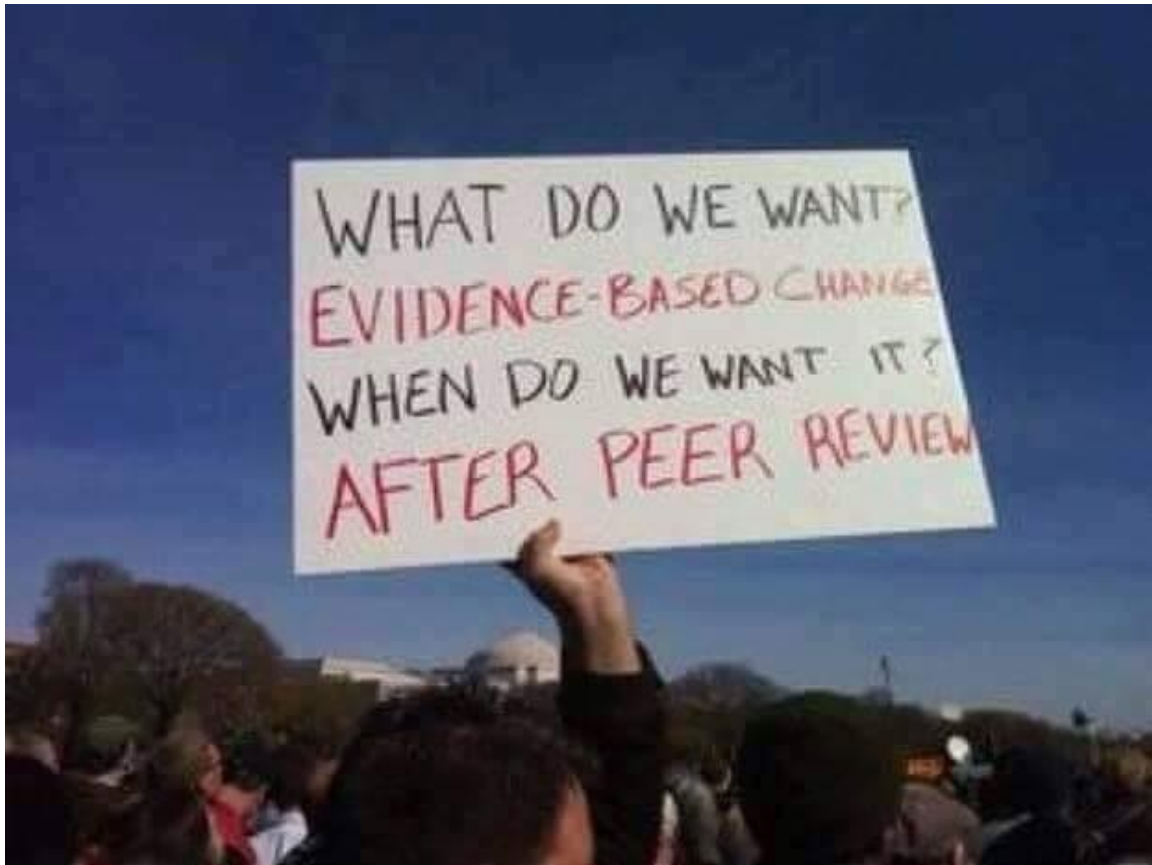# Making evidence credible for public health policy

Kathryn Oliver
@oliver_kathryn
Kathryn.Oliver@lshtm.ac.uk

LONDON
SCHOOL *of*
HYGIENE
&TROPICAL
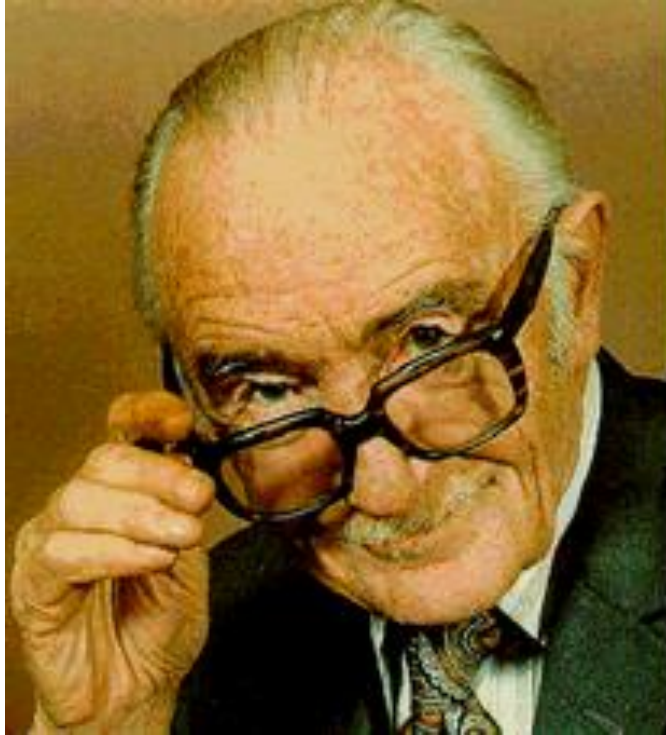MEDICINE

Why are we here?

To change society

To influence policy and practice

… often taken to mean…

To increase evidence use / uptake / impact / knowledge mobilisation / K* / etc.

Evidence-based policymaking: a brief history

- Evidence production became institutionalised

- Knowledge forms became codified

- Systematic reviews most credible

Oliver & Pearce. Three lessons from evidence-based medicine and policy: increase transparency, balance inputs and understand power." *Palgrave Communications* (2017

https://thescienceofnutrition.wordpress.com/2012/06/16/

- Researchers successfully argued that evidence should inform policy
- EBP as an analogue of EBM, often via reviews facilities
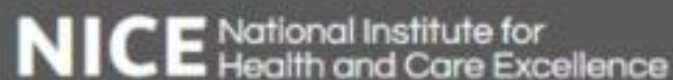
But – it's hard! Why?

- Lots of answers – few useful ones

- Hard to evidence?

- Policymakers not good at it?

- Systemic issues?

Top 5 barriers

- Lack of availability and/or access to research
- Unclear, irrelevant, unreliable research findings
- No opportunity, poor timing
- Low policymaker research skills
- Cost

Top 5 facilitators

- Improved access and dissemination
- Collaboration between researchers and policymakers
- Clear, relevant research
- Good relationships with policymakers
- Good relationships with researchers

Oliver 2014 a/b

A heavily compromised evidence base

- Mainly surveys asking (academics) about perceptions, attitudes and opinions

- Few studies gathered empirical data about the ways in which evidence was used in the field

- Little data on the effect of evidence-use

- Often no distinction between implementation and evidence-use

Monitoring and evaluating policies (18)

Prioritising problems (3)

Implementing policies

Clarifying problems (4)

Reviewing and commenting on draft policies (16)

Identifying policy options and relevant evidence (5)

Reviewing and commenting on identified policy options and implementation strategies (13)

Identifying barriers to implementing those options and strategies to address those (6)
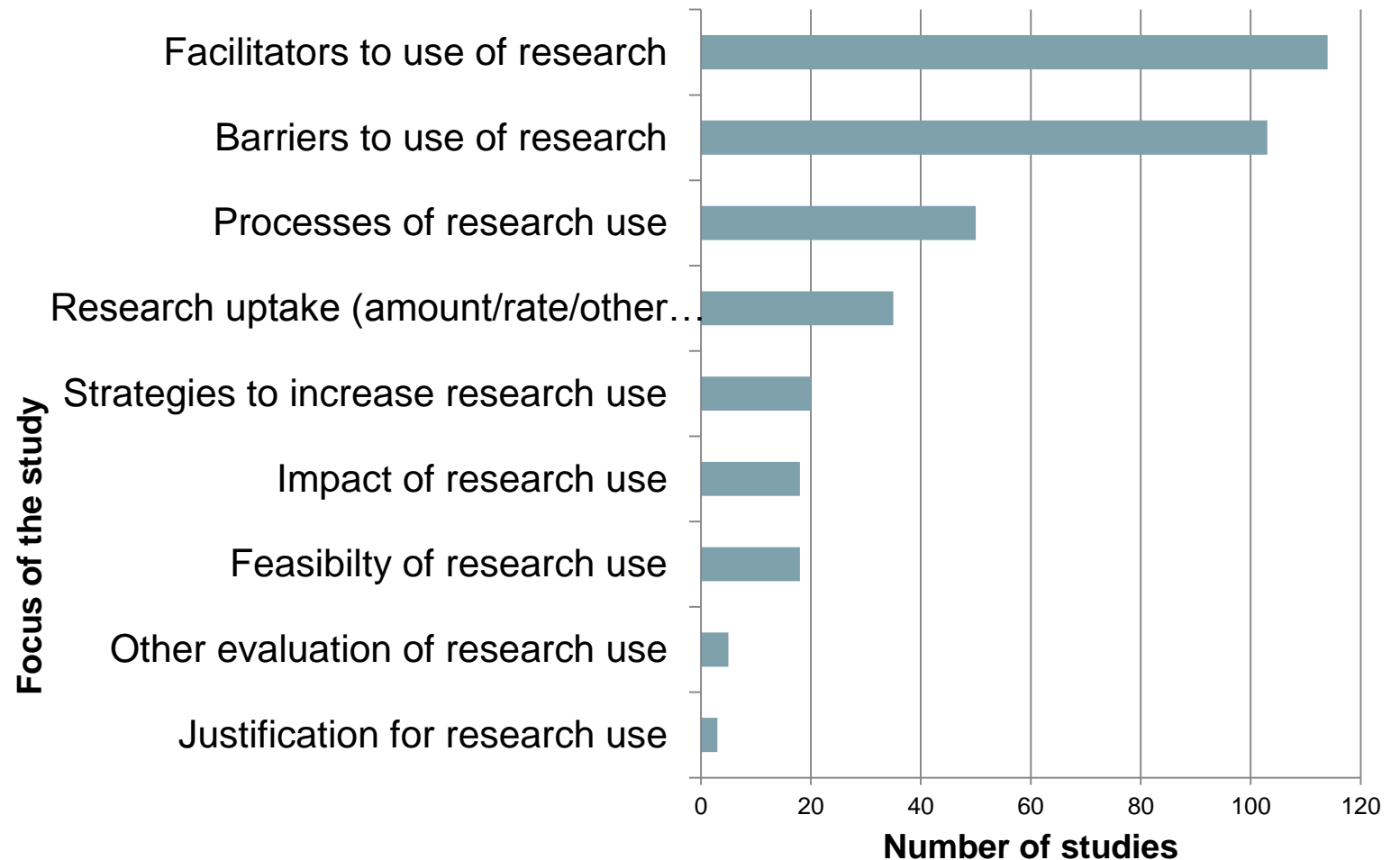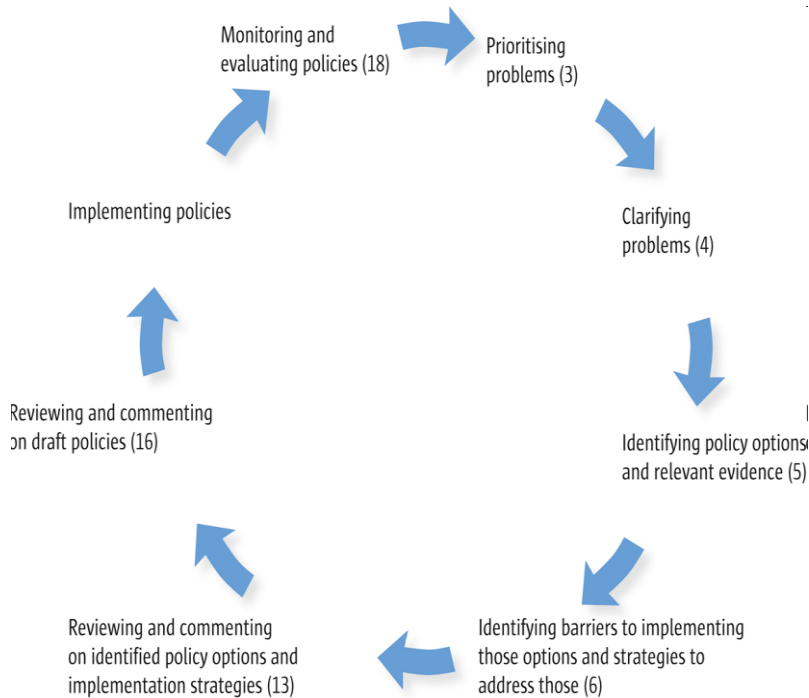
Oxman et al. Health Research Policy and Systems 2009 7(Suppl 1):S15

research knowledge brokering

Armitage 2019

So What if Academia is Slow?
- Nature abhors a vacuum and people end up relying on common sense approaches, which are subject to:
  — Third person effect
  — Fundamental attribution error ("I know my patients")
- What quality and quantity of evidence is *sufficient* to enable academic behavioural scientists to give advice on complex interventions (Armitage, 2015)?

"…the enduring irony of the *lack* **of evidence** and the *lack of application* of evidence about how to do evidence-informed policy or practice…" (Davies 2018)

Mashable.com

Elephants… apparently

The public health effect of economic crises and alternative policy responses in Europe: an empirical analysis

David Stuckler, Sanjay Basu, Marc Suhrcke, Adam Coutts, Martin McKee
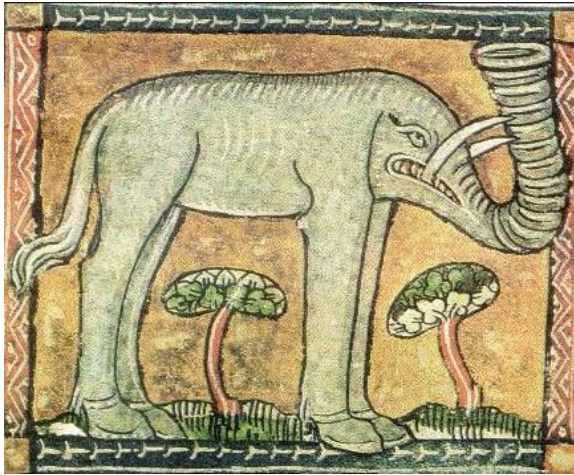
Summary

Background There is widespread concern that the present economic crisis, particularly its effect on unemployment, will adversely affect population health. We investigated how economic changes have affected mortality rates over the past three decades and identified how governments might reduce adverse effects.

Methods We used multivariate regression, correcting for population ageing, past mortality and employment trends, and country-specific differences in health-care infrastructure, to examine associations between changes in employment and mortality, and how associations were modified by different types of government expenditure for 26 European Union (EU) countries between 1970 and 2007.

Findings We noted that every 1% increase in unemployment was associated with a 0·79% rise in suicides at ages younger than 65 years (95% CI 0·16–1·42; 60–550 potential excess deaths [mean 310] EU-wide), although the effect size was non-significant at all ages (0·49%, –0·04 to 1·02), and with a 0·79% rise in homicides (95% CI 0·06–1·52; 3–80 potential excess deaths [mean 40] EU-wide). By contrast, road-traffic deaths decreased by 1·39% (0·64–2·14; 290–980 potential fewer deaths [mean 630] EU-wide). A more than 3% increase in unemployment had a greater effect on suicides at ages younger than 65 years (4·45%, 95% CI 0·65–8·24; 250–3220 potential excess deaths [mean 1740] EU-wide) and deaths from alcohol abuse (28·0%, 12·30–43·70; 1550–5490 potential excess deaths [mean 3500] EU-wide). We noted no consistent evidence across the EU that all-cause mortality rates increased when unemployment rose, although populations varied substantially in how sensitive mortality was to economic crises, depending partly on differences in social protection. Every US$10 per person increased investment in active labour market programmes reduced the effect of unemployment on suicides by 0·038% (95% CI –0·004 to –0·071).

Interpretation Rises in unemployment are associated with significant short-term increases in premature deaths from intentional violence, while reducing traffic fatalities. Active labour market programmes that keep and reintegrate workers in jobs could mitigate some adverse health effects of economic downturns.

1. Policymakers are poorly served by evidence producers

2. They consume a more heterogenous diet than we think

3. We do not help them to decide what to do in the absence of an RCT, here played by Marilyn Monroe

4. Allows policymakers to misuse evidence by

   – Attaching 'RCT' / evidence synthesis to a policy to legitimise a position or depoliticise

   – Cherry-pick

   – Use legitimate concerns about methods or generalisability to undermine and dismiss

1. Policy does not happen in linear clear stages

2. Policy makers are often not making choices between clear alternatives...

3. And if they are, evidence usually doesn't help them with this choice

4. Can use emotional short cuts, psychological cues, anecdotes to be persuasive

5. Recognising that policy making is a complex business
   – multiple levels, with multiple institutions, networks, ideas, conditions and events which all influence policy processes

visualnext.com

Cairney and Kwiatkowski 2017, Oliver and Cairney 2019

1. The production of knowledge is a social process

2. What scientific knowledge is taken to mean is influenced by social dynamics, interactions, cultural contexts, settings, etc.

3. Power is just as important in scientific research as in any other domain of human activity

Image copyright: ForFarmers UK.
Intellectual copyright: Wynne 1992

'Science is not politics. It is politics by other means'
Latour, 1988: 229

A new approach to the problem
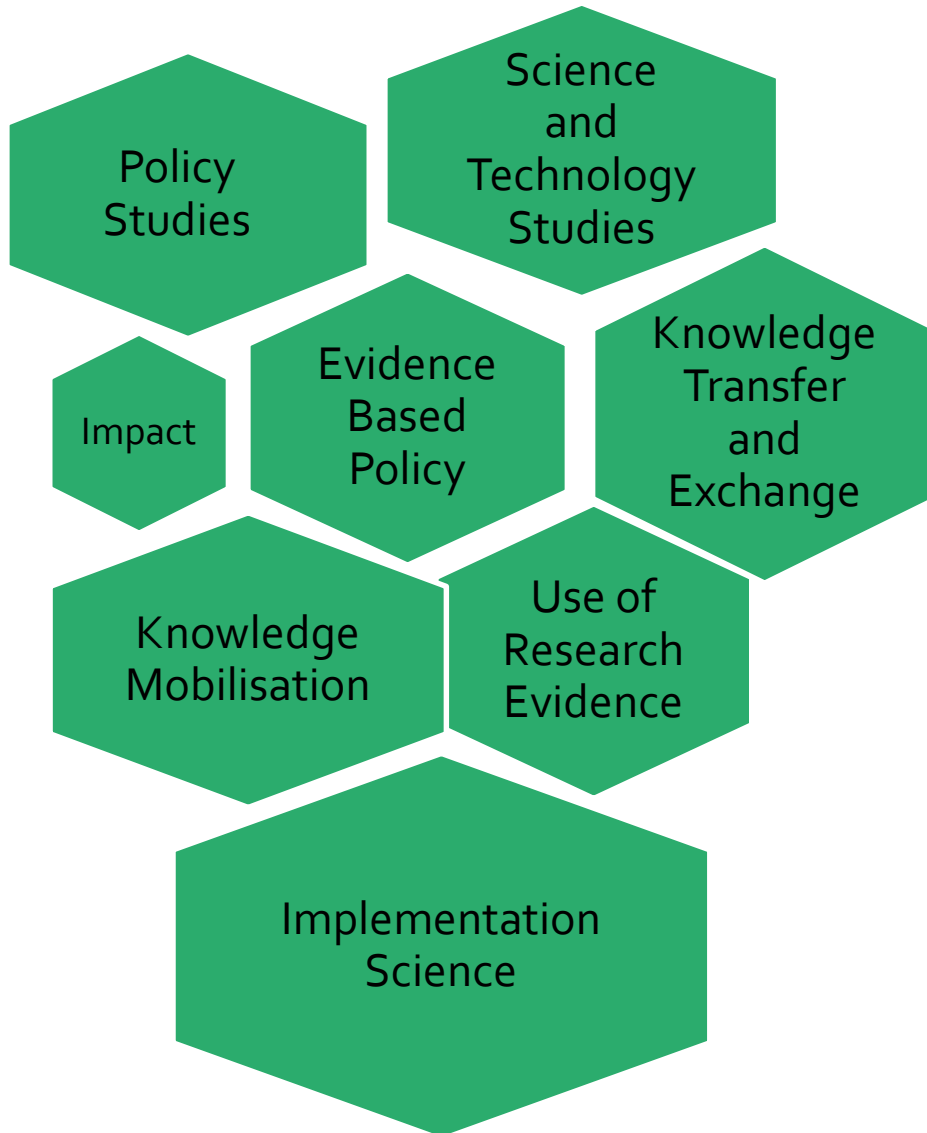
Policy Studies

Science and Technology Studies

Impact

Evidence Based Policy

Knowledge Transfer and Exchange

Knowledge Mobilisation

Use of Research Evidence

Implementation Science

The problem is not one of supply / demand or willingness

Relationship between evidence and policy / practice is not linear, not transactional

What does the problem look like?

What do answers look like?

(See Transforming Evidence for more....
https://transformure.wordpress.com)

Theory of communication

A piece of evidence

Audience

Utterance:

Speaker has an intention to share a meaning

Comprehension:

A cat sat on the mat

COMMUNICATION

A cat sat on the mat!

Interpretation(s):

- Is this person trying to show off their knowledge of nursery rhymes?
- This person is a bit obsessed with cats
- Cats sit on mats

Theory of communication

COMMUNICATION

only occurs when utterance is comprehended and interpreted as speaker intends
In other words, it's a collaborative process (Grice 1972)

A piece of evidence → Audience

Speaker has an intention to share a meaning

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Theory of communication

A body of evidence

COMMUNICATION

A piece of evidence

COMMUNICATION

Speaker has an intention to share a meaning

Audience

Comprehension: ???

Interpretation(s):

???????????????

Pope Francis ✔
@Pontifex

In order to pray well, we need to have the heart of a child.

12:30 · 01/03/2019 · TweetDeck

4,829 Retweets **22.7K** Likes

Theory of communication

A body of evidence

A piece of evidence

COMMUNICATION

COMMUNICATION

Speaker has an intention to share a meaning

Audience
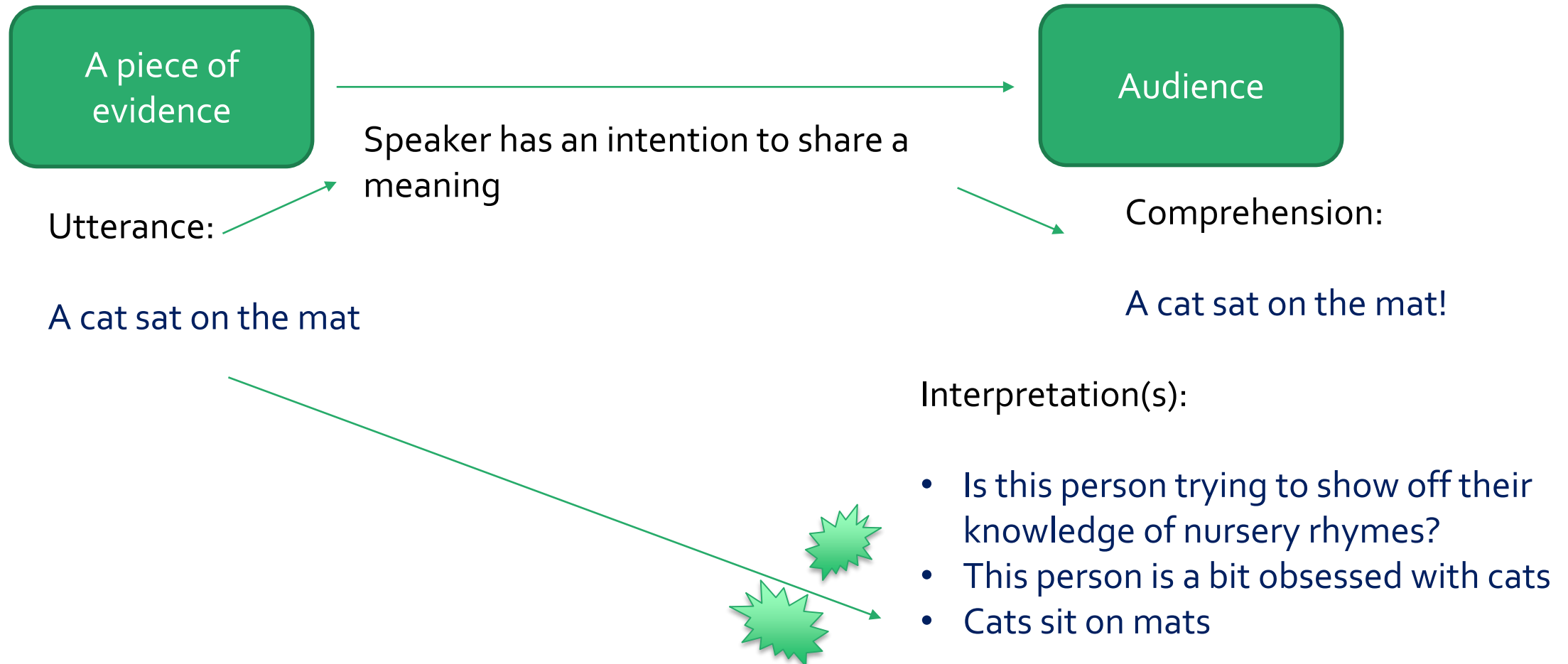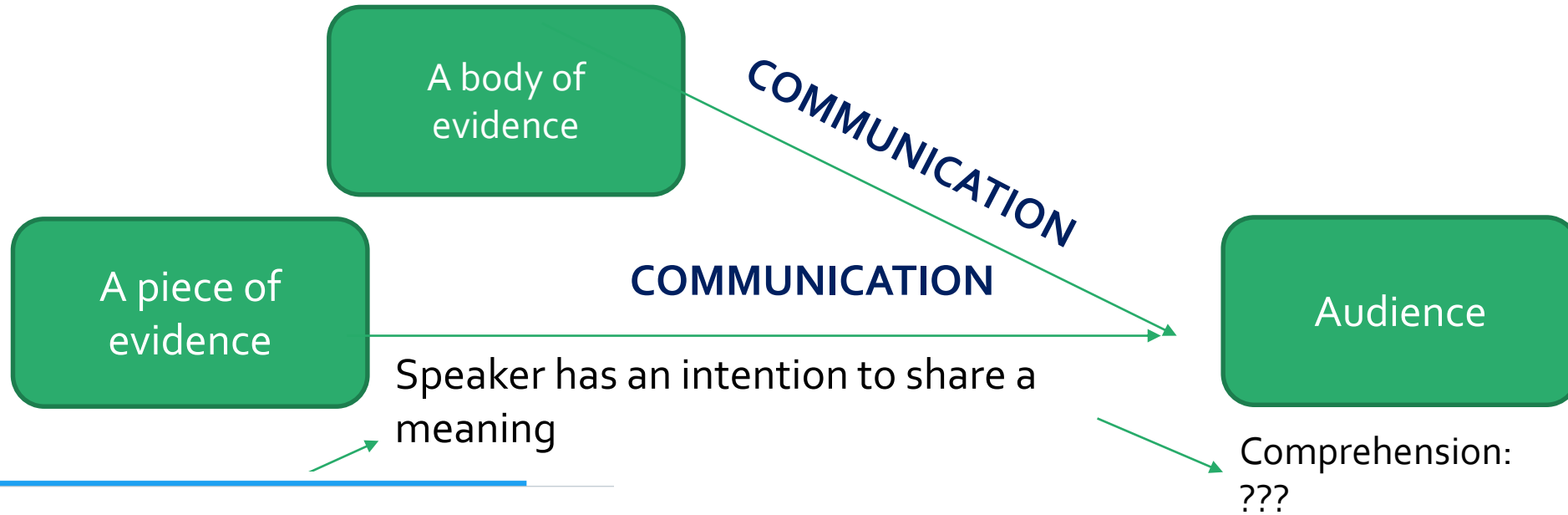
COMMUNICATION

only occurs when utterance is comprehended and interpreted as speaker intends
In other words, it's a collaborative process (Grice 1972)

How can I, as a speaker, make sure that my meaning has been comprehended?

How is the audience interpreting this?

What actions do they think they should be taking?

Do I (the speaker) agree?

A different set of questions

A body of evidence

COMMUNICATION

A piece of evidence

COMMUNICATION

Audience

Speaker has an intention to share a meaning
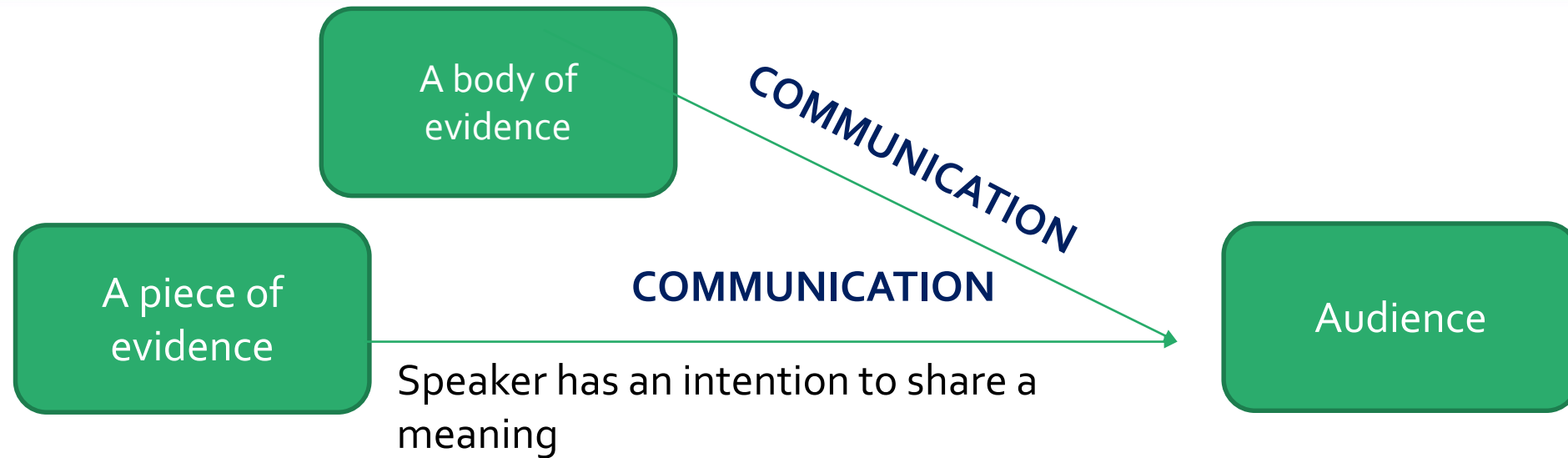
Criteria which we (academics) think makes evidence more or less weighty:

Robustness
Rigour
Systematic, exhaustiveness

What is going on here? Completely different criteria

Persuasiveness
Credibility
Reasonableness
Agreement
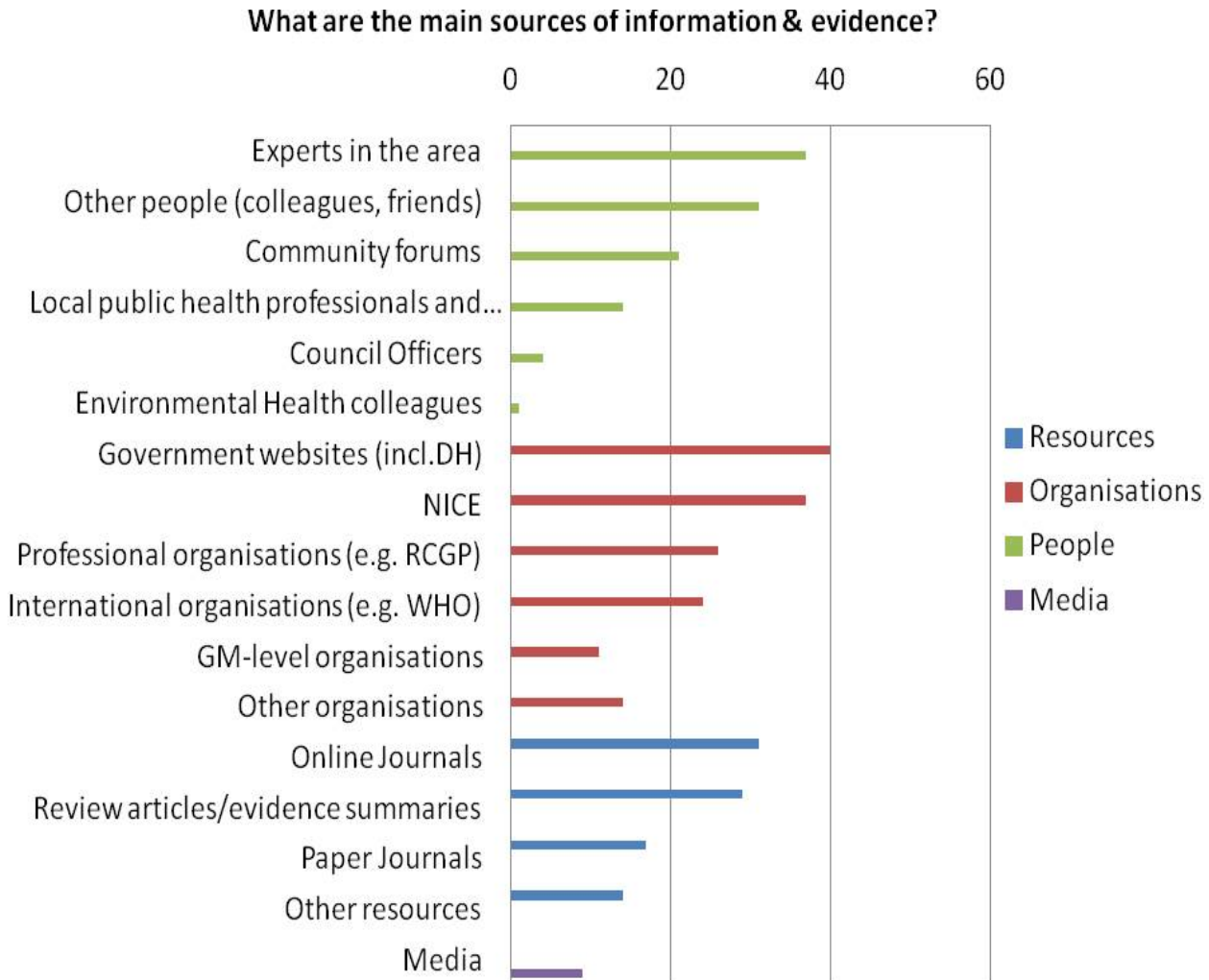Authority

And therefore different questions, e.g.
What is grounds for action?
What makes evidence credible?

What is credibility?

- Perceived characteristic of media, source, evidence itself
- Connected with concepts like legitimacy, salience, quality and validity
- Said to be a key factor in how to be persuasive
- Short-cut / heuristic to assessing or grading appropriateness of evidence
- Lens into understanding decision-making: if we know what is credible to decision-makers, we can learn:

  - how to make our evidence seem credible

  - How to influence policy more successfully

But we currently do not have a good picture of what makes evidence credible

What counts as evidence?

What are the main sources of information & evidence?
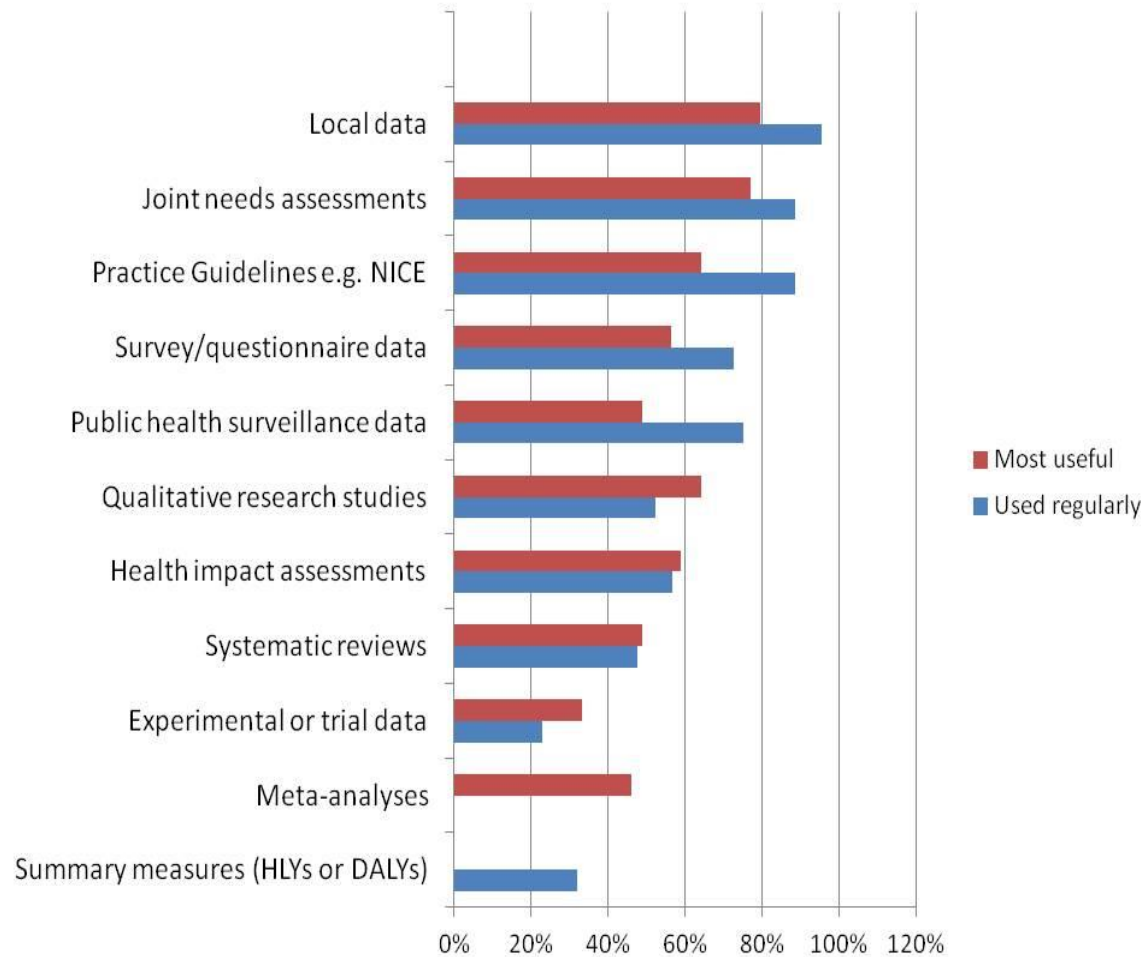
What kinds of evidence are used?

Types of knowledge

Formal

Personal ← → Institutional

Informal

Expert advice (clinical experts, expert witness, ~~Science advice~~)

Institutional guidelines/ statements

Academic/peer-reviewed

Tacit knowledge (Old boys networks)

Stakeholder expertise

Experiential (lay and professional)
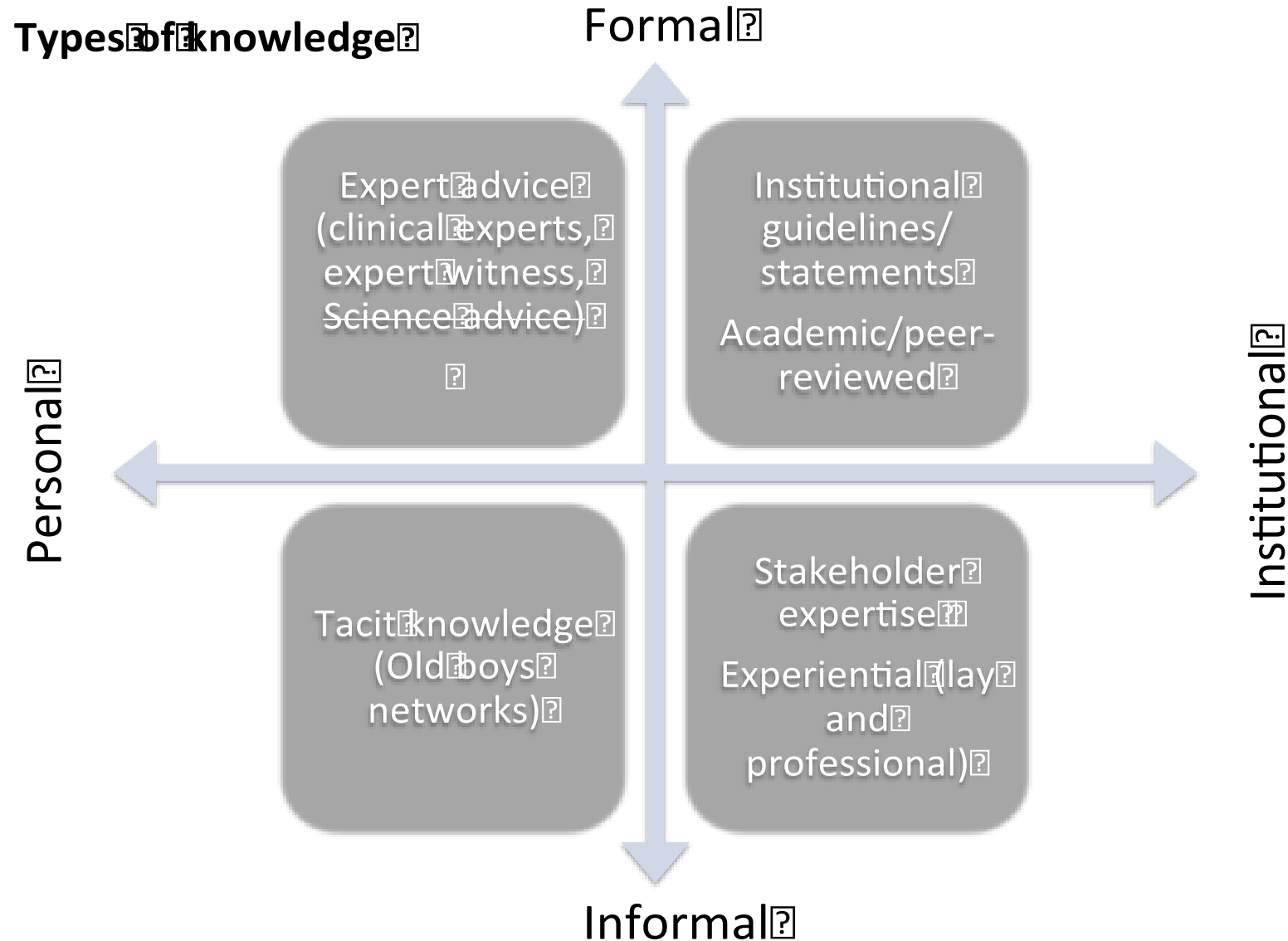
What makes these credible?

What confers credibility?

Formal

Personal

Institutional

Informal

EXPERTISE

Membership of professional body

TECHNOCRATIC

Institutional reputation

Procedure (scientific method etc)

LEADERSHIP

Charisma/personality

Experience/personal history

Personal connections

DEMOCRATIC

Membership of informal population & formal process to collect knowledge
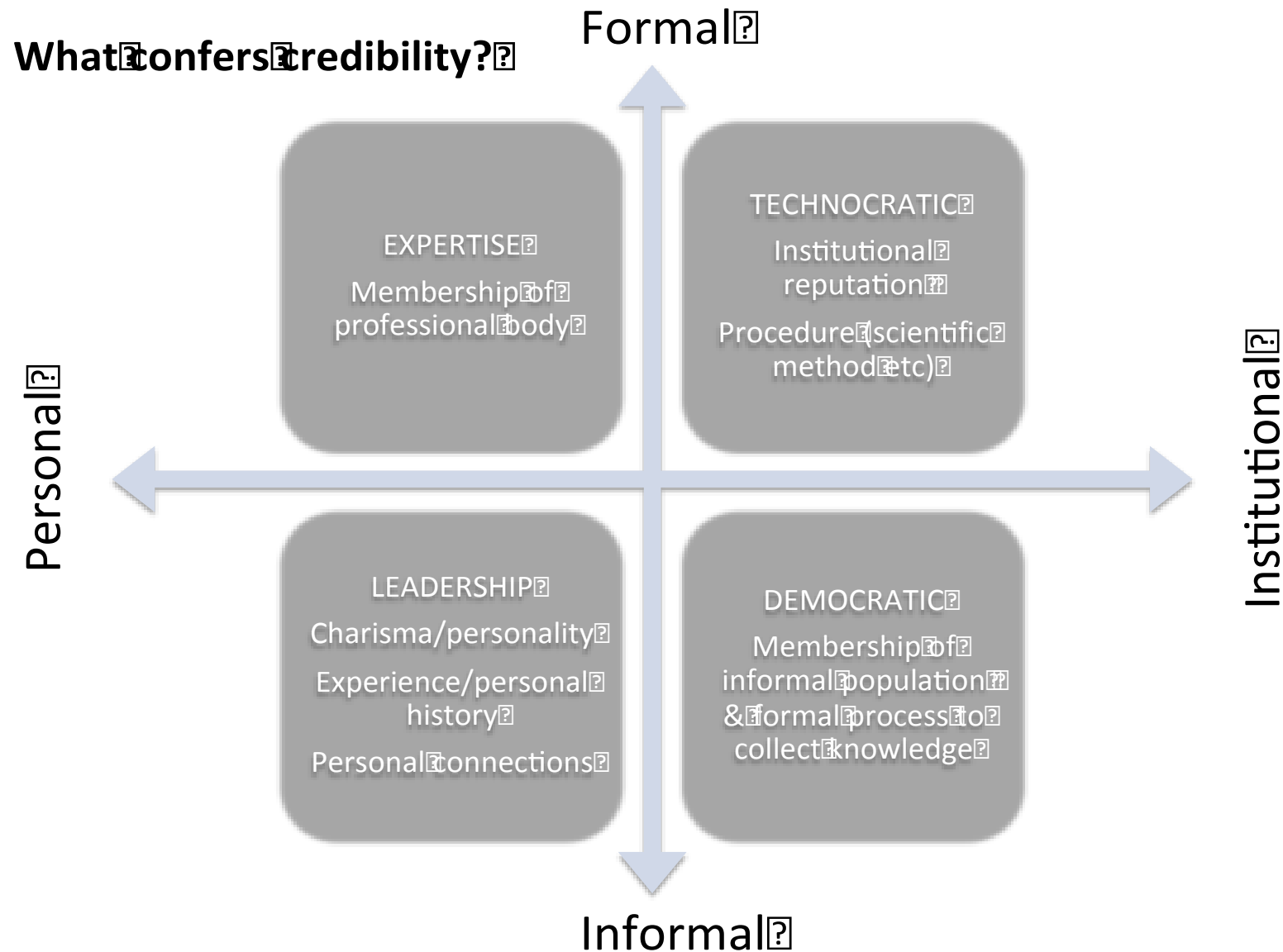
What makes evidence credible?

It was my first director post as well, so I was new to it, and I think coming from a public health background in my previous post, I was used to having power through being an expert. *Director of Public Health*
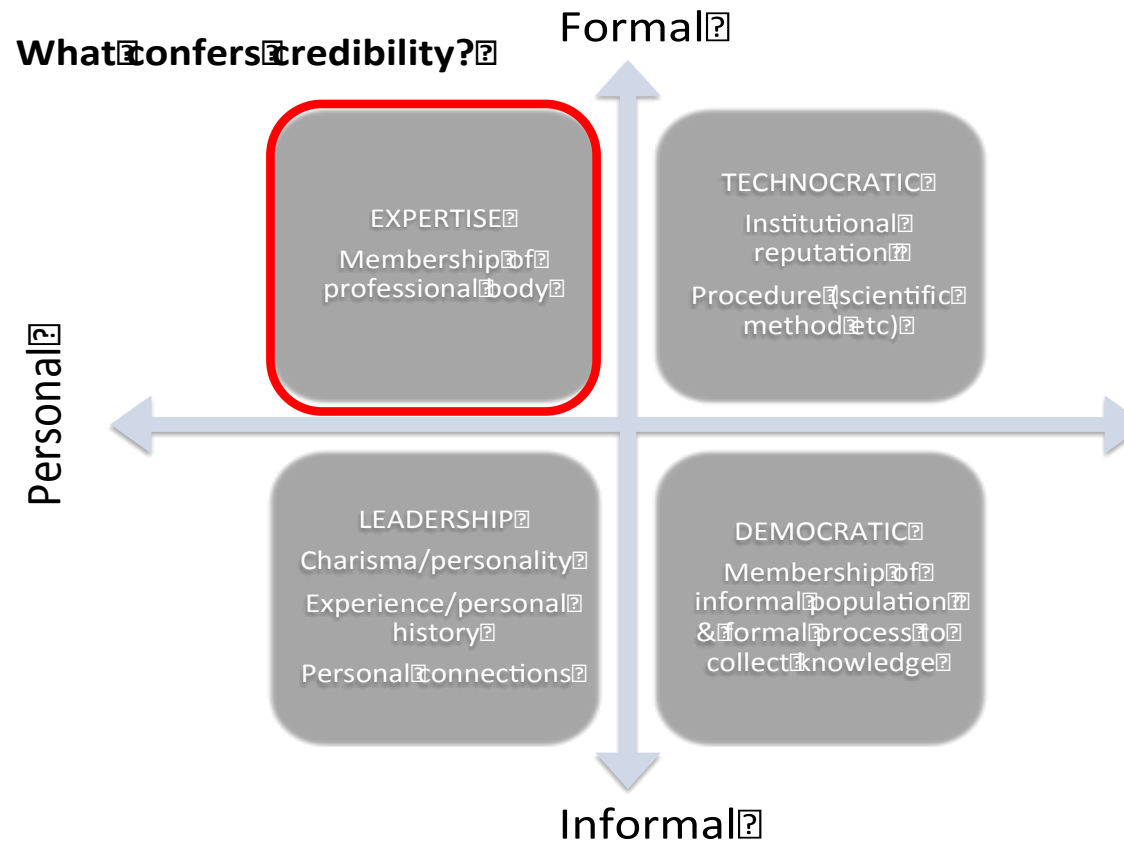
I think it's me as a person, cause it is known, I think It's that Professor title.
(*Professor*)

What confers credibility?

Formal

EXPERTISE
Membership of professional body

TECHNOCRATIC
Institutional reputation
Procedure (scientific method etc)

Personal

Institutional

LEADERSHIP
Charisma/personality
Experience/personal history
Personal connections

DEMOCRATIC
Membership of informal population & formal process to collect knowledge

Informal

Membership of professions or organisations

Qualifications

Professional background

No quality assessment, accountable through being in public realm

What confers credibility?

Having been through a recognised process

Attached to a organisation with kudos

Quality ('rigour', 'validity') appraised via process (peer review

Formal

Personal

Institutional

Informal

EXPERTISE
Membership of professional body

TECHNOCRATIC
Institutional reputation
Procedure (scientific method etc)

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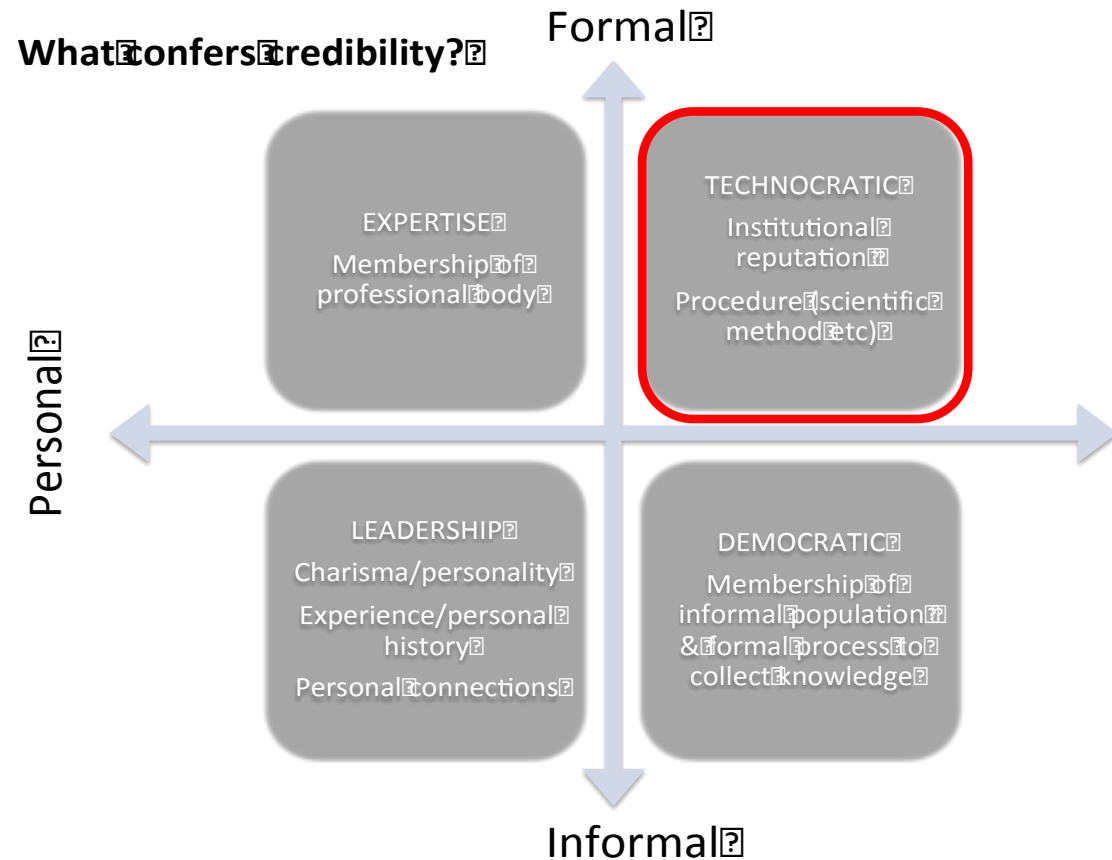
I think academics have a really important role to play in terms of making sure we produce good quality evidence, that we are pushing boundaries and that we are using the best methodologies and are being robust. *DfT director*
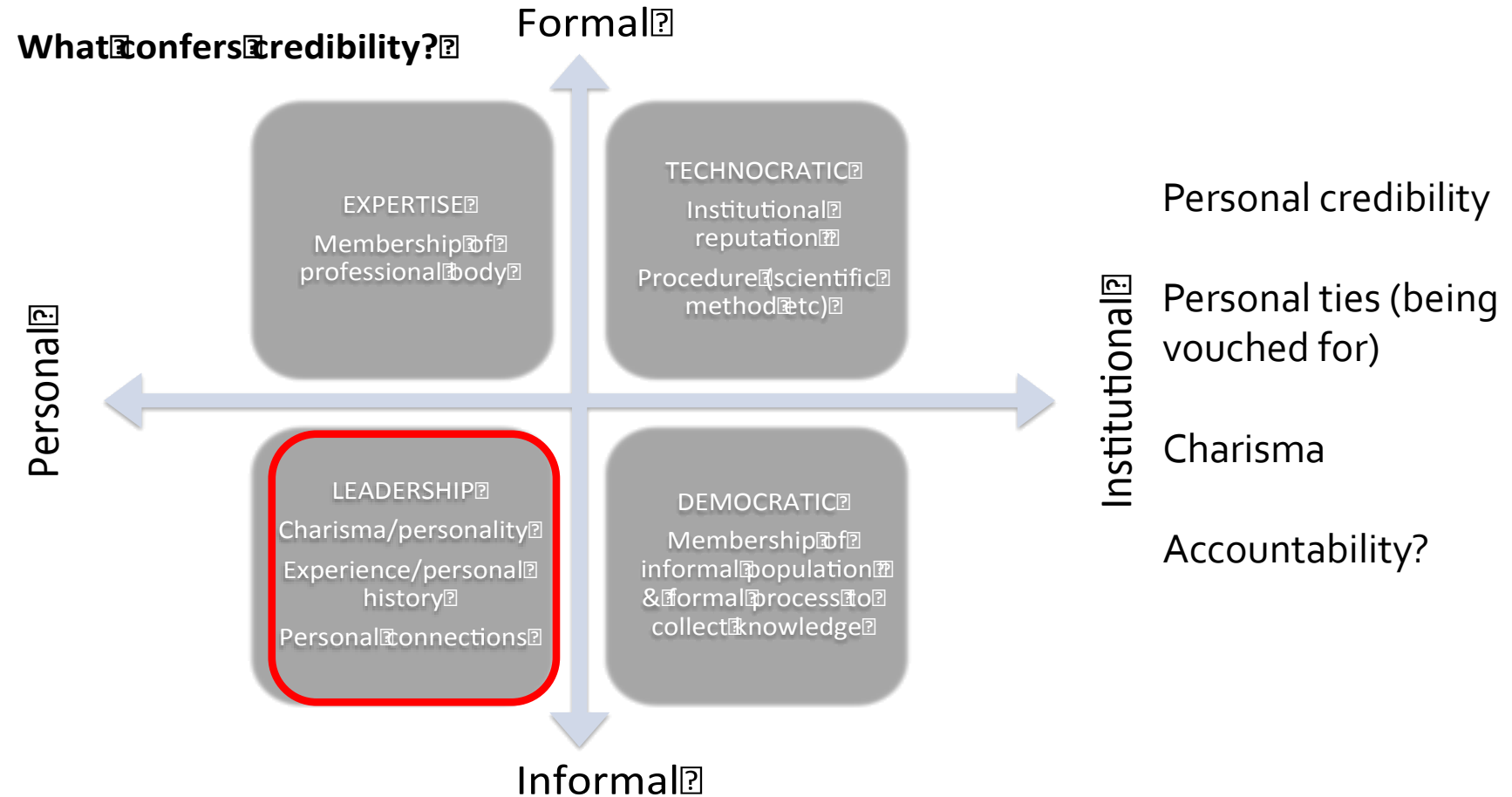
I think the UCL brand says something about the quality of the offering. The fact that the CEO, [Joe Bloggs], he is a [Ologist], he is a professor of [Ology] at UCL, he is also a national figure. That is very important for us in terms of thought leadership as well. (*Chairman of UCL spinout company)a*

A different approach: what makes evidence credible?

Sometimes it's about charisma, but they get that from their role and their experiences ...There's all sorts of things like about the way people dress and how they look I suppose effects how they come across in those sorts of situations. *Council Officer*
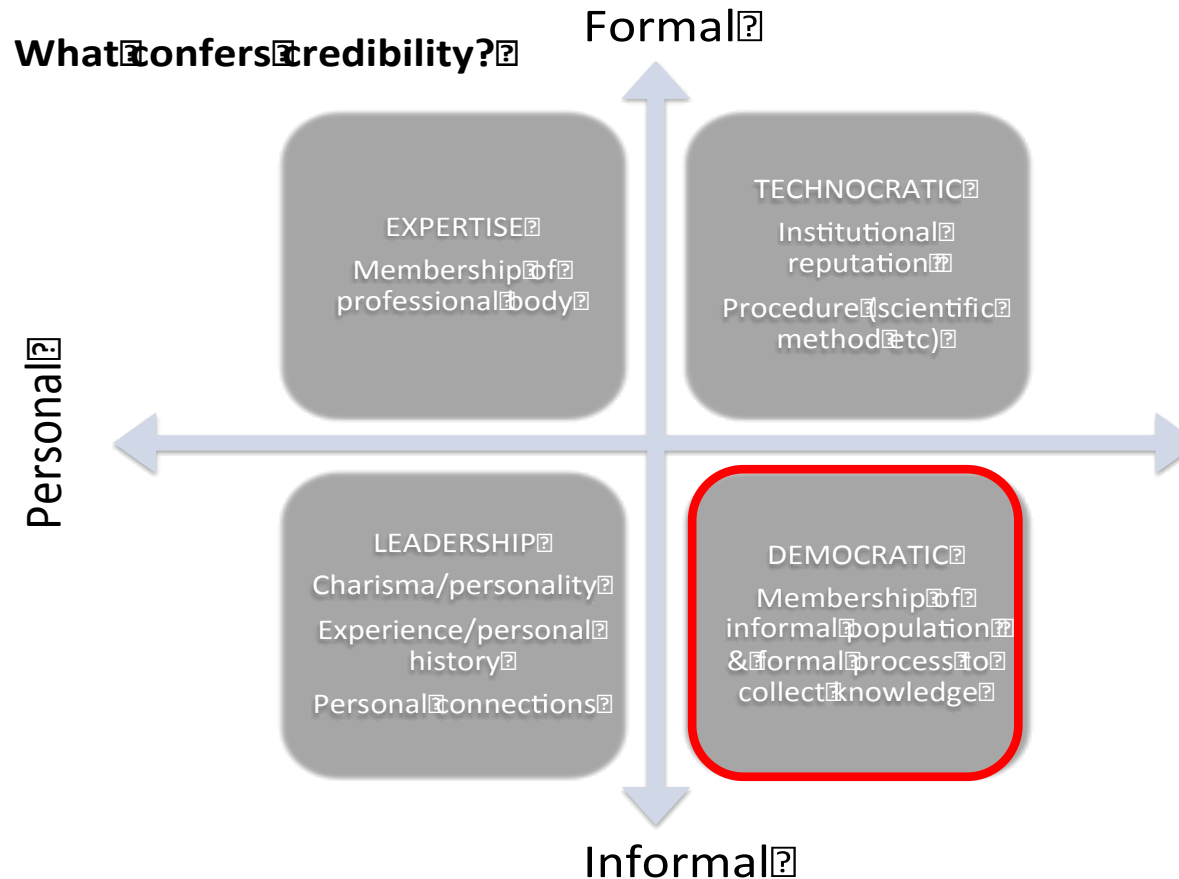
Council Officer: In a PCT you might just have to be clubbable, KO: clubbable?
Council Officer: Yeah, pretty good to get on with, nice cufflinks, you know?

What confers credibility?

Formal

Personal

Institutional

Informal

EXPERTISE
Membership of professional body

TECHNOCRATIC
Institutional reputation
Procedure (scientific method etc)

LEADERSHIP
Charisma/personality
Experience/personal history
Personal connections

DEMOCRATIC
Membership of informal population & formal process to collect knowledge

Personal credibility

Personal ties (being vouched for)

Charisma

Accountability?

A different approach: what makes evidence credible?

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&TROPICAL
MEDICINE

Experience (personal)

Institutionally-focused process

Membership of informal population

Accountability?

What confers credibility?

Formal

TECHNOCRATIC
Institutional reputation

Procedure (scientific method etc)

EXPERTISE
Membership of professional body

Personal

Institutional

LEADERSHIP
Charisma/personality

Experience/personal history

Personal connections

DEMOCRATIC
Membership of informal population & formal process to collect knowledge

Informal

We wouldn't go, for example, for green consultants because it wouldn't have credibility as a report. However accurate it may be it could be dismissed as, well, they would say that anyway. So we would look for credible consultants who were independent and with a good track record (*Policy campaigner*)

What makes evidence credible?

- Known institutional or personal source
- where the evidence is gathered from and relevant to
- how it fits with ongoing policy discussions
- Being presented by someone credible (personally, institutionally)
- Being useable
- Serving the right purpose
- Being attuned to, aligned with existing policy debates

- i.e. being the right voice, at the right time, in the right place, saying the right things

Hmm

This (to some extent) aligns with current advice to academics:

1. Do high quality research
2. Make it relevant and useable
3. Understand the decision-making context
4. Be accessible: engage routinely, flexibly and humbly
5. Decide if you want to be an issue advocate or honest broker
6. Build relationships (meaning: ground rules, and invest)
7. Be entrepreneurial, or find someone who is
8. Reflect continuously: should you engage, do you want to and is it working?

Oliver & Cairney 2019

But – beware the advice of unusually successful academics

Dilemma 1: Are academics able to try to influence policy?

Financial and personal costs unequally borne, undermining diversity of voices available.

Oliver, Kothari and Mays 2019

Practical costs	• Large administrative burden arranging meetings, rooms, travel • Expensive in terms of researcher time and resources
Personal costs to researchers	• Increased interpersonal conflict • Burnout and stress
Professional costs to researchers	• Independence and credibility questioned • Reputational damage
Costs to research	• Managing relationships takes time, effort • Investing in relationships with no guarantee of outcome
Costs to stakeholders	• Sacrificing time from day job (if not officially sanctioned) • Career costs
Costs to the research profession	• Reduced motivation for stakeholder to engage or use research • Credibility and utility of evidence questioned • Research evidence become just another voice

Dilemma 2: How should academics influence policy?

Requires new skills – such as storytelling – which are not a routine part of academic training, and may be derided by our colleagues.

Oliver, Kothari & Mays 2019
Katz & Martin 1997

1. Create and maintain good relationships
   – Which takes time, effort, biting tongue, doing favours, possibly no benefit a lot of the time

2. Managing engagement process
   – resolving conflict (untrained), managing group dynamics, not letting loudest shout, balancing different voices (experiential vs expert), making the most of everyone's resources

3. Investing long-term
   – Sacrificing research and teaching time, not expecting guaranteed success, being able to take the hit, having resources to be around on the off-chance

4. Being good at it
   – Wanting to do all this, having the personal and professional skills to do it well

Dilemma 3: What is the purpose of academics engagement in policymaking?

Why are we doing it? What does it truly mean to engage in this influencing business?

- Successful evidence advocacy requires a level of engagement in networks that blurs the divide between scientist and policymaker (Himmrich, 2016)

- Advice assumes we are engaging in order to persuade others to privilege and act on their research i.e. instrumentally and strategically

- But this may damage the relationships and goodwill built by the more sincere and invested participants who possess a more enlightened view on the likelihood and nature of their impact (Goodwin, 2013).)

Credibility – not the be all, end all

The more recent recognition that trust and credibility are the basic dimensions in public 'understanding', now also risks reifying these concepts, which would be just as misleading.

Trust, or trustworthiness, and credibility are relational terms, about the nature of the social relationships between the actors concerned. They are not intrinsic to either actor nor to the information said to be transmitted between them.'

Wynne, 1992. pp 282

Influencing policy

Increasing credibility may increase influence on policy. But this remains self-serving and transactional:

Louise Shaxson @LouiseShaxson · Feb 21

I've never really liked the idea of 'honest broker': it's v easy to slip from 'policymakers should use robust evidence' to 'policymakers should use evidence from my project' to 'policymakers should act on my project's findings'.
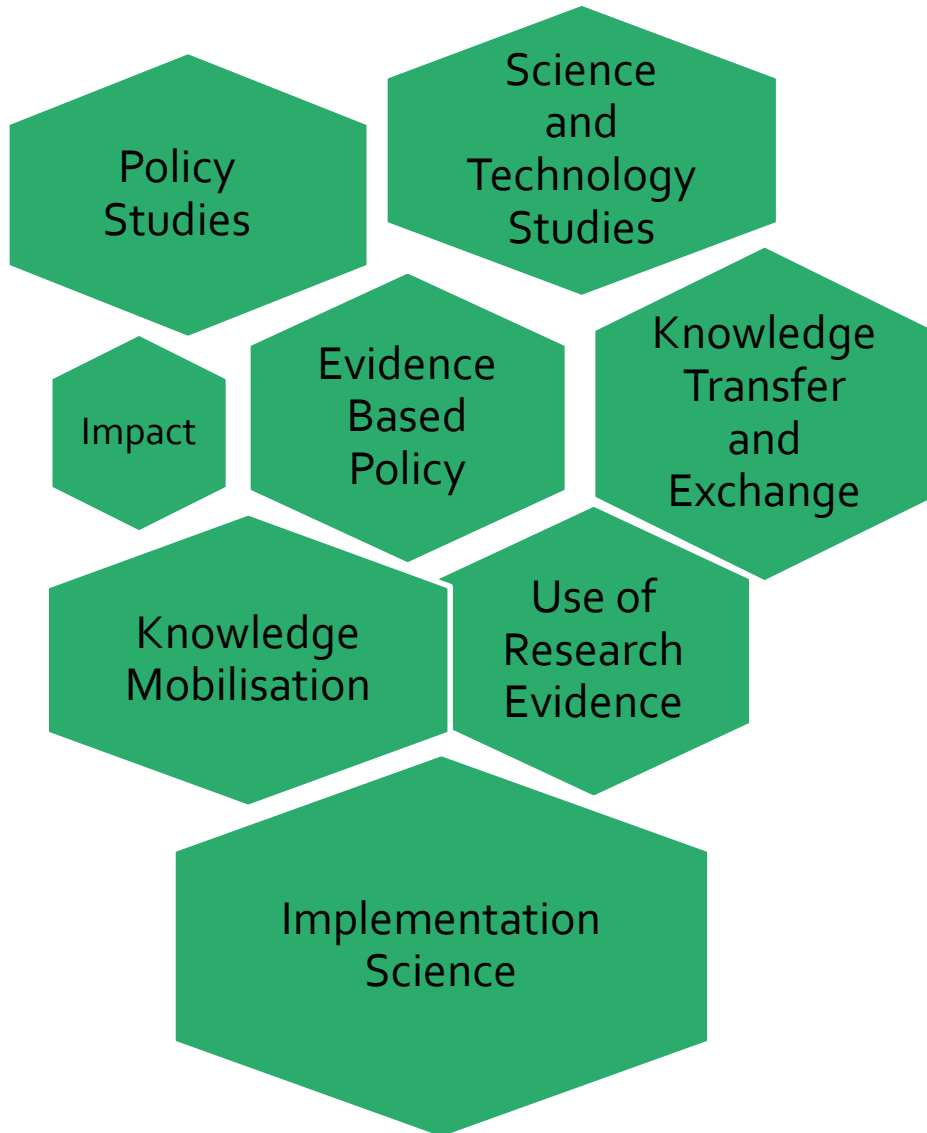
💬 1   🔁   ♡ 4

- Going beyond tokenistic and instrumental engagement is to build genuine rapport with policymakers

- May require us to co-produce knowledge and cede some control over the research process

- Involves a fundamentally different way of doing public engagement, primarily to listen and learn, then reflect on research practices, outputs, and most useful contribution?

A new problem to approach

Policy Studies

Science and Technology Studies

Impact

Evidence Based Policy

Knowledge Transfer and Exchange

Knowledge Mobilisation

Use of Research Evidence

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The problem is not one of supply / demand or willingness

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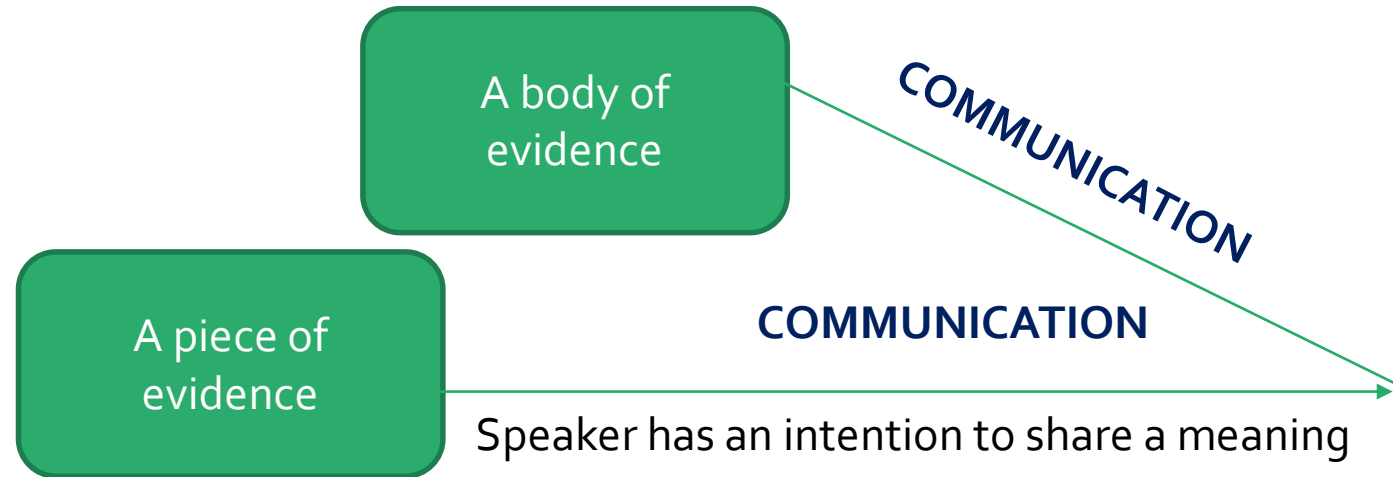
What does the problem look like?

- Understanding the policy gaze

- Understanding our purpose as academics

What do answers look like?

- Needs to take into account relations and networks

- Needs to engage in collaborative sense-making

Communication as a collaboration

A body of evidence

A piece of evidence

COMMUNICATION

COMMUNICATION

Speaker has an intention to share a meaning

Audience

How can I, as a speaker, make sure that my meaning has been comprehended?

Do I want to be as persuasive as possible? (if so there are tools available – emotions, anecdotes etc)

Or do I just want to make sure I communicate as effectively as possible (in which case need to truly engage in conversation to establish mutual comprehension and interpretation)?

How is the audience interpreting this?

What actions do they think they should be taking?

Do I (the speaker) agree?

Making evidence credible?

- Aim for better **communication**, not better **influence**

- This implies a change to practice of research (ethics, communication, stakeholder engagement)

- What is my responsibility to myself / peers / funders / PI / students / public?

"Science is a practice saturated with moral responsibility... and we have as individuals to shoulder the responsibility to the practice of science, to the scientific community and to the broader society. " (Douglas 2012)

- General responsibilities: Be decent, don't do harm

- Role responsibilities: Don't falsify data, apply for ethics

- Make choices consciously

What should researchers think about?

– What is my role?
- Representative (of my peer group / profession / my set of experiences?)
- Bringing of **some** expertise (on the assumption that some is better than none)?
- To teach others (and learn from others) about research methods
- As researchers, to manage the dynamics and agendas of the above?
- To try and produce the "best" possible knowledge?
- To give all stakeholders a positive experience?
- To change people's minds?

- Why am I doing this? (improve research or service? Get papers? Be nice?)

- What am I comfortable with?

- What choices am I making? (honestly?)

How to improve communication

- How to create (co-create) and support the infrastructure for genuine conversation, especially thinking about how to make opportunities, risks and rewards more equitable

- Training in engagement - helping researchers and funders take this seriously as a skill set and activity

- Think through how it changes research. What's the motivation for doing it (sincere, instrumental), especially since we don't know whether...

- Does it actually change policy and practice?

Why communicate, when and how?

1. What is everyone bringing to the table?

    - Policymakers/funders: Money, problem, knowledge of political context, pressure for answers...

    - Researchers: expertise in topic, and in "doing" research (of different kinds)

    - Public/patients: Lived experiences, practical experiential expertise

2. Under which circumstances are these needed?

    - E.g. when is it better to have patient representative, and not a   systematic review of patient experiences?

3. What are the costs?

    - Time, administrative, cultural, professional

4. How are decisions taken, responsibility and accountability shared?

    - Group dynamics? Market forces? Authority?

Take home messages

- Knowing how to make something credible would allow us to design more effective 'interventions' to influence policy and practice

- Implies a profound understanding of context and capability / capacity to engage with evidence of different kinds

- Credibility is in the eye of the beholder, and other dimensions are important

- So should we be using it as a yardstick / target (as much advice / interventions seems to do?)

- Rather than trying to increase influence , think about how to think through comprehension, interpretations and implications together.

- Need a new moral framework to guide these activities

From 'Gentlemen prefer evidence-led deliberation and consensus-building', 1953

Some papers I have written with colleagues

Oliver & Cairney. (2019) The dos and don'ts of engaging in policy: a systematic review of the 'how to' advice for academics . Palgrave Communications.

Cairney & Oliver (2018) How Should Academics Engage with Policy? Political Studies Review Cairney, Paul, and Kathryn Oliver. "Evidence-based policymaking is not like evidence-based medicine, so how far should you go to bridge the divide between evidence and policy?." *Health Research Policy and Systems* 15, no. 1 (2017).

Pearce, W., & Oliver, K. (2017). Three lessons from evidence-based medicine and policy: increase transparency, balance inputs and understand power. *Palgrave Communications*.

Oliver, K. A., & de Vocht, F. (2017). Defining 'evidence'in public health: a survey of policymakers' uses and preferences. *European Journal of Public Health*, *27*(suppl_2), 112-117.

Oliver, K., Lorenc, T., & Innvær, S. (2014). New directions in evidence-based policy research: a critical analysis of the literature.

Oliver, K., Innvar, S., Lorenc, T., Woodman, J., & Thomas, J. (2014). A systematic review of barriers to and facilitators of the use of evidence by policymakers. *BMC Health Services Research*, *14*, 2.