Plural pathways for translation by design

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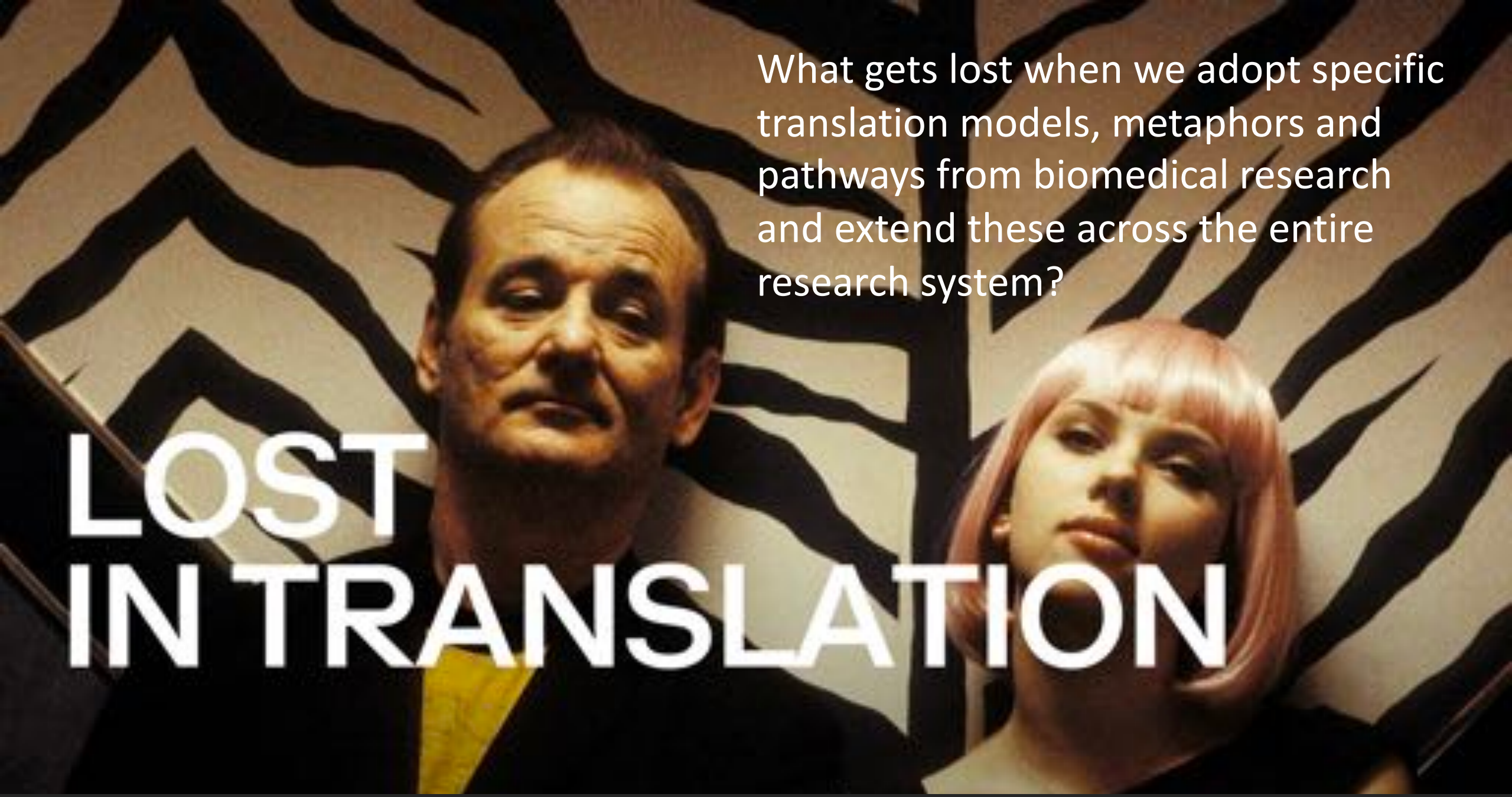
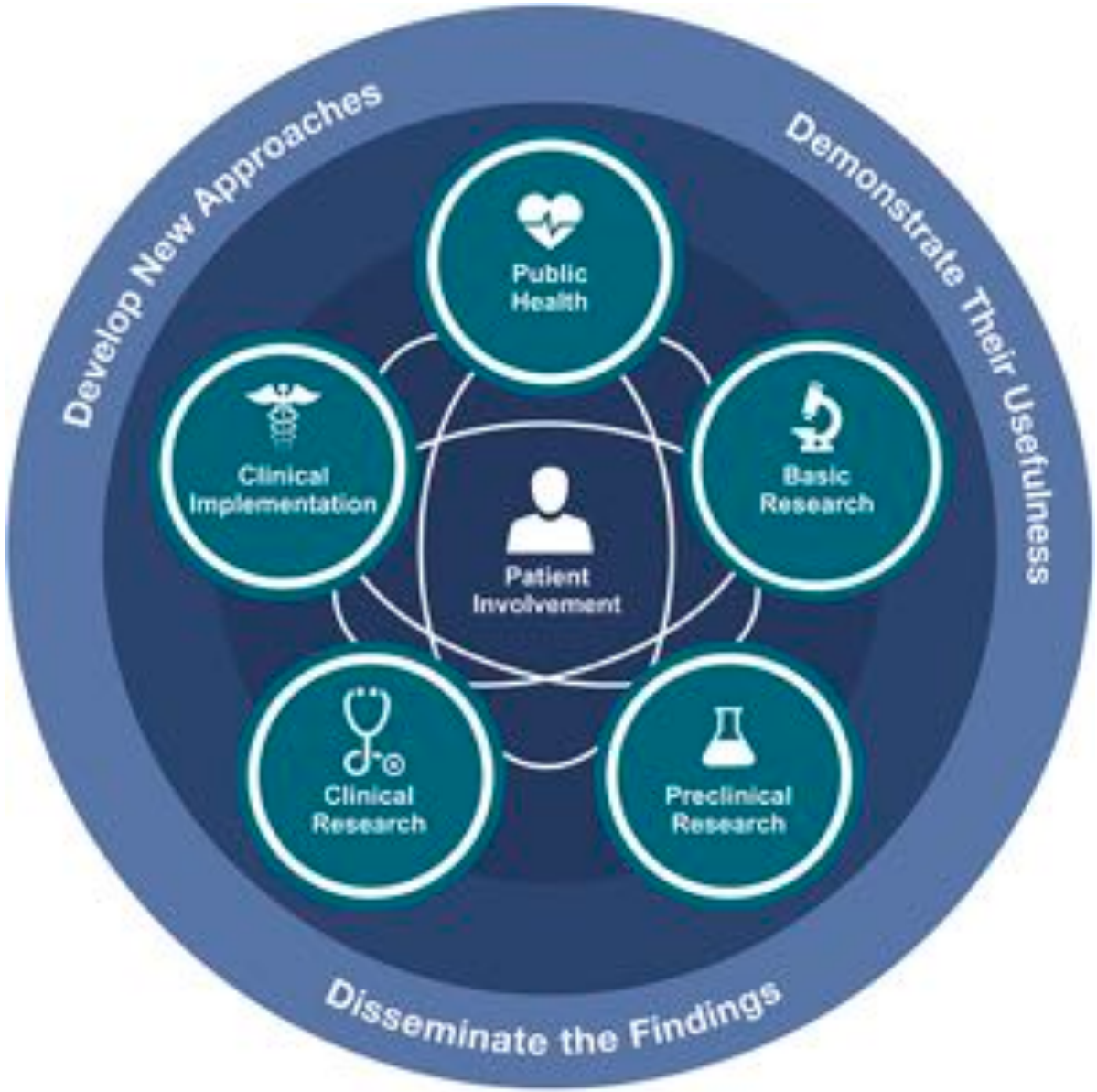
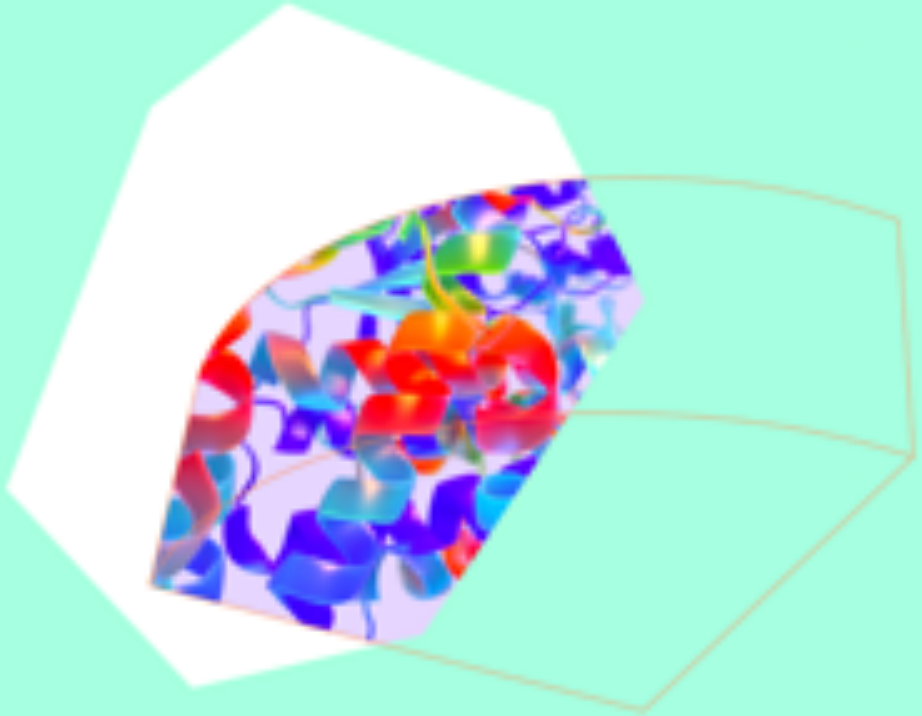
http://www.researchonresearch.org/



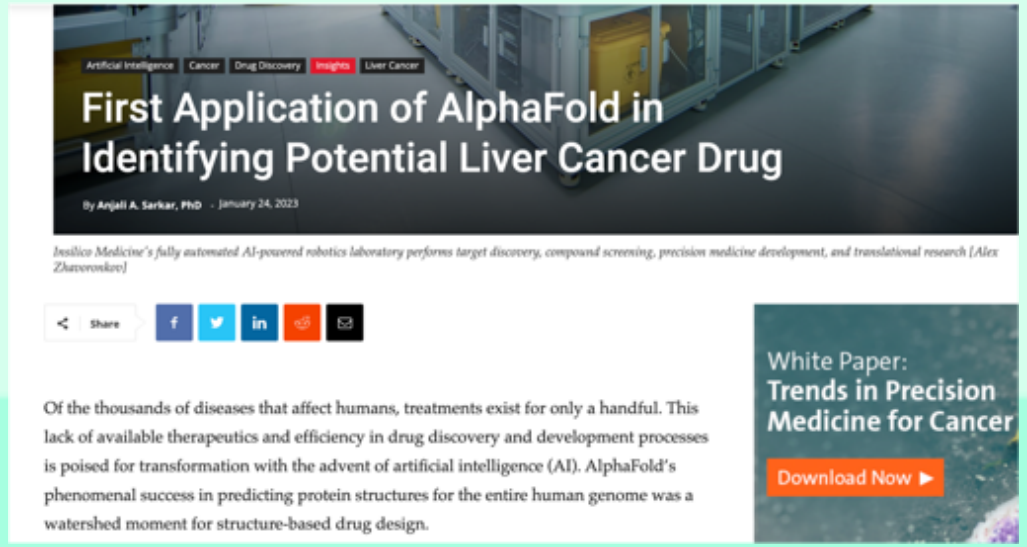
What gets lost when we adopt specific translation models, metaphors and pathways from biomedical research and extend these across the entire research system?



Credit: National Center for Advancing Translational Sciences



AlphaFold



Accelerating scientific discovery

AlphaFold can accurately predict 3D models of

The Biomedical Bubble

Why UK research and innovation needs a greater diversity of priorities, politics, places and people

Richard Jones and James Wilsdon

What do we mean by a Biomedical Bubble?

The bubble metaphor can be applied in a variety of contexts:

- **A speculative bubble**, as developed for tulips in the 1630s, or dotcoms in the early 2000s.[58]
- **An epistemic bubble**, where individuals or groups are closed off from alternative views and voices (e.g. the 'Westminster bubble' or the 'filter bubble').[59]
- **A valuation bubble**, where share prices are artificially inflated (e.g. a 'carbon bubble' in the value of oil companies, which fails to account for the costs of climate change).[60]
- **A social bubble**, in which interactions between strong supporters (e.g. of an emerging technology or sector) create reinforcing networks, feedback loops and commitments beyond anything that can be rationalised through cost-benefit analysis.[61]
- **An attention bubble**, which crowds out the political, public and investment space for support of alternatives.[62]

We use biomedical bubble to convey several of these meanings. Biomedical research has far too much substance to constitute a formal speculative bubble, but it does reflect aspects of an epistemic, valuation, social and attention bubble.

nature > humanities and social sciences communications > articles > article

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Translating research for policy: the importance of equivalence, function, and loyalty

Steve Connelly, Dave Vanderhoven, Robert Rutherfoord, Liz Richardson & Peter Matthews

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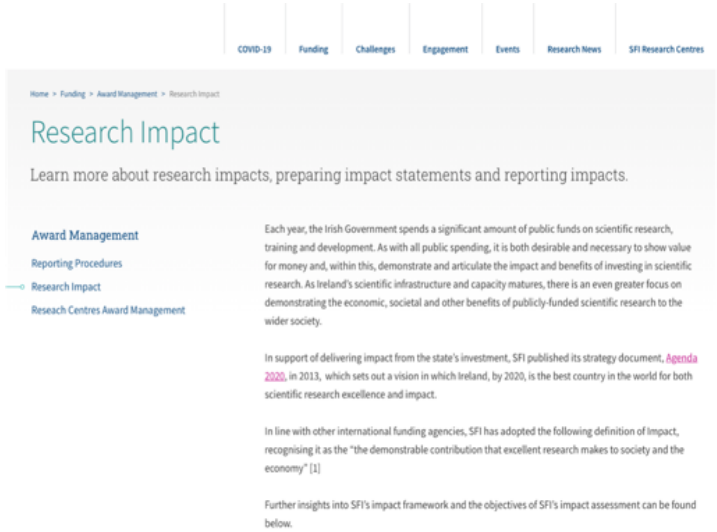
Abstract

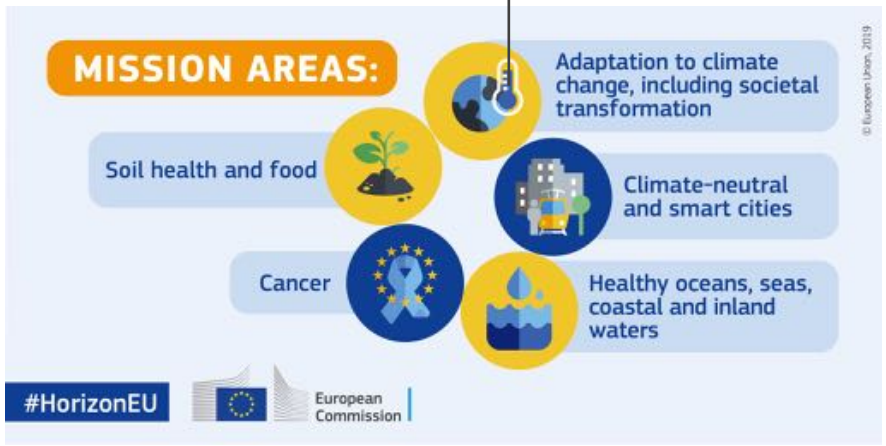
The question of how to make academic research more useful to government, and frustration over its lack of obvious use, have long been the subject of policy makers' and scholars' attention. These have driven the global development of institutionalised links between the two communities, while also leading to a broad consensus as to why the goal is often not realised. In order to better explain the barriers, this paper takes the concept of "translation" very literally, and proposes an innovative approach, which analyses academic and policy practices using ideas from the humanities-based discipline of Translation Studies. This enables an exploration of what constitutes good translation, and in particular of the tension between keeping faith with the original material and users' understandable emphasis on functionality. The conclusion is that while some aspect of original research content must be maintained, what this is cannot be prescribed: the appropriate equivalence between original and translation is always context-dependent. This throws the emphasis on the relational aspects

"Translation" has become a widely used metaphor for what happens to research in its passage from academia to users. Often used in a very general sense, without theoretical commitments to what translation might actually involve, the term also has a range more specific meanings tied closely to the broader conceptualisations of the nature of the research-policy relationship…"

Two critical responses:
1) A radical interpretation of the term emerging from actor-network theory (ANT) and science and technology studies (STS), which emphasises change, rather than the simple "carrying over" of a well-defined entity. ANT's founder argued that "to translate is to displace" (Callon, 1986).

2) The alternative critical response has been to view "translation" as irredeemably attached to linear conceptions of research use, and so to reject the term altogether (e.g. Penuel et al. (2015) claim it leads to "an impoverished way of thinking about the relation of research and practice".)





The ‘impact agenda’ today

Research Evaluation, 2019, 1–14
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Special Section Paper

OXFORD

From productive interactions to impact pathways: Understanding the key dimensions in developing SSH research societal impact

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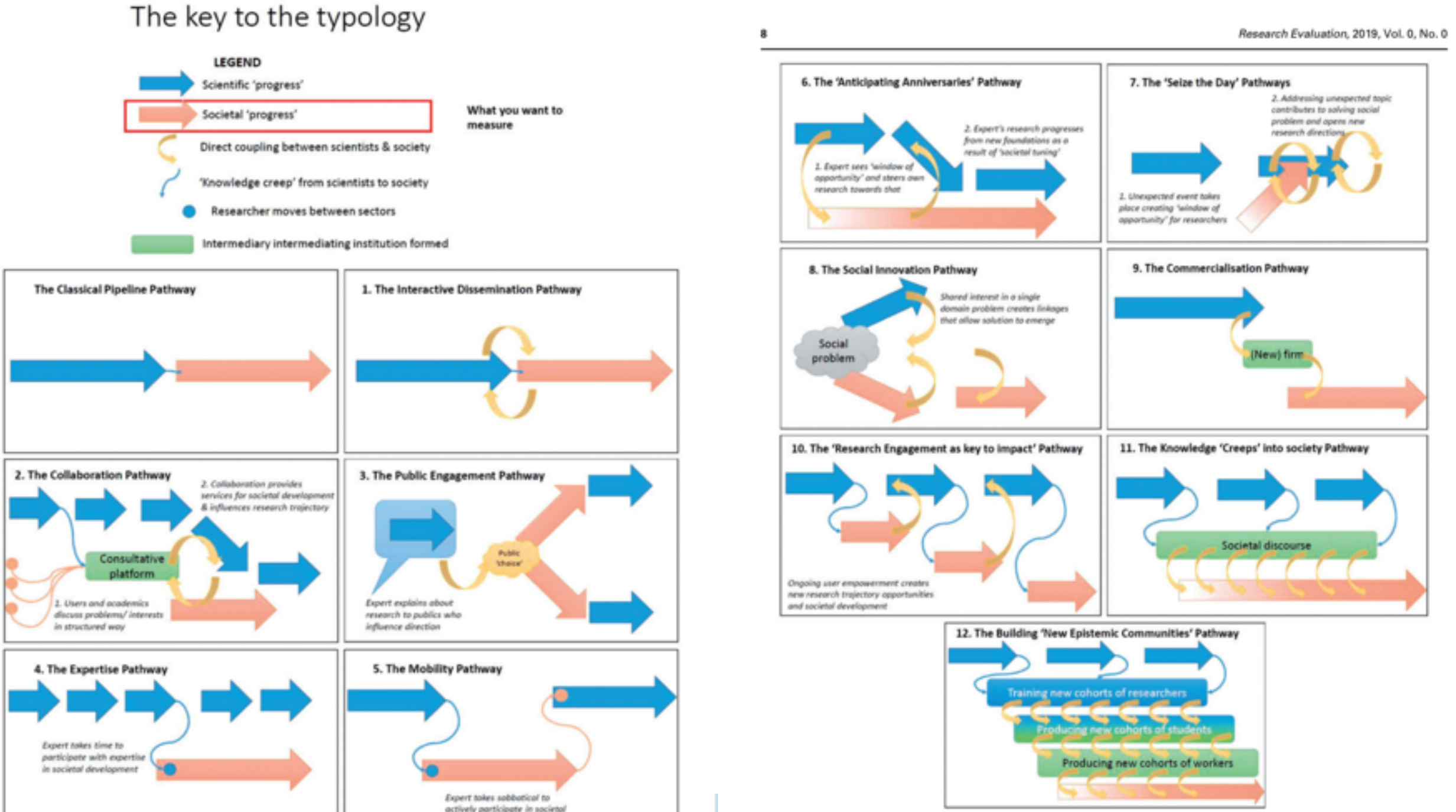


Figure 1. Continued.

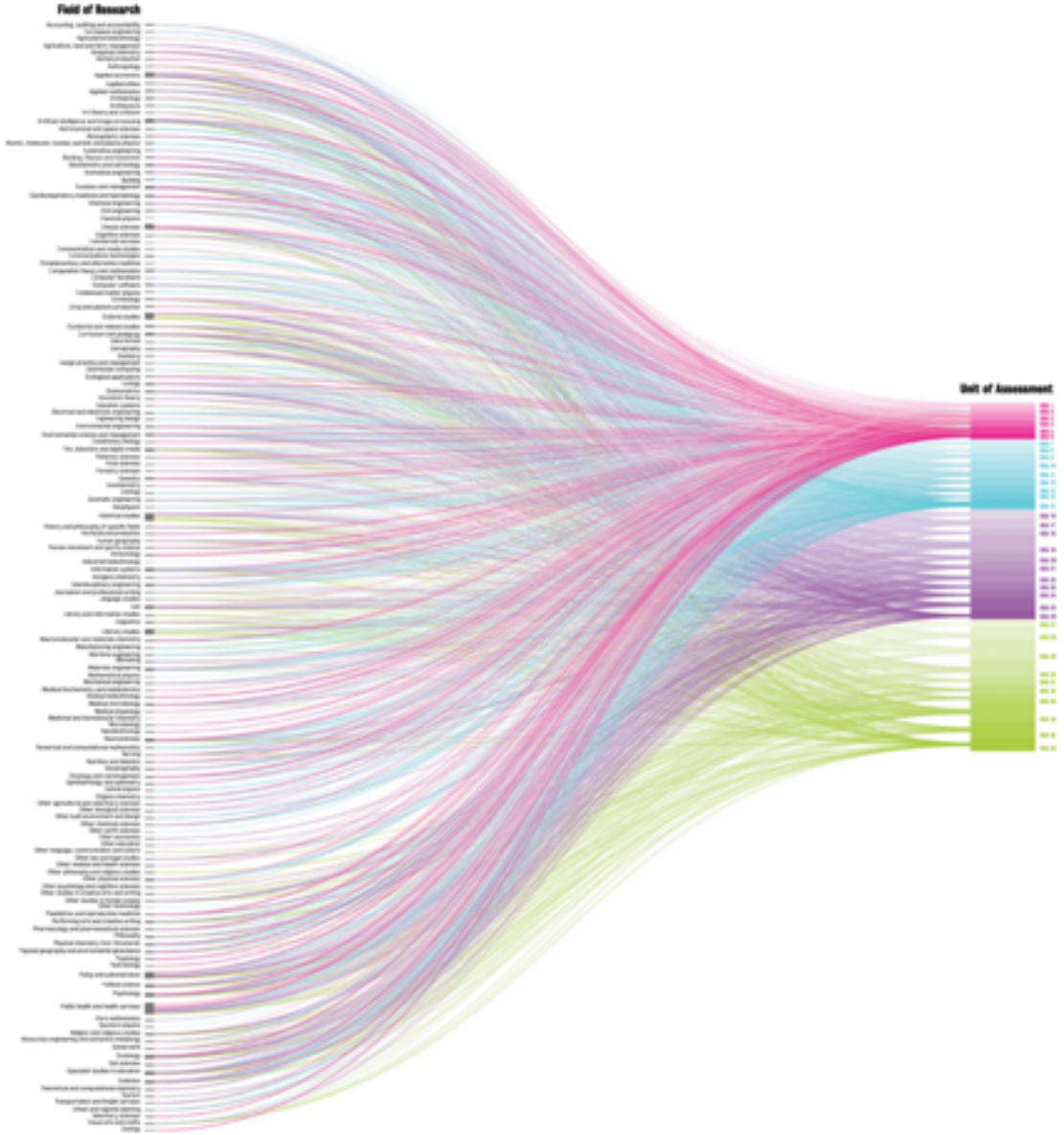
KING'S College LONDON

The nature, scale and beneficiaries of research impact

An initial analysis of Research Excellence Framework (REF) 2014 impact case studies

King's College London and Digital Science

Prepared for the Higher Education Funding Council of England, Higher Education Funding Council for Wales, Scottish Funding Council, Department of Employment and Learning Northern Ireland, Research Councils UK and the Wellcome Trust



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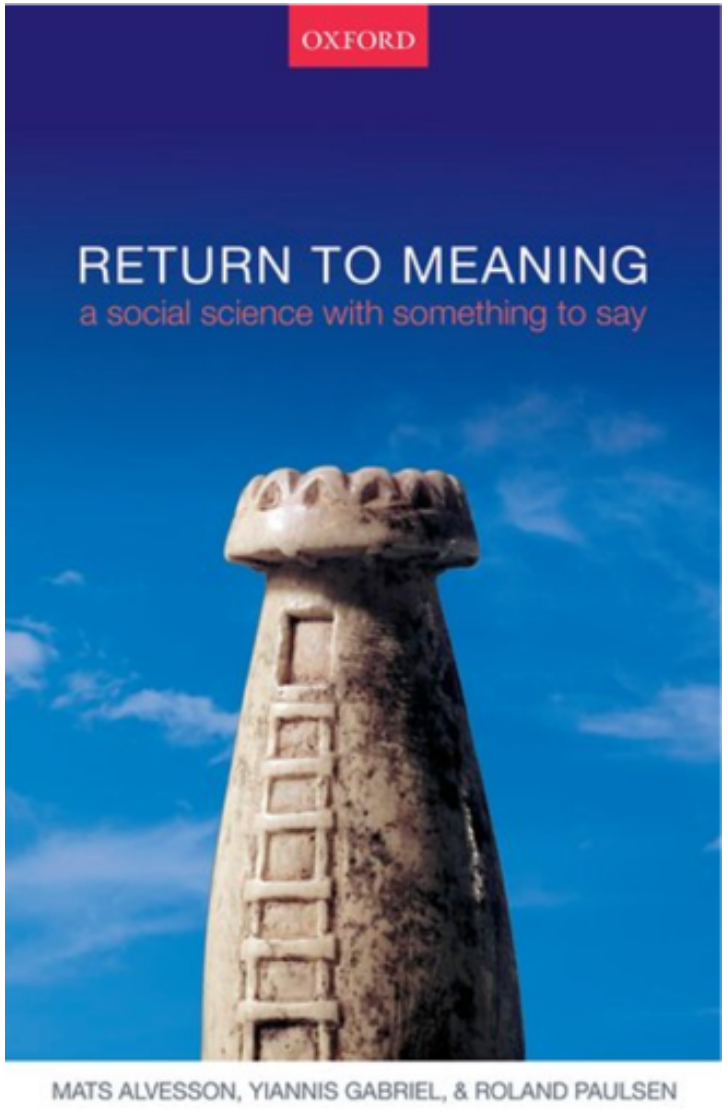

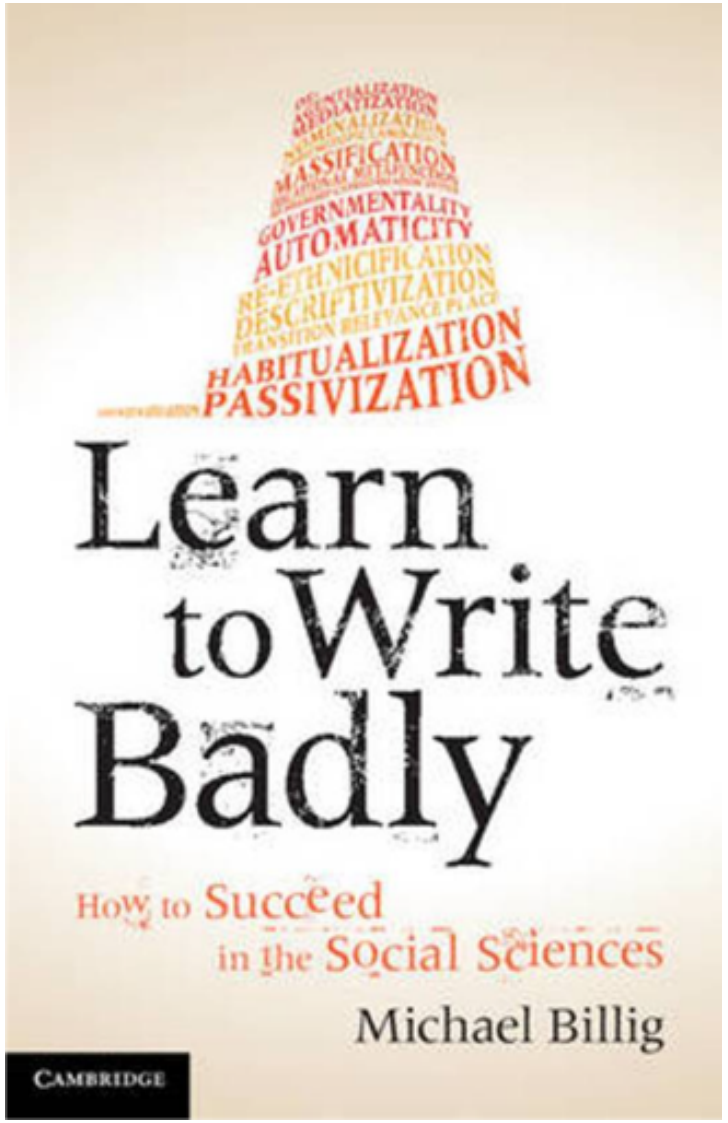

"Never before in the history of humanity have so many written so much while having so little to say to so few"

nature human behaviour

PERSPECTIVE

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Should social science be more solution-oriented?

Duncan J. Watts

Over the past 100 years, social science has generated a tremendous number of theories on the topics of individual and collective human behaviour. However, it has been much less successful at reconciling the innumerable inconsistencies and contradictions among these competing explanations, a situation that has not been resolved by recent advances in 'computational social science'. In this Perspective, I argue that this 'incoherency problem' has been perpetuated by an historical emphasis in social science on the advancement of theories over the solution of practical problems. I argue that one way for social science to make progress is to adopt a more solution-oriented approach, starting first with a practical problem and then asking what theories (and methods) must be brought to bear to solve it. Finally, I conclude with a few suggestions regarding the sort of problems on which progress might be made and how we might organize ourselves to solve them.

As a sociologist who spends a lot of time in the company of physicists, computer scientists and other outsiders to my field, I am often asked a question of the sort: "What is the social science perspective on *X*?", where *X* is some topic of interest. To a social scientist, the question sounds hopelessly naïve: for any

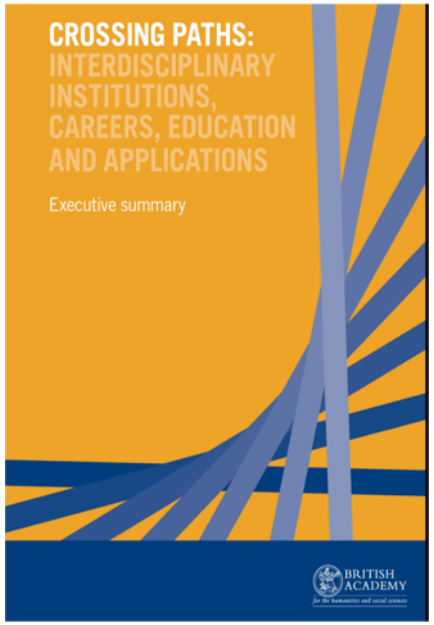
theories over the solution of practical problems. Finally, I argue that one possible solution to the incoherency problem is to reject the traditional distinction between basic and applied science, and instead seek to advance theory specifically in the service of solving real-world problems.

1. Be critical, confident transdisciplinarians

A **multidisciplinary** approach draws upon the strengths or expertise of different disciplines, and more effectively joins up their findings, but leaves disciplinary boundaries (and sometimes hierarchies) intact.

An **interdisciplinary** approach involves the fuller integration of disciplines, to develop potentially novel ways of approaching research questions, recognising that there is a diversity of ways to understand and address particular problems.

Transdisciplinary research not only integrates expertise from across academic disciplines, but also involves societal stakeholders in the design stage, and throughout the research process. In transdisciplinary research, knowledge can come from beyond academic disciplines, and insights are often provided through other kinds of tacit knowledge – as held by local communities, businesses, social movements or practitioners.



2. Keep it complex & embrace the messiness

COMMENT

CONSERVATION Threats to Adélie penguins assessed p.1034 | MATHEMATICS Roger Penrose reflects on 50 years and 6 volumes of work p.1039 | REVIEWING Pool of peers grows to cope with submissions surge p.1041 | OBITUARY Brian Marsden, keeper of comets, remembered p.1042

A UK crop circle, created by activists to signify uncertainty over where genetic contamination can occur.

Keep it complex

When knowledge is uncertain, experts should avoid pressures to simplify their advice. Render decision-makers accountable for decisions, says **Andy Stirling**.

Worldwide and across many fields, there lurks a hidden assumption about how scientific expertise can best serve society. Expert advice is often thought most useful to policy when it is presented as a single 'definitive' interpretation. Even when experts acknowledge uncertainty, they tend to do so in ways that reduce unknowns to measurable 'risk'. In this way, policy-makers are encouraged to pursue (and claim) 'science-based' decisions. It is also not uncommon for senior scientists to assert that there is no alternative to some scientifically contestable policy. After years researching — and participating in — science advisory processes, I have come to the conclusion that this practice is misguided.

An overly narrow focus on risk is an inadequate response to incomplete knowledge. It leaves science advice vulnerable to the social dynamics of groups — and to manipulation by political pressures seeking legitimacy, justification and blame management. When the intrinsically plural, conditional nature of knowledge is recognized, I believe that science advice can become more rigorous, robust and democratically accountable.

A rigorous definition of uncertainty can be traced back to the twentieth-century economist Frank Knight'. For Knight, "a measurable uncertainty, or 'risk' proper ... is so far different from an unmeasurable one that it is not in effect an uncertainty at all". This is not just a matter of words, or even methods. The stakes are potentially much higher. A preoccupation with assessing risk means that policy-makers are denied exposure to dissenting interpretations and the possibility of downright surprise.

Of course, no-one can reliably foresee the unpredictable, but there are lessons to be learned from past mistakes. For example, the belated recognition that seemingly inert and benign halogenated hydrocarbons were interfering with the ozone layer. Or the slowness to acknowledge the possibility of novel transmission mechanisms for spongiform encephalopathies, in animal breeding and in the food chain. In the early stages, these sources of harm were not formally characterized as possible risks — they were 'early warnings' offered by dissenting voices. Policy recommendations that miss such warnings court overconfidence and error.

The question is how to move away ▸

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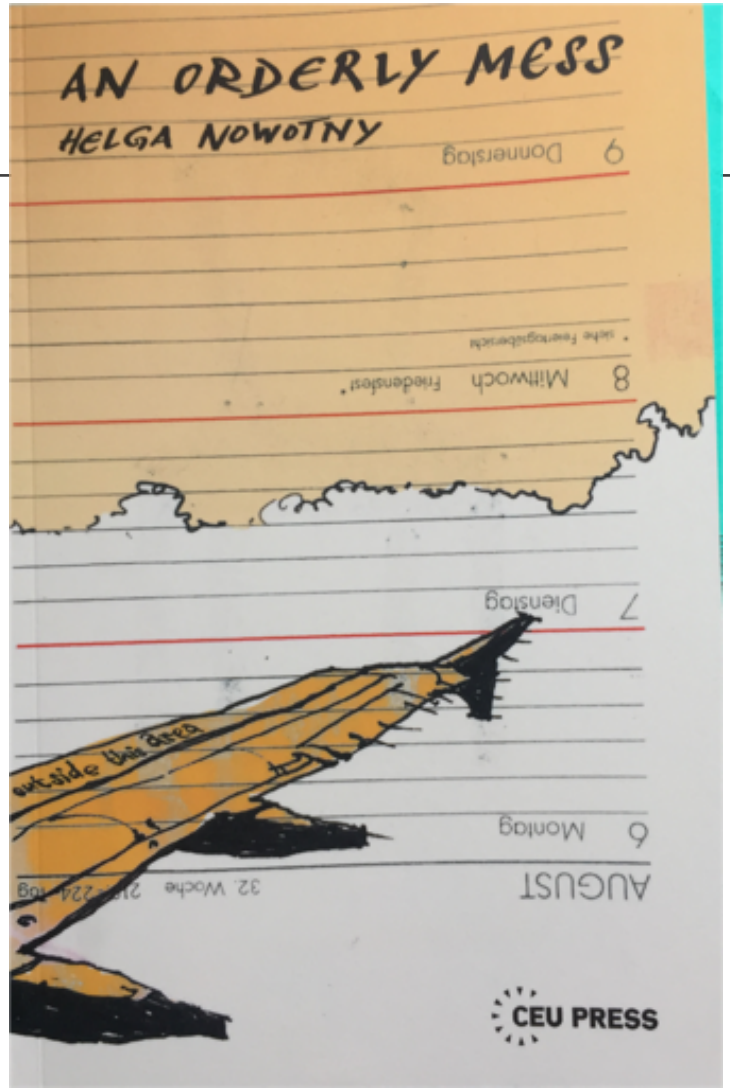
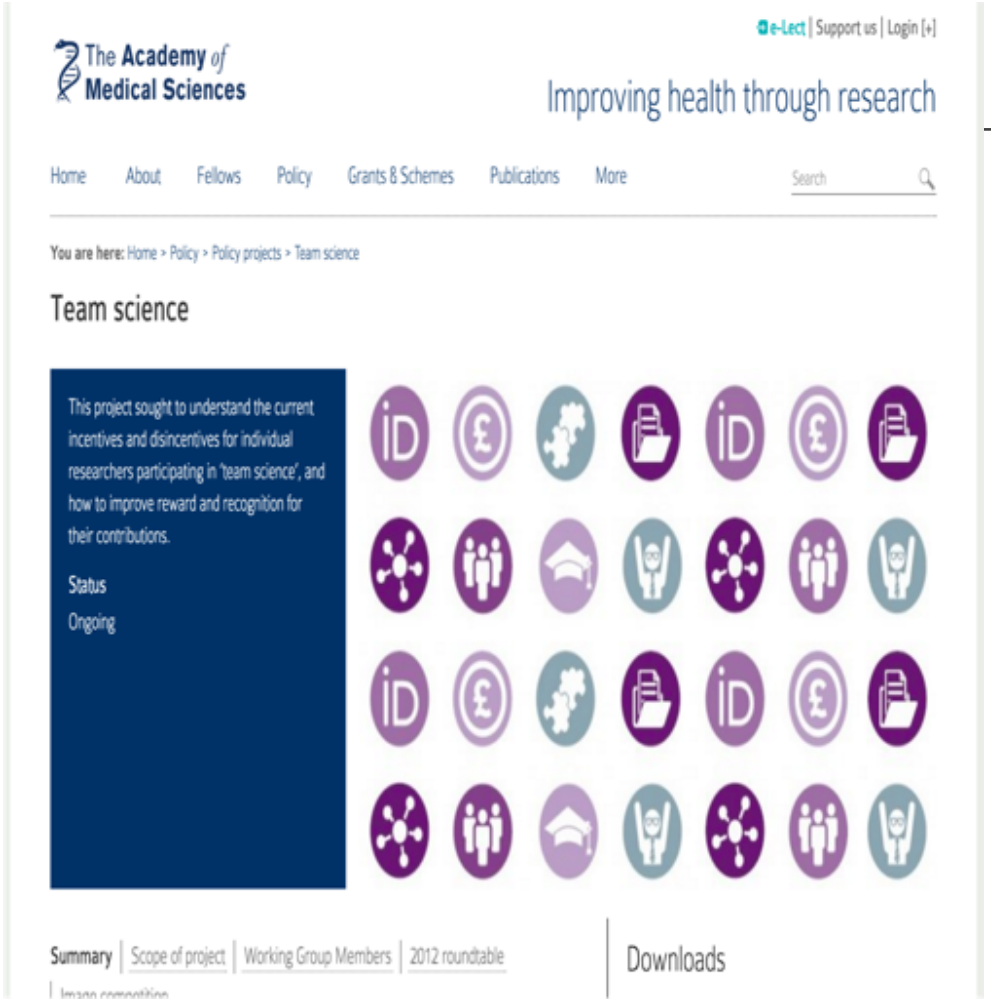
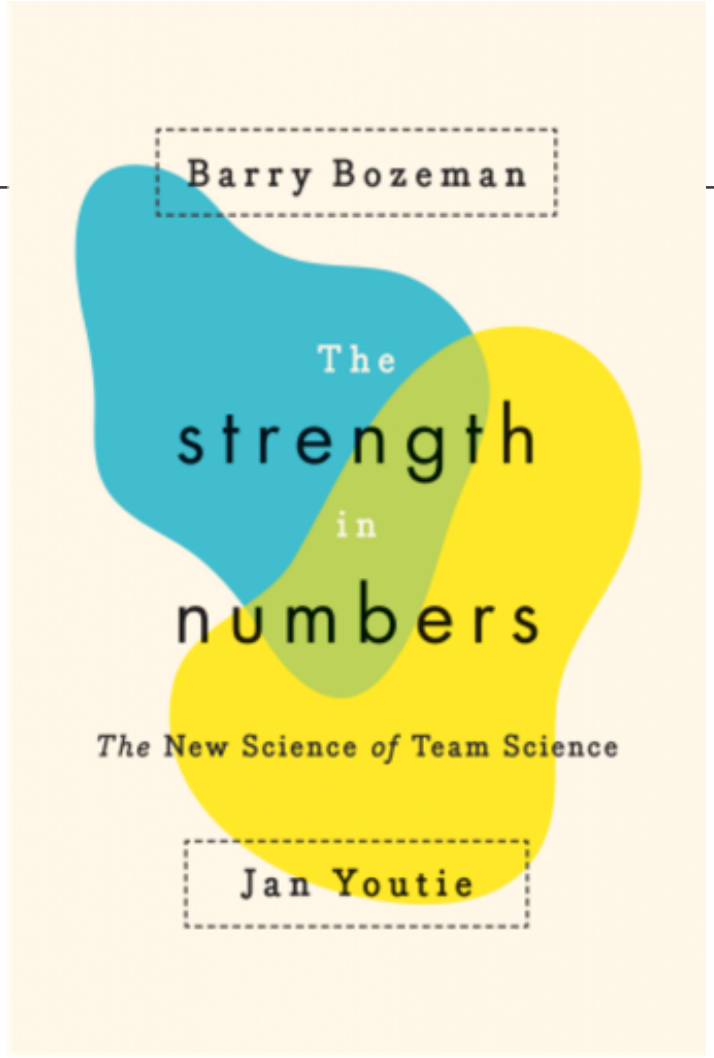


3. Get serious about ‘team social science’





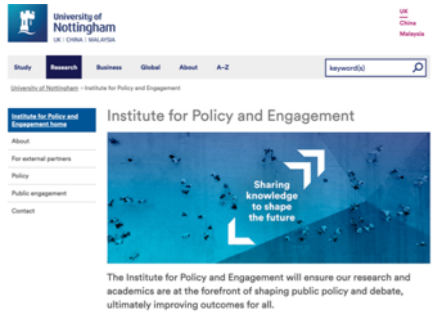
4: Expand criteria and indicators of research leadership to include impact & translation - & reflect this in hiring/promotion processes

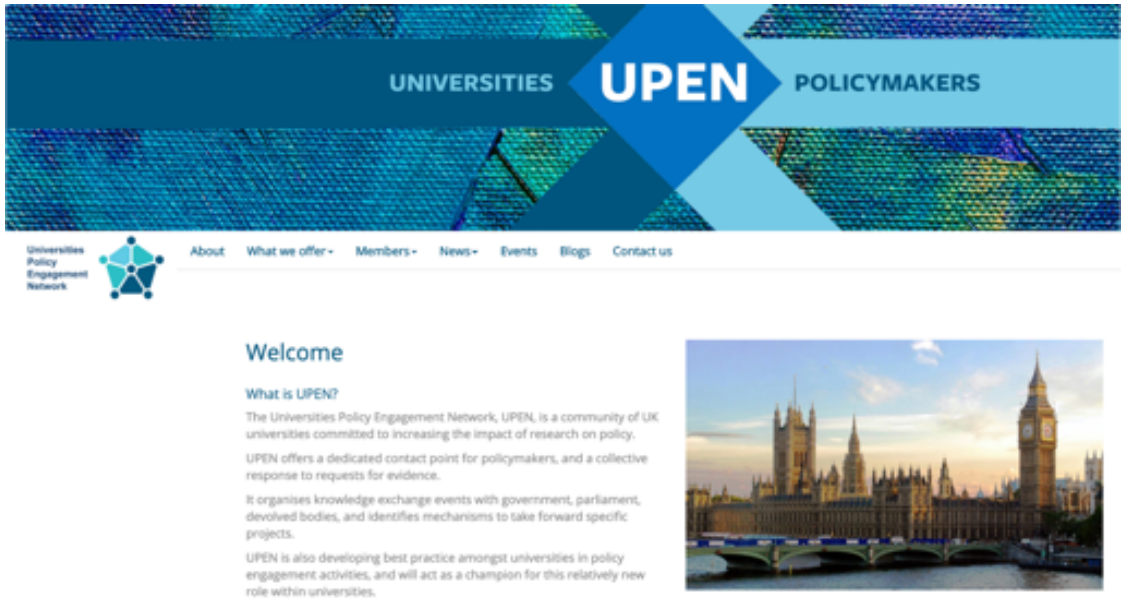
Harnessing the Metric Tide

indicators, infrastructures and priorities for responsible research assessment in the UK

STEPHEN CURRY, ELIZABETH GADD AND JAMES WILSDON

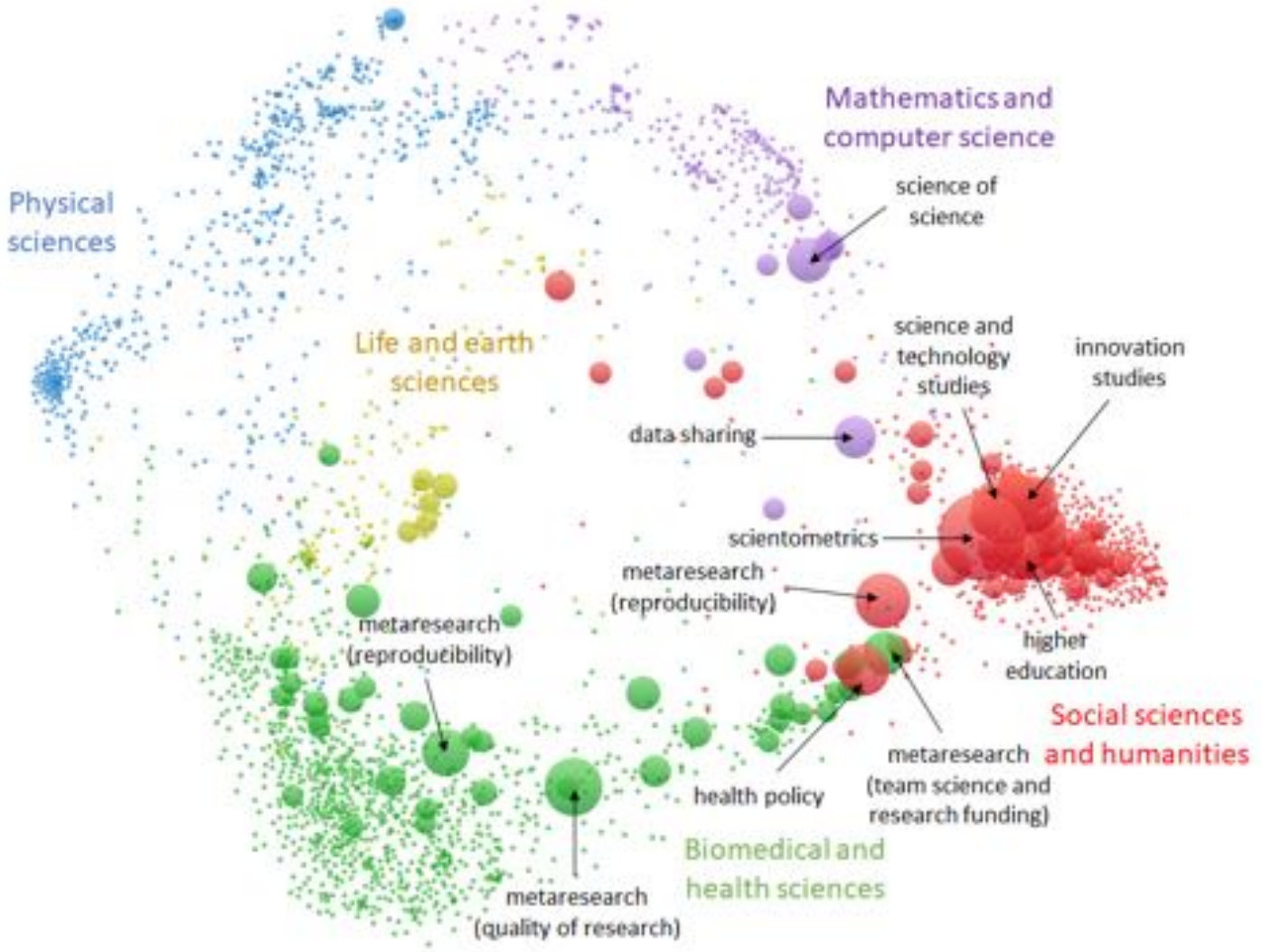
DECEMBER 2022

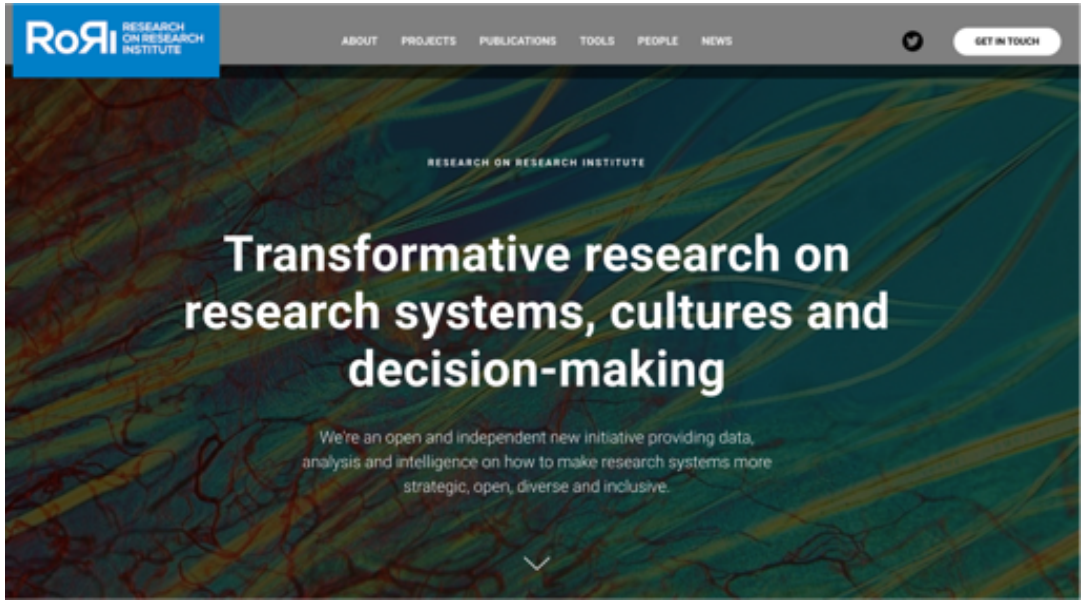




5: Support brokers, networks & trading zones (including pan-university policy shops)

6: Invest in meta-research as a path to translation





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