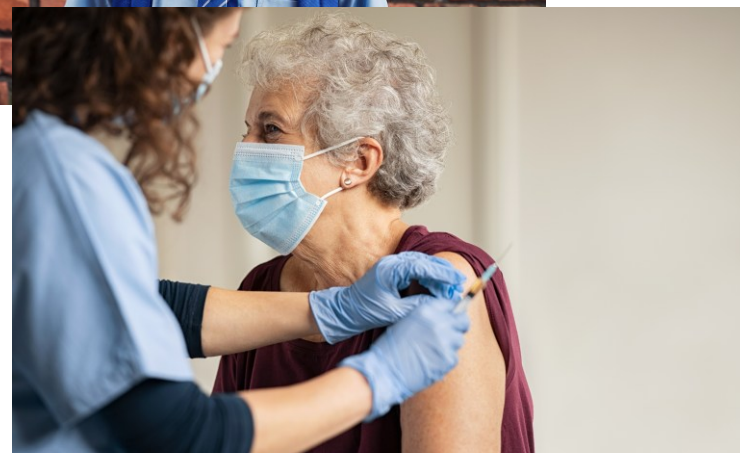
Translating behavioural science advice into policy during a public health emergency; a behavioural perspective

Lucy Porter, Lisa Zhang, Nia Coupe, Sharon Cox, Jo Davan Wetton, Lucie Byrne-Davis, Jo Hart, Amy Waghorne, Richard Amlot, Stephen Reicher & Susan Michie

Lucy.porter@ucl.ac.uk

Background

- COVID-19 crisis period 2020-2022
- Many policies relied on behaviour change (stay at home, face-masks, vaccinations)
- **Scientific Pandemic Insights group on Behaviours (SPI-B)** → independent scientific advice to UK government
- Concerns raised about use of this advice by government



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Overview of research questions and methods

- **What advice did SPI-B provide?** Thematic analysis of SPI-B advice reports and prioritisation exercise
- **Where did SPI-B advice go?** Documentary analysis of scientific advisory group meeting minutes
- **How was SPI-B advice communicated, engaged with and used?** Documentary analysis of UK COVID-19 Public Inquiry and interviews with advice generators, disseminators and users

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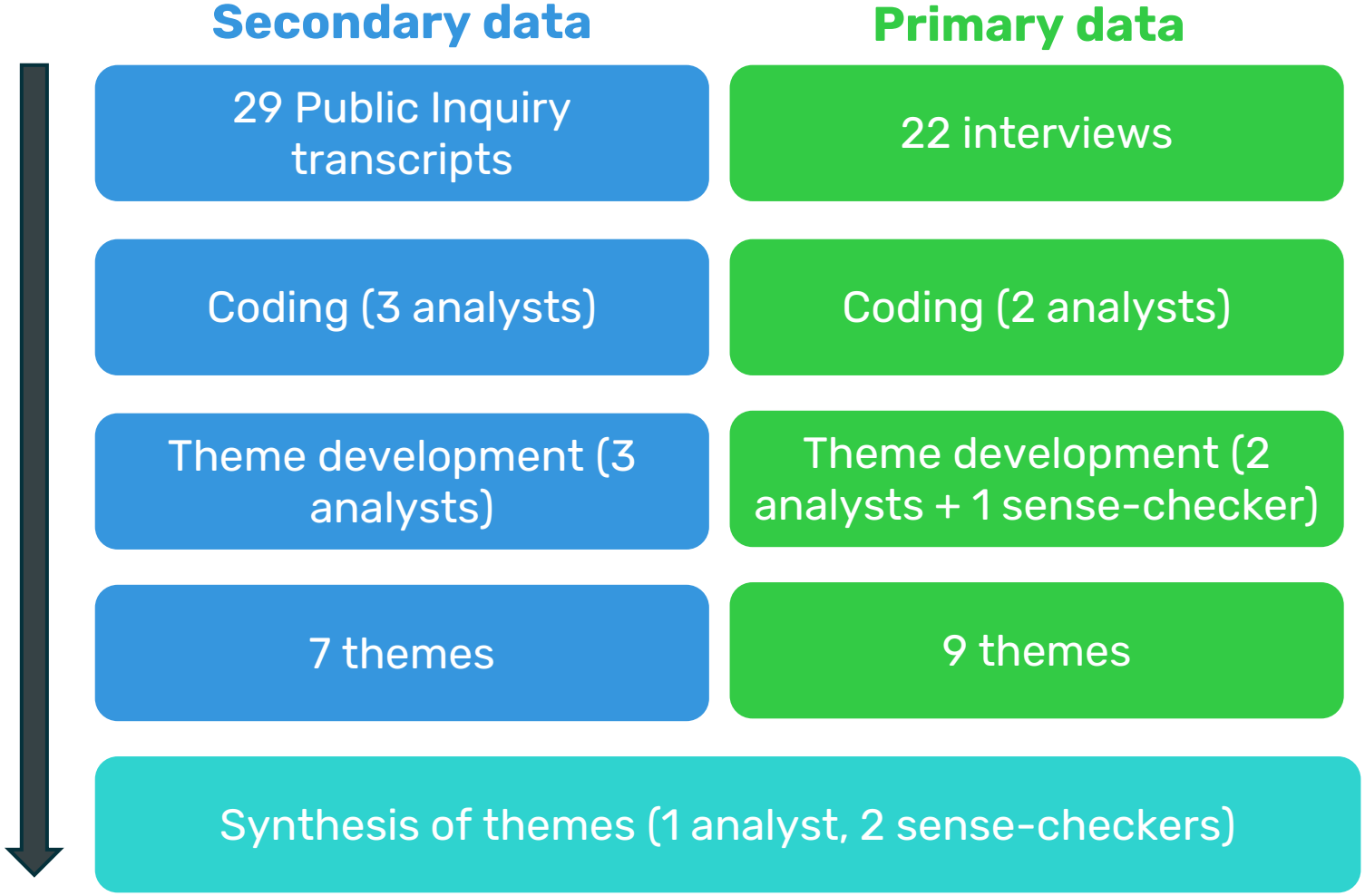
Procedure and Analysis



- Two separate thematic analyses
- 2^{ndary} = UK COVID-19 Public Inquiry transcripts (accountability in legal context)
- 1^{ary} = Interviews with SPI-B advisors and civil servants (research and anonymity)
- Synthesis of findings due to perceived similarity
- Collaborative thematic analysis due to volume of data

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Perceptions as to whether advice was used or not

YES

Really good, really productive relationships […] I struggled to know what, where my team ended and where their efforts started actually

Advice user, interview

NOT ENOUGH

We didn't consider it adequate and we continued to push throughout the pandemic for better financial support […] people didn't know that they could qualify for it, they couldn't access it quickly enough, and so on.

Lucy Yardley, SPI-B Co-Chair, Inquiry

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YES

Really good, really productive relationships […] I struggled to know what, where my team ended and where their efforts started actually

Advice user, interview

NO

I tried to understand how much the next phase of this kind of messaging can be more supported by SPI-B […] The messages in this instance are kept by a small group of agencies that have won their political campaigns and are now supporting this one too. My team was never consulted either and as soon as I heard the message I flagged our concerns which mirror those of the group – only to be told it was too late now

Email from Cabinet Office official, Inquiry

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Lucy Yardley, SPI-B Co-Chair, Inquiry

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Processes of advice generation and dissemination

- Formal and informal dissemination routes
- At times ad hoc; advice didn't always arrive where it needed to

> *I feel really bad because what I'm going to have to say is I didn't use anything from SPI-B at all. I don't think anything ever came across my desk, maybe occasionally. […] But I think it was more in the form of somebody sharing a snippet or something from a SPI-B meeting.* ***Advice user, interview***

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The eco-system of behavioural and social science advice

I would trust the judgement of the campaigners and the messaging people we used, which were some of the best in the world, if not in Western Europe, in terms of, you know, building the sort of messaging that we needed. ***Lee Cain, Director of Comms for No.10, Inquiry***

- Multiple advice providers ("feature not a bug")
- **But** seen as competition and conflict, rather than chance for synthesis

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Scientific culture and capability within government

- Variations in openness to scientific advice
- Low capability impacted commissioning and translating of advice

They said to me: the Cabinet Office is asking the wrong questions and misinterpreting the answers. And that was a problem both before the first wave and as we emerged out of the first wave. ***Dominic Cummings, Adviser to Prime Minister, Inquiry***

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Trust and collaborative working

That lack of trust was not helped by SPI-B members speaking out publicly on Twitter and all of these things. ***Advice user, interview***

I remember a number of points of SPI-B being undermined either in the media or by, you know, sections of the governing party. ***Advice user, interview***

- Working relationships and common goals hugely important for implementation (e.g., advisers and civil servants)
- Growing, mutual distrust between SPI-B and politicians

Behavioural science not prioritised

- Behavioural science not considered relevant or not on the radar
- Behavioural science as a whole not seen as reliable

Everybody's focus was on getting a number of tests delivered […] no one in the organisation was talking about trying to understand what people did when they got a test […] so that key end behaviour was on no one's agenda. ***Advice user, interview***

Behavioural science not prioritised

- Behavioural science not con
- Behavioural science as a wh

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Complexity, pace and pressure during a pandemic

And then people were constantly changing jobs during the pandemic so I mean, it's just a boring logistical issue, but it was an issue that had a real impact right, if you got moved from PHE email to a Cabinet Office email, how did you retain your contacts and distribution lists and stuff that you're on. ***Advice user, interview***

- Huge volume of work at incredibly high pace
- High turnover in roles, changes to systems and organisations

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Relevance and fit of SPI-B advice

We were dealing with policy leads that were dealing with red hot flaming torches […] some of the work was overly long, pretty impenetrable, extremely academic and didn't actually explain the core considerations in the shoes of the policy leaders, perhaps that it could have done […] Where it did almost stray into telling us what to do, it was always the stuff that politically we couldn't do. ***Advice user, interview***

- SPI-B advice didn't fit with political approach of decision-makers
- SPI-B advice not specific enough – no policy examples

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- SPI-B advice didn't fit with political approach of decision-makers
- SPI-B advice not specific enough – no policy examples

However

"…we did have policy examples but we were asked by [Senior Adviser] to take those out because he thought that's straying into the policy world. Whereas my experience of working with policy makers, they want to have concrete examples of generic scientific principles."

SPI-B adviser, interview

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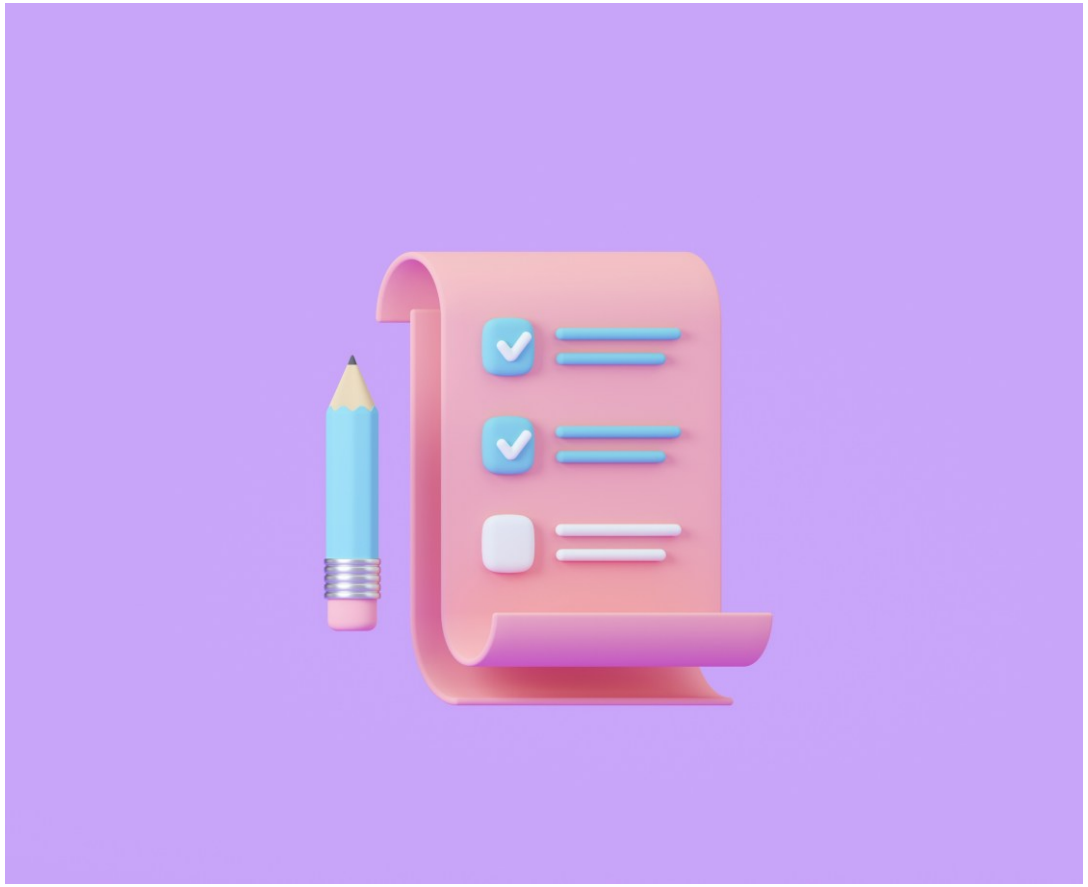
Next steps – developing recommendations

- Extracted recommendations from transcripts
- Recommendations span the entire pipeline, from scientific advisers to advice users
- 3 x sense-checking workshops held with stakeholders
- Revisions of final list underway…
- This stage led by Lisa Zhang (RA and PhD student)



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