What works to promote research-policy engagement?
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Abstract

Background: To improve the use of evidence in policy and practice, many organisations and individuals seek to promote research-policy engagement activities, but little is known about what works. We sought to (a) identify existing research-policy engagement activities, and (b) evidence on impacts of these activities on research and decision-making.

Methods: We conducted systematic desk-based searches for organisations active in this are (such as funders, practice organisations, and universities) and reviewed websites, strategy documents, published evaluations and relevant research. We used a stakeholder roundtable, and follow-up survey and interviews with a subset of the sample to check the quality and robustness of our approach.

Results: We identified 1923 individual activities in 428 organisations world-wide. However, we found only 57 (3%) activities, 13% of organisations) had publicly-available evaluations. Most activities aim to improve research dissemination or create relationships. Existing evaluations offer an often rich and nuanced picture of evidence use in particular settings (such as local government), sectors (such as policing) or by particular providers (such as learned societies, but are extremely scarce.

Conclusions: Funders, research- and decision-making organisations have contributed to a huge expansion in research-policy engagement initiatives. Unfortunately, these initiatives tend not to draw on existing evidence and theory, and are mostly unevaluated. The rudderless mass of activity therefore fails to provide useful lessons for those wishing to improve evidence use, leading to wasted time and resources. Future initiatives should draw on existing evidence about what works, seek to contribute to this evidence base, and respond to a more realistic picture of the decision-making context.

Main Text

Background: For over four decades, researchers have written about how evaluation and research evidence is routinely ignored by decision-makers (Weiss, 1993; Ham, Hunter and Robinson, 1995; Black and Donald, 2001; Schoemaker and Smulders, 2015). The perceived failure of decision-makers to use evidence has led researchers to investigate barriers and facilitators of evidence use (Innvaer *et al.*, 2002; Orton *et al.*, 2011; Oliver *et al.*, 2014), and conceptualisations of the 'evidence-policy gap' which seek to promote 'bridging' interventions (Hayre and Parker, 1997; Haines, Kuruvilla and Borchert, 2004; Dobbins *et al.*, 2009; Boaz, Baeza and Fraser, 2011; Davis *et al.*, 2013; Milat and Li, 2017). This discourse may have shaped how individuals and organisations understand their role within the broader research-policy system (Gough and Boaz, 2017).
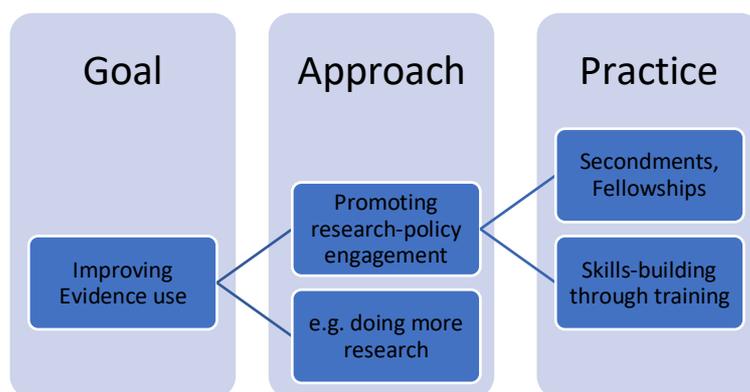
Responding to this perceived failure to use evidence, many organisations and individuals have sought to promote greater engagement between researchers and policymakers. 'Engagement', is often taken to mean greater interaction at the interpersonal (e.g. networking events) or inter-organisational (e.g. secondment schemes) level. As will be immediately obvious, a great many different types of activities may fall under the broad heading of 'engagement': from training courses for PhD students on how to maximise impact, to major investments by funders into centres or research programmes to deliver policy-and-practice-relevant research (such as the What Works Centres in the UK).

This multiplicity is for a number of reasons. First, individuals and organisations actively seeking to promote evidence use through increased research-policy engagement have different perspectives on what is meant by the goal of 'improved evidence use', based on the well-known assumption that evidence is rarely or poorly used. As a goal, it is poorly defined, and hard to measure (Gitomer and Crouse, 2019). Often proxy goals – often equally vague – are adopted. For example, researchers and funders tend to talk of 'research impact', 'knowledge translation', or 'evidence uptake' as goals (Armstrong, Pettman and Waters, 2014; Boswell and Smith, 2017). Decision-makers in the UK tend to talk about 'academic-policy engagement' or 'optimising science advice' (Government Office for Science, 2019; Stevenson, 2019). Terms also differ depending on sector or discipline, which further muddies the water (Oliver, 2019; Smith *et al.*, 2019).

Second, each individual or organisation wishing to participate in engagement activities is constrained and incentivised in different ways through different processes (Smith and Stewart, 2017; Dunleavy and Tinkler, 2021). Researchers are incentivised primarily to seek individual 'research impact' often articulated in a linear narrative, whereas policymakers seeking to 'pull' research in may be looking to understand a policy problem through reading across different narratives and framings. This means that participants in engagement activities may not share the same aim, even if taking part in the same activity; and will likely participate in a way which benefits their own interests most.

Third, research-policy engagement activities may be selected on the basis of the familiar, rather than the effective; the 'if you're a hammer, problems look like nails' effect. For example, funders will seek to fund, whereas conveners like learned societies may seek to hold events and strategic discussions. This may work well for them, but not necessarily for the broader goal of improving evidence use. At present relationships between organisations are not configured in ways that facilitate working towards wider/shared goals (Best and Holmes, 2010). Even where clarity around aims exists, people are most likely to reach for familiar tools and approaches, rather than identifying common aims and then utilising the most effective option available.

It is therefore understandable that there are so many approaches to promote to research-policy engagement. It is, however, a challenge to those wishing to identify the most effective approaches. As well as lack of clarity about the nature of the ultimate goal, there are multiple strategies and practices which are deployed in its service. It is also possible that individual practices may serve multiple goals (e.g. improve decision-making; improve teaching quality in universities).

Ultimately, without more information about the effects of different approaches to research-policy engagement, it is likely that activities will have limited impact. Worse, they risk undermining aspects of the broader system (such as capacity and goodwill to engage) elsewhere. Thus, it is important to answer two main questions:

1. What research-policy engagement activities are being used with the goal of improving evidence use?

2. What is known about the impacts of these activities?

Methods: To explore these questions, we undertook a large-scale mapping exercise. To identify relevant activities, we conducted systematic desk-based searches for eight types of organisation in the UK (research funders, learned societies, universities, intermediaries, policy organisations and bodies, practice organisations and bodies, think tanks and independent research organisations, non-profits, and for profits/consultancies), and five overseas (research funders, universities, learned societies, intermediaries and policy organisations). After an initial systematic search from Dec 2019-Sep 2020 (with results summarised in Hopkins 2021), we surveyed a subsample of these stakeholders to ensure (a) we had identified as many relevant organisations as possible and (b) we had accurately collected data on activities. This led to a further 162 organisations being added to our dataset by December 2020.

There are many ways of categorising these kinds of activities (see, e.g. (Hoppe, 2009; Michie, van Stralen and West, 2011; Langer, Tripney and Gough, 2016). We have taken the approach of identifying **organisations, initiatives and activities** as the units of analysis. For example, the UK Parliament and the Economic and Social Research Council (ESRC) are both organisations, who fund an initative called the Parliamentary Office for Science and Technology (POST). POST also carries out a number of activities (e.g. runs networking events, publishes evidence syntheses). We included organisations in our dataset if there was evidence from their websites and associated documentation that they were now, or had ever been actively engaged in promotion of academic-policy engagement activities, with a particular emphasis on extracting insights for the UK. For this reason, we have assumed that learning from UK universities and learned societies will be relevant to other countries with developed research-policy systems.

Within each organisation or initiative, we identified specific activities used to promote engagement. For example, a research funder could directly fund research relevant to policy and/or practice; could support fellowships and secondments for academics to enter policy organisations; and could host policy-academic networking events. For each identified activity, we collected data on who it was aimed at, amount invested, and the key practices which strategies sought to employ. We shared an initial set of activities at a workshop in Feb 2020 with relevant funders, policymakers, researchers, and intermediaries. We used this workshop to identify an analytical strategy to synthesise and explore these data. Using their input, we refined our analytical approach and identified nine types of research-policy engagement *practices*: 1. Disseminating and communicating research, 2. Formal institutional requests for evidence, 3. Facilitating access to research, 4. Building decision-maker skills, 5. Building researcher skills, 6. Building professional partnerships, 7. Strategic leadership, 8. Rewarding impact, and 9. Creating infrastructure and posts.

Thus, we collected information on:
- which organisations and initiatives were actively promoting research-policy engagement (who; where; when; at what cost; funded by whom)
- how (what specific activities, and what types of practices they were engaged in), and
  to what effect (whether there was any evaluation of these activities, or other research indicating impact of these activities).
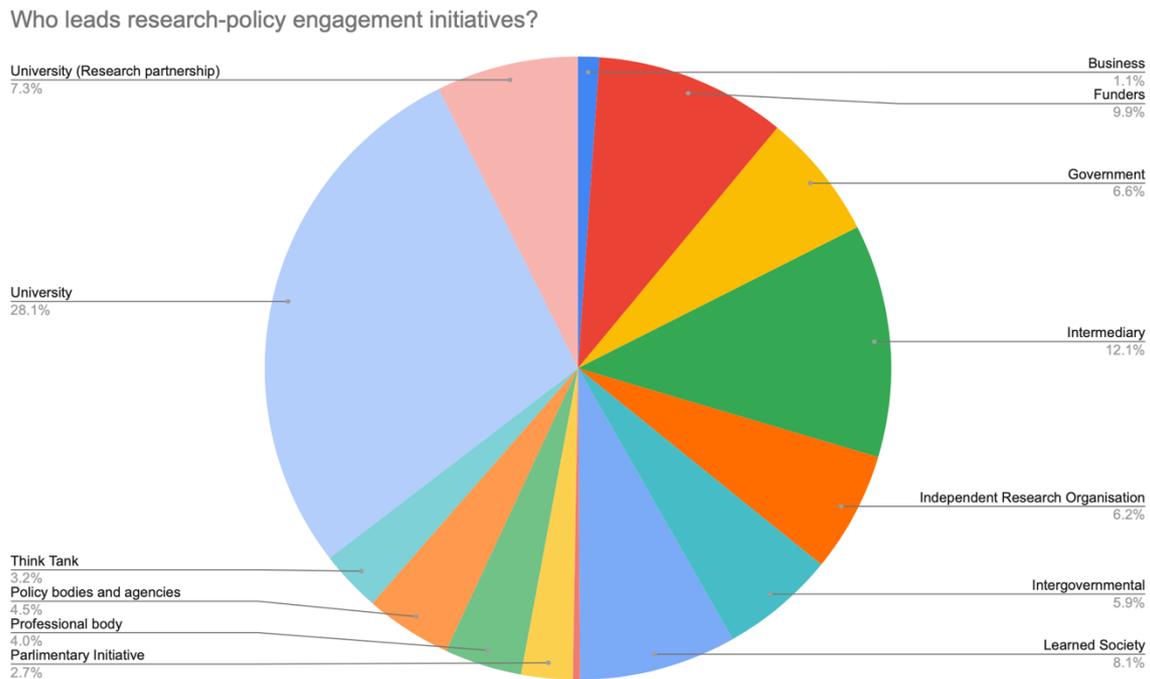
For more details on the search strategy and full dataset, please see supplementary methods file.

Results:

Overall, we identified 428 organisations globally who have been or are currently promoting research-policy engagement, in over 41 countries. Of these, the majority were university based (including

university teams, networks and multi-university research centres, but also included governmental departments and policy agencies, learned societies and professional bodies, intermediary organisations (such as What Works Centres and advocacy charities). We also found businesses, primarily publishers and database owners (see Figure 2).

Figure 2: Types of organisations which host research-policy engagement initiatives

We identified 1922 activities carried out by these organisations across multiple policy and practice areas. As is consistent with the literature, the majority of activities were aimed at health areas (n = add). Although the very oldest organisations in our dataset began over 500 years ago, by far the majority of research-policy engagement activities themselves date from 1945 onwards, with a large increase in activity from 2010 onwards. We conducted an analysis of the primary practice that initiatives were using, summarised in Table 1 and Chart 2. Again, note that some activities (e.g. fellowship schemes) may use more than one practice (e.g. building skills and disseminating research).

Practice	N organisations (N individual activities)	How many of these activities were evaluated?
1. Disseminating & communicating research	404 (503)	26 (6%)
2.Formal requests for evidence	158 (174)	2 (1%)
3.Facilitating access to research	256 (293)	23 (8%)
4.Building decision-maker skills	177 (252)	28 (11%)
5.Building researcher skills	167 (253)	9 (4%)
6.Building professional partnerships	258 (286)	28 (8%)
7.Strategic leadership	238 (257)	4 (2%)
8.Rewarding impact	54 (58)	0
9.Creating infrastructure and posts	211 (245)	21 (9%)
Total	513 organisations (1922 activities)	141 (6%)

By far the majority of activities (see Table 1) identified fell into the first category of **Practice 1: disseminating and communicating research**, with investment increasing since the late 1990s. For many, this has meant attempting to increase the impact of one piece of research, or pulling in evidence in direct response to a policy or practice need. Examples of this include the writing and dissemination of policy briefs, often based on evidence syntheses (see, for example, Partners for Evidence-driven Rapid Learning in Social Systems (PERLSS, 2018), to increase research appeal and accessibility. Existing evaluations suggest that these types of approaches to improving evidence use do little to address practical, cultural or institutional barriers to engagement (Langer, Tripney and Gough, 2016), and that although communication and dissemination products and events (e.g. newsletters and conferences) are valued by participants, they can demonstrate little impact on policy or practice.

The issuing of and response to **formal evidence requests**: **Practice 2** is one of the oldest ways in which governments seek to pull in evidence and expertise, usually to address a particular need, often using formal institutional mechanisms such as science advisory committees, or requests for evidence issued through legislatures and consultations (Beswick and Geddes, 2020). The publication of evidence priorities, such as the UK's Areas of Research Interest also operate as a static but public request for evidence (Nurse, 2015; Teers, Miller and Braddock, 2018). Evaluations suggest that greater support with thinking through the purpose and goal of formal evidence requests and associated activities would benefit governments by providing a more diverse and appropriate evidence base (Liaison committee 2019). 'Push' mechanisms that aim to inform government advice or consultation may be hampered by low academic and public visibility of Scientific Advisory Committees and Expert Committees (Cabinet Office, 2017).

Deliberate attempts to **facilitate access to evidence: Practice 3** have expanded over the past two decades, such as rapid response synthesis services (Mijumbi-Deve *et al.*, 2017), and supported commissioning processes (Gough, Maidment and Sharples, 2018). Some are funded directly by government, others by research funders. We found several long-term funder-led initiatives to promote partnership working and identify policy-relevant questions (*Living With Environmental Change (LWEC) - EPSRC website*, no date; Bednarek *et al.*, 2016). Government- and researcher-led activities include the co-creation research (e.g. the What Works Trials Advice Panel (*What Works Trial Advice Panel*, no date), which has worked with the UK government on over evaluation projects across 18 departments and public bodies), and the development of tools to support commissioning and help government departments set up research and evaluation projects (Sax Institute, 2019). Internally-conducted evaluations of initiatives supporting government to commission and co-develop research may have more potential to conduct policy-responsive research to both short and longer term timescales (*Policy Innovation Research Unit: Progress Report 2018-19*, no date; Teers, Miller and Braddock, 2018).

Organisations using **Practice 4: building policymaker (research) skills** focused on training or capacity-building (e.g. Canadian Science Policy Centre, the US Coalition for Evidence Based Policy and the UK Alliance for Useful Evidence). Training focused on understanding and using evidence is often provided by policy intermediaries (Morgan, 2020) or think tanks (Haddon and Sasse, 2018)). University-based training tends to focus on developing the expertise of policy professionals in specific areas such as security and communications (see the KCL Centre for Strategic Communications (KCSC) Executive Education programme). Such training was found by evaluations to often be too academic, with skills and knowledge at too detailed a level to easily apply (see, e.g. N8). Some evaluations report increased capacity for evidence use or generation, but often impact of this on practice was unclear. Policy fellowship programmes, found in 11 universities in the UK and US aim to formalise or increase the exchange of people and ideas between policy organisations and campuses. More commonly, research funders, policy organisations and universities aim to **build researcher skills: Practice 5**, meaning offer exposure to and knowledge about how policy works. These often takes the form of secondments and

internship schemes (Tyler, 2017; Morgan, 2020); in-house training provided by university policy teams; mentoring and coaching opportunities (*research4impact*, no date); and advocacy training (at the US Center for Child Health Policy and Advocacy). Training and professional development focused on engagement is an expanding are but almost no evaluations exist to what works for whom, in which settings and contexts, other than to say that there is considerable variation in the needs of researchers and policy partners (Langer, Tripney and Gough, 2016).

Practice (6) building professional partnerships appears to be an increasingly popular approach, primarily focusing on the creation of policy/practice-research collaborations, usually of limited life-span, and/or networks. Factors which appear to make these successful is linking related collaborations through funding or networking schemes, such as the William T Grant Foundation's Research-Practice Partnership programme, supported by a national knowledge-sharing network (Tseng, Easton and Supplee, 2018). In the USA, these partnerships are funded primarily by philanthropic donors, and in Africa through development budgets. The UK research councils and government have funded multiple such partnerships, primarily in health (such as the Collaborations for Leadership in Applied Health Research and Care, which bring together clinicians and researchers, or the NIHR-funded Policy Research Units), but also in local government (such as Leading Places (O'brien, 2018), or Engaging with Scottish Local Authorities (Hardill and Baines, 2012); and some issue-oriented collaborations such as around sustainability, (e.g. Living With Environmental Change (Warburton, 2011)) and policing (Hunter, May and Hough, 2017; Teers, Miller and Braddock, 2018; Page, 2019; May, Sen and Hough, 2020). Collaborative research initiatives have been more robustly evaluated (Hunter, May and Hough, 2017; Kislov *et al.*, 2018; Interface Associates UK Limited, 2020). Initiatives that aim to build relationships over the long term through partnerships or networks may be limited by insecure or project-based funding (Allen, Grace and Martin, 2015). There is also an expanding literature on research-practice partnerships which suggests that long term, mutualistic, collaborative working may be central to addressing barriers to improving evidence use identified in research, and improving the ability of engagement activities to provoke shifts in organisational cultures and routines (Coburn and Penuel, 2016; Farrell, Harrison and Coburn, 2019).

In addition to research collaborations, networks and networking opportunities were (according to mainly internal evaluations) valued by participants, particularly where sustained over longer periods (Frost *et al.*, 2012). Disciplinary examples include the specialist networks run by the British Society of Criminology (BSC), while others are sector-specific (the UN Science-Policy-Business Forum on the Environment) or organised at regional or national levels (for example The Brokerage network run by the Scottish Policy and Research Exchange, or the federally-organised US Scholars Strategy Network).

Activities focused on **strategic leadership: practice 7** tended to either be examples of organisations claiming they advocated for evidence-informed decision-making (e.g. EVIPNet, the Coalition for Evidence-based policymaking in the US), or providing training and capacity-building for individuals to develop strategic leadership skills. Organisational strategic leadership was noted for some international networks (e.g. Lister 2018) and funders (e.g. (ERA-Net, 2005) who were able to demonstrate convening powers around contentious issues, or to set agendas and expectations for engagement. Major academies in the UK, such as the Royal Society of Edinburgh, devote resources to pooling academic expertise and convening stakeholders with the aim of influencing global policy discussions. International associations build on the work of national academies in service of policy engagement, for example through the European Academies' Science Advisory Council (EASAC). At university level in the UK, the establishment of over a dozen dedicated policy teams in the past ten years reflects an attempt to more strategically embed policy skillsets and provide institutional strategy for knowledge exchange (Beswick & Gedddes, 2020), although in practice many may work more pragmatically to support individual researchers.

Our review of initiatives to **reward and incentivise engagement: practice 8** identified over 60 prizes or rewards for impact, knowledge exchange, or 'best use of evidence'. These are often run by, run by journals (Evidence and Policy's Carol Weiss Prize), Policy Institutes (the King's Policy Idol Competition), universities (Nottingham Universities' Keystone Award for non-academic members of staff), research networks (Life Sciences Research Network Wales' Research Impact Awards), and learned societies (for example the UK Political Studies Association's 'Best Use of Evidence' Award), as well as funding bodies (the ESRC's 'Impact Prize'). For funders, recent interest in professional development and research leadership may signal this as an area for future investment (Flinders, 2020). None have evaluations in the public domain.

Finally, some activities seek to **creating and embedding infrastructure: Practice (9)** at a more systemic level. Examples of this type of activity include the UK's Areas of Research Interest (ARIs) Fellowships which represent the first strategic attempt to align the work of public research councils with Departmental priorities (Gov.uk, 2017). More frequently, research-policy engagement activities have sought to embed infrastructure by creating longer-term relationships to ensure the (financial) sustainability of their project beyond the funded lifespan. However, most of the examples we identified demonstrated that these outcomes depended on links between individual researchers and policymakers rather than greater systemic connectivity ((Knight and Lightowler, 201, Allen, Grace & Martin, 2015), and indeed any impacts at this level appear to be the result of individuals going beyond their remits to create and sustain relationships via, for example, sharing resources such as staff and knowledge, leading to and depending on trust and goodwill (Kenny *et al.*, 2018). Most evaluations discuss job creation rather than systems-level indicators; however, there is clearly value in identifying where activities may complement one another, and the different roles organisations may play, in order to avoid competition for resources such as policymaker time.

Overall, we identified a total of 57 evaluations, of varied quality (see also Evaluation summary table, end). Most of these evaluations focused on one activity within one organisation, although some activities were evaluated more than once, and some organisations evaluated more than one activity per evaluation. We estimate between 3-13% of all activities were evaluated (57/1922 activities, to a maximum of 57/426 organisations) (See table 2.)

Some were independent and robust, but mostly these evaluations took the format of annual or 'end of project' summaries which described only selected aspects research-policy engagement activities carried out by that organisation (e.g. of their Fellowship programme but not of their convening or strategic advocacy activities). Thus, these should be taken as indications of the state of knowledge about *practices*, not at the unit of the organization. Most evaluations were quite recent, or in grey literature, and focused on individual projects and often done by those who worked on original research project.

Table 2: Summary of evaluation evidence for academic-policy engagement initiatives

Practice	N and % evaluated?	Overall state of evidence for this practice
1. Disseminating & communicating research	26 (6%)	Mostly internal evaluations suggest that organisations' stakeholders value their research outputs; limited evidence of effect on policy or practice
2.Formal requests for evidence	2 (1%)	Evaluations suggest that greater support with thinking through the purpose and goal of engagement activities would benefit governments by providing a more diverse and appropriate evidence base.

3.Facilitating access to research	23 (8%)	Collaborative research structures tend to benefit research and researchers more than partners by leading to more research; also more effective at dissemination than decision-influencing. Demand-side initiatives common.
4.Building decision-maker skills	28 (11%)	activities often focused on didactic, academically-heavy content to provide users with research skills which were often beyond the needs of the user. Some development of skills was valued by participants, but they often struggled to apply them in practice. Activities which focused on evidence use tended to focus on naïve interpretations of the policy process - very much the 'do policy better' model. Exceptions include the N8 which worked with police forces to determine their training needs (in this case data) and designing a course.
5.Building researcher skills	9 (4%)	Activities tend to focus on exposing researchers to policy or practice context, with individual but not organisational benefit (particularly for home organisation). Host organisations tended to benefit temporarily from increased resources.
6.Building professional partnerships	28 (8%)	These largely fell into two groups: the provision of networking opportunities, and the creation and support of research collaborations. Mostly, events and networking opportunities, particularly sustained over a period, were said to be valued by participants (mostly internal evaluations). Good governance and management structures were found to be fundamental to the success of these partnerships, particularly where attempting to generate policy or practice-relevant research. Unless managed well with good structures, career planning, governance, etc, these tend to benefit researchers more than partners. Longer-term initiatives offered more opportunity for learning and impact.
7.Strategic leadership	4 (2%)	Existing evaluations are rare. Evidence suggests that strategic leadership activities promote individual rather than organisational benefits. Where organisations claim strategic leadership roles, this is usually un-evidenced.
8.Rewarding impact	0	
9.Creating infrastructure and posts	21 (9%)	Achieving systems change is challenging and hard to evidence within the lifespan of most funded evaluations and projects. Initiatives included creation of consultative networks, but also 'above-and-beyond' connecting activities such as sharing resources, connecting relevant offices or staff; these would be undertaken on the basis of, and leading to goodwill. Evaluations tended to focus on systems-level indicators such as jobs creation, international or national fora which supported (financial) sustainability.

Discussion

Key findings: There has been huge expansion in research-policy engagement initiatives, probably a natural result of the longstanding (academic) focus on the perceived failure of policymakers to use evidence well (Weiss, 1979, 1998; Lomas and BROWN, 2009). Overall, we found 1928 individuals activities conducted by 426 organisations. As far as we know, this is the first attempt to systematically identify all research-policy engagement activities within the UK, with significant overseas coverage. This allows us to speak with confidence about the state of the evidence base, which we find to be scarce and/or hard to access. Our search methods (desk-based search) relied on websites, a participant survey and a stakeholder roundtable, and we committed significant resources to access this information in a way which we think has not been previously collated. Nevertheless, we would not claim to have exhaustively identified every paper or evaluation relevant to this topic. There is likely to be information out there produced for internal purposes that we were unable to access.

Most activity, and probably most money is still spent on disseminating and communicating research, which, as a sole strategy, has long been known to be ineffective at producing policy and practice change, or societal impact (Knott and Wildavsky, 1980; Contandriopoulos *et al.*, 2010). There has also recently been a focus on initiatives which seek to initiate or support inter-personal or inter-organisational relations (>700 identified). These operate on the assumption that creating direct interpersonal links leads to greater research use (Secret, Abell and Berlin, 2011; Gainforth *et al.*, 2014; Topp *et al.*, 2018). Recent research suggests that interpersonal links are indeed important in the production and use of relevant evidence (Sin, 2008; Ward, 2017), but need to be underpinned by long-term strategic and institutional support (Coburn and Penuel, 2016; Tseng, Easton and Supplee, 2018), but few of the relational initiatives we found were designed or operated in this way. We found few initiatives which could be described as attempting to operate at this higher systemic level, with most practice being linear or relational activities, undertaken with an awareness of the broader system (e.g. sets of stakeholders or organisational constraints) within which they operate. The literature on evidence use would suggest, however, that it is precisely this type of long-term, strategic working which attempts to bring together organisational goals and ways of working which is most likely to promote evidence use effectively (Holmes *et al.*, 2017). The emphasis on the knowledge-policy gap has led to a proliferation of activities, but few activities have been evaluated robustly or in a way likely to help researchers or policymakers to make effective decisions (Dwan, McInnes and Mazumdar, 2015).

We diagnose a dual design failure: unclear aims, and a lack of appreciation of the policy and practice contexts within which they are attempting to operate. Most initiatives appear to address the assumption that decision-makers do not listen to evidence, which is still widely held despite increasing evidence to the contrary (Elliott and Popay, 2000; Fischhoff and Scheufele, 2013). These initiatives are targeting a problem which may not exist (or at least not at the scale assumed by researchers). This means that when designing initiatives, many providers may have an inappropriate, or a poorly-articulated goal. We find this to be the case, with few having pre-specified outcomes which would indicate success or failure. Most initiatives refer to vague goals such as 'research impact' or 'policy change'. It may not be a reasonable outcome for a newsletter to demonstrate this kind of outcome – which may instead lead to interim goals like greater awareness of activities, interest on the part of decision-makers, willingness to converse, or initiation of relationships. This lack of specificity hinders quality evaluation – and as we have seen, very few of these initiatives had evaluations available in the public domain. The fact that few evaluations reported on potential impacts on policy and practice should not be taken as evidence of ineffectiveness. They may be having impacts on all kinds of outcomes, and, as previous reports have noted, it is important that these impacts are captured (Walker *et al.*, 2019). But because the existing evaluation evidence is so scarce, and there is so little disentangling of the mechanisms, assumptions, goals and outcomes associated with different activities, it is not possible to say which types of research-policy engagement activities will lead to which types of impact.

That does not mean, however, that it would not be possible to design evidence-informed research-policy engagement initiatives (Boaz *et al.*, 2016, 2019). An obvious next step would be to more fully synthesise the evidence on particular settings (e.g. local government, particularly on the supply vs. demand of evidence and on the civic university (Grace, 2006; Mawson, 2007; Curran, 2011; Hardill and Baines, 2012; Allen, Grace and Martin, 2015; O'brien, 2018; Rushmer and Shucksmith, 2018; UCL/LGA, 2020), provided by types of organisations (e.g. learned societies, or funders (e.g. (Grace, 2006; Health Economics Research Group, Office of Health Economics and Europe, 2008; Flinders and Anderson, 2019) or on types of activities (Fellowship schemes research to policy, for example). This would enable teasing out of the context-specific lessons for each of these. There is clearly scope to further build the evidence base to capture the learning from the immense amount of activities ongoing, including building rigorous evaluation into proposals for engagement activities.

It is understandable that there has been an increase in busyness as opposed to effective action. Much of the existing advice aimed at either researchers generally exhorts researchers to 'increase your own impact or the impact of your own research'(Oliver and Cairney, 2019). If everyone took this advice, it would lead to increasing noise and busyness, with unclear effects on decision-making or outcomes. Other advice is aimed at decision-makers, proposing greater use of evidence synthesis (Brownson *et al.*, 2018) or use of intermediaries (Davies *et al.*, 2017). As has been widely discussed in the literature, however, much of this advice - and indeed activity – does not seem to be based a good understanding of the policy world (Cairney and Oliver, 2018), or of the ways in which evidence and knowledge can inform and interact with decision-making (Grundmann, 2017; Tseng, 2008).These initiative would also be more likely to be effective if they responded to a more realistic picture of the decision-making context they sought to influence (Wellstead, Cairney and Oliver, 2018).

This would help prevent significant wasted investment (time, money and resources) in ineffective activities. It is hard to get a clear financial picture of how much has been spent on these types of activities, but it seems reasonable to assume that a very significant sum has been spent in the last decade alone on the attempt to achieve 'impact' – what Knott and Wildavsky call "tangible benefits of information" (Knott and Wildavsky, 1980). Unfortunately, we did not find a single robust evaluation which clearly demonstrated the more distal outcomes of ameliorated societal outcomes, or increased evidence use by decision-makers, as a result of these investments – on the contrary (see, e.g. (Kislov *et al.*, 2018). Evaluations of interventions tend to report on more proximal outcomes, such as influence on ideas held by decision-makers or attitudes to evidence use in general, but there are very few which track through to those later stages of implementation (Hanney *et al.*, 2020). This matters, particularly where interventions are claiming impact on, or attempting to address these distal goals (even if, in practice, more proximal ones are being targeted).

Less concretely, but we believe equally importantly, the increased number of initiatives in this space are likely to lead to competition between them (for, for example, the scarce resource of policymaker attention (Cairney, 2018)). Without good evidence to help them choose where to engage, policymakers risk opportunity costs (e.g. engaging with the less effective initiative). Poor experiences of engagement can reduce goodwill on all sides, harming not just the initiative in question, but the system more broadly. The next academic to knock on the door may receive a less favourable response from an unhappy policymaker (Oliver and Cairney, no date). It is in all our interests to support effective engagement.

Increased competition may also exacerbate existing inequalities (e.g. by engaging with richer sets of researchers, with all the structural inequities which that implies (Oliver, Kothari and Mays, 2019)). Competition between research-led engagement initiatives to be the 'go-to' voice for academic policy engagement in particular may favour better-resourced or more 'acceptable' academic voices. It could

also limit opportunities for conversation or deliberation about what shared goals there may be, within this crowded space. Few initiatives make their values explicit; indeed, many prefer to see research production as a morally neutral activity (Sarewitz, 2018). With the focus on delivery rather than reflection and learning, there is a real risk that important questions about the ethics and values underpinning existing activities go unchallenged and unexamined.

Conclusion: Overall, the picture is of a vast and increasing mass of rudderless activity, which is busy rather than effective. Without clear goals, and without strategic coordination, it is impossible to pick out any signal over the noise. Worse, without clearly collecting and building on existing evidence about these type of interventions, or on a well-founded understanding of the decision-making context there are almost certainly harms being inflicted. Harms are likely to include wasted time and resources, reduced goodwill and interaction, and increased inequalities in terms of participation in evidence production and use. We also believe we have a moral responsibility to understand and debate the moral and ethical values underpinning these activities, and to somehow create space for shared conversation about whom the research-policy system does, and should serve.

What could we do differently? We see three main ways forward. First, for those wishing to design and implement new initiatives and interventions, we suggest engaging with the existing literature to help clarify what you are doing, why, and how it can be informed be existing studies and perspectives. There is now a wealth of empirical evidence and commentary about how policymaking works in different contexts ((Boaz and Gough, 2012; Ferlie *et al.*, 2012; Smith, 2014; Cairney, 2016; Gough *et al.*, 2018). The evidence about research policy engagement initiatives is more limited, but pockets of rich and nuanced evidence exists and should be used. There is also a rich multidisciplinary scholarship on evidence production and use, which should be better shared and used (Oliver and Boaz, 2019; Smith *et al.*, 2019). This step is crucial, since too many initiatives begin with unclear aims, not discussed properly among pushers and pullers. Researchers would not get away with an undeveloped approach to funded research, so the same should apply with funded engagement.

Second, if you have clarified your aims, you can establish the extent to which a new initiative complements or competes with projects in the current landscape. If competition between initiatives does indeed cause the harms we outline above, could discussions about shared goals and coordinated activities offer a way forward? Funders in particular could incentivise collaborative work/evaluation across these initiatives. Further empirical and conceptual work is required taking a systems lens to articulate shared goals and activities to prevent working at cross purposes, select activities and invest in them strategically. This would (a) be more democratic, in terms of enabling a shared conversation about what different stakeholders wish to put into, and get out of our common research-policy engagement activities (including the generation of research). It would also enable more strategic activity and investment rather than the current 'throw it at the wall and see what sticks / suck it and see' model, which, as this paper demonstrates, is both wasteful, likely to be ineffective, and may cause harm through opportunity costs and reduction of the good will on which this entire endeavour patently depends.

Third, if you complete the first two steps, you can take seriously the existing evidence on 'what works' in relation to comparable initiatives, use it to produce a clear plan of action that can be evaluated somehow, and establish how an evaluation of this work will aid comparable projects. All those with an interest in more effective and ethical research-policy engagement should actively seek to contribute to the evidence base. Most evaluations were conducted by the researchers involved in delivery, and were mainly reports for funders. As such, they had no incentive to connect with the broader field of study on evidence production and use, nor to draw out broader lessons. Yet it is possible to specify clear research gaps in this area. We need to better understand the goals and aims

of different strategies and whether they achieve them. We can do this by asking clearer questions to guide research and evaluation of these types of activities, such as:

- What are the goals and outcomes of different evidence-use activities employed by different actors (including funders, decision-makers, or researchers) within the research system?
- What are the specific goals of these different activities, and how do they work in practice? Is it possible for those doing these activities to articulate and share their theories of change?
- Do some activities deliver particular goals or outcomes more effectively than others?
- If so, what types of activities (generational; mechanism; deliverer; context) should be employed to deliver what types of outcomes?
- Who is best placed to deliver which kinds of activities, and what relationships with others are necessary to support them? (For example, university policy teams may be well placed to support researchers, but not well placed to lead or shape engagement with government)

There are some signs that the wider agenda we set out is beginning to be recognised by governments and funders, in their recognition of (aspects of) the research-policy system (Leyser, no date; Fransman *et al.*, 2018; Government Office for Science, 2019; UKRI, 2019). Finding ways to connect these conversations, and to act on our shared learning, will be key to establishing a research system which works for us all.

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