

How should academics engage in policymaking to achieve impact?

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Abstract. This article reviews the advice from the academic and 'grey' literatures to identify a list of dos and don'ts for academics seeking 'impact' from their research. From 'how to do it' sources, we identify consistent advice on how to engage effectively, largely because it is necessarily vague, safe, and focused primarily on individuals. We then consider the wider policymaking system in which actors make political choices and have unequal access to impact opportunities. We identify the effort it takes to have actual policy impact and how far academics should be expected to go to secure and take credit for it.

Introduction

Academics are under increasing pressure to engage with policymakers, practitioners, publics, and traditional and social media. However, they face major ethical, personal, and practical dilemmas about if, when, and how to engage to influence policy. Further, the positive and negative effects of such engagement, from workplace promotion to personal intimidation and social media abuse, are not experienced equally. In that context, there has been an explosion of activity, on the theme of dos and don'ts for academics, but with no guarantee that 'one best way' to engage for policy impact will ever emerge.

What does the currently available advice add up to? Does it produce consistent messages that can be organised into key general themes for all academics, with the potential to be tailored for political studies researchers in a straightforward way? Or, is the advice based on narrow points of view from specific individuals or disciplines that are not relevant to political studies? Does it help academics secure meaningful 'impact' or merely help them play the game and describe enough impact activity to satisfy their employers and funders?

To help answer such questions, we first draw on systematic reviews of two sources of general advice on impact: (1) peer-reviewed articles by scientists describing their experiences of the 'barriers' between evidence and policy (Oliver et al, 2014), and (2) the 'grey' literature, in which there is a rich source of reports and blogs by experienced researchers, practitioners and policymakers (Oliver and Cairney, 2019). From these sources, we can identify fairly consistent advice that is relevant to political studies scholars. For example, most accounts emphasise the need for short, concise, and freely available reports in plain language, to counter a tendency towards inaccessible jargon-filled articles behind a paywall. Further, many encourage more face-to-face contact with policymakers and practitioners, to help us understand and tailor our research to our audience, while some advocate the greater use of blogs and a professional social media presence.

While such advice seems sensible, it is not informed routinely by policy studies or political science accounts of the relationship between evidence and policy (Cairney, 2016). Consequently, there is a problematic tendency to produce advice that is: too general, on the assumption that advice applicable to one type of scientist is applicable to them all; too 'safe', without exploring the politics of engagement; and, too reliant on a linear idea of impact in which there is a direct relationship between activity and outcome. Social science accounts question the idea that academics can apply such generic advice to have such a direct effect on policy and policymaking (Boswell and Smith, 2017). Rather, game-playing Universities use this understanding to tell an overly heroic story of individual academics (Dunlop, 2018; see

also Moran and Browning, 2018). It is important to separate some general, sensible, ‘how to’ advice regarding activities like *clear communication* and *networking* from the more specific and challenging advice – regarding concepts such *framing* and *coalition-forming* – that we would associate with political activity and derive from actual studies of evidence-informed policy change (Cairney and Kwiatkowski, 2017). Indeed, it would be ironic if political studies academics restricted themselves to the safe but often low-impact or unreflective strategies recommended by their peers in other disciplines.

Therefore, to challenge and help improve the ‘how to’ advice - found predominantly in the ‘grey’ literature and periodically in peer reviewed ‘barriers’ studies - we identify the ways in which academic political science and policy studies raise key issues and frame more fundamental questions. First, the ‘how to’ literature focuses on *individuals* or organisations, such as when recommending concise reports and a social media profile. Policy studies focus more on policymaking *systems* and the difficulties of separating the effect of individual action from systemic effects. Effective actors, in such systems, tend to invest for the long term to, for example, become part of larger coalitions and learn how to frame evidence in relation to the beliefs of their audience. Second, few sources of advice address ethical or political dilemmas regarding, for example, variations in the power and vulnerability of researchers when they engage in politics and policy. Key issues can range from: the line we think we can draw between evidence framing and manipulation (Cairney and Oliver, 2017), the balance between tailoring advice and pandering to the ideology of our audience (Cairney, 2018a), and the extent to which Universities can expect academics to engage on social media when they know that some may be listened to less but abused more.

Third, these issues intersect with systemic issues regarding what it really takes to have policy impact. Put most strongly: would we expect academics to engage for the length of their career - while often feeling confused, vulnerable and compromised - in the hope of exploiting a ‘window of opportunity’ for change that may never come? Or, put more generally: to go beyond standard advice is to consider the wider policymaking system in which academics must make political choices and exercise power, raising more profound questions about what it takes to have impact and how far academics should be expected to go to secure it.

We explore these issues in the following sections, asking how each source of advice engages with safe issues versus key dilemmas. First, we synthesise insights from two sources of literature on impact and evidence-informed policymaking: peer-reviewed studies of the ‘barriers’ between evidence and policy, generally from health and natural sciences; and, lessons on engagement from the grey literature, written by experienced practitioners and researchers of the policy process. Second, we show how studies informed by policy studies and political science change the way we think about impact, from a focus on individual advice to systemic issues and dilemmas. Third, we reflect on the gap between safe advice on how to engage and the more challenging issues that arise when we consider what it would take to secure real, long term policy impact with evidence. Overall, we reject the idea that political scientists can draw on generally applicable ‘how to’ advice. Further, political and policy studies concepts help us identify the major dilemmas that scholars face when they seek to engage for impact.

[Studies of the ‘barriers’ to academic impact and practical advice on how to respond](#)

In the UK, a key source of context is the relatively hopeful story of academic impact contained in the ‘Research Excellence Framework’ and the requirement to describe ‘pathways to impact’

to secure Research Council funding (Boswell and Smith, 2017: 2). It builds largely on “linear models of the policy process, according to which policy-makers are keen to ‘utilise’ expertise to produce more ‘effective’ policies” (2017: 1). If so, governments will pursue “a more ‘evidence-based approach to policymaking”, researchers ‘have a responsibility to articulate the impact of their research to non-academic audiences’, ‘this impact can be documented and measured’, and ‘researchers’ own efforts to achieve research impact will play a significant role in explaining why some research has impact beyond academia and some does not’ (2017: 2-3). Boswell and Smith (2017: 7) suggest that such ‘simplistic supply-side models’ may ‘offer a reassuring narrative to both policy-makers and researchers’ but do not provide the types of ‘theoretically informed’ analysis that would help us waste less time, play fewer games, and think more sensibly about impact. Rather, they exacerbate two key problems in the literature.

First, a cadre of scholars of evidence/policy draws incomplete conclusions when trying to explain the main ‘barriers’ to their impact. Oliver et al (2014) conducted a systematic review of 145 articles published since 2000 on the ‘barriers of and facilitators to the use of evidence by policymakers’. Most focus on health, generally providing insights from the perspective of researchers, and often with a comparison between ‘evidence-based policymaking’ and ‘evidence-based medicine’ in mind (Cairney and Oliver, 2017; Oliver and Pearce, 2017). Very few studies draw on theoretically-informed analysis of the policy process (Oliver, Lorenc and Innvær, 2014). Cairney (2016: 90-2) supplements this search in the field of environmental science, finding a similar focus on personal experience or surveys of scientists describing the obstacles they faced. These limitations are reflected in the proposed solutions to key barriers, including:

1. Produce better quality evidence on policy problems and solutions.
2. Improve dissemination strategies to increase policymaker access to research: write more concise and less jargon-filled reports, boost resources for dissemination, and remove paywall obstacles to accessing research.
3. Develop relationships with policymakers, to address the unpredictability of politics, or the importance of timing, serendipity, and ‘windows of opportunity’ to act.
4. Engage directly, in academic-practitioner workshops, or use intermediaries such as ‘knowledge brokers’, to break down communications and cultural barriers associated with the different incentives, rhythms, and language of researcher and policymakers.
5. Encourage policymakers to be more science literate, to appreciate the role of evidence and ways to separate high- and low-quality sources (Oliver *et al.*, 2014; Cairney, 2016: 57-8; 90-2; Topp *et al.*, 2018)

Second, there is continuous anxiety among researchers asked to do the impossible with their research using ‘how to’ advice found regularly in the ‘grey’ literature. Oliver and Cairney (2019) searched systematically – in Scopus, Web of Science, Google Scholar, and selected websites and journals - for academic, policy, and grey publications which offer advice to academics or policymakers on how to engage better with each other. This search captures letters, editorials, think-pieces, and blogs, all of which are usually ignored by evidence syntheses. These sources produce a remarkably consistent set of tips over time and across disciplines. We summarise the key themes and individual recommendations from 86 publications (see Oliver and Cairney, 2019 for a full account of method and results):

1. **Do high quality research.**

- Use specific well-established research designs, methods, or metrics (Aguinis *et al.*, 2010; Sutherland, 2013; Caird *et al.*, 2015; Sutherland and Burgman, 2015; Andermann *et al.*, 2016; Lucey *et al.*, 2017; Donnelly *et al.*, 2018).
2. **Make your research relevant and readable.**
 - Provide and disseminate easily-understandable, clear, relevant and high-quality research (NCCPE, no date; Maddox, 1996; Green *et al.*, 2009; Farmer, 2010; Kerr, Riba and Udow-Phillips, 2015; Colglazier, 2016; Tesar, Dubois and Shestakov, 2016; Echt, 2017b; Fleming and Pyenson, 2017; Olander *et al.*, 2017; POST, 2017).
 - Aim for the general but ‘not ignorant’ reader (Farmer, 2010; Goodwin, 2013; Hillman, 2016) (Havens, 1992; Norse, 2005; Simera *et al.*, 2010; Boyd, 2013; Bilotta, Milner and Boyd, 2015; Whitty, 2015; Kerr, Riba and Udow-Phillips, 2015; Docquier, 2017; Eisenstein, 2017; Olander *et al.*, 2017; POST, 2017).
 - Use storytelling. Produce good stories based, for example, on emotional appeals or humour to expand your audience (Evans, 2013; Fischhoff, 2015; Docquier, 2017; Petes and Meyer, 2018).
 3. **Understand the policy process, policymaking context, and key actors.**
 - Understand the policy process in which you engage (NCCPE, no date; Graffy, 1999; Tyler, 2013; Hillman, 2016; King, 2016; Cairney P, 2017; Marshall and Cvitanovic, 2017; Tilley *et al.*, 2017).
 - Note the busy and constrained lives of policy actors (Lloyd, 2016; Docquier, 2017; Prehn, 2018).
 - Maximise your use of established ways to engage, such as in advisory committees (Gluckman, 2014; Pain, 2014; Malakoff, 2017).
 - Be pragmatic about what ‘success’ looks like, accepting that research rarely translates into policy options directly (Tyler, 2013; Gluckman, 2014; Sutherland and Burgman, 2015) (Prehn, 2018).
 4. **Be ‘accessible’ to policymakers: engage routinely, flexibly, and humbly**
 - As publicly-funded professionals, it is the job of academics to engage with policy and publics (Aurum, 1971; Nichols, 1972; Burgess, 2005; Farmer, 2010; Shergold, 2011; Maynard, 2015; Boswell and Smith, 2017; Tyler, 2017).
 - Discuss topics beyond your narrow expertise, as a representative of your discipline or the science profession (Petes and Meyer, 2018).
 - Be humble, courteous, professional, and recognise the limits to your skills when giving policy advice (Goodwin, 2013; Fischhoff, 2015; Kerr, Riba and Udow-Phillips, 2015; Hillman, 2016; Jo Clift Consulting, 2016; Petes and Meyer, 2018; Prehn, 2018).
 - Respect policymakers’ time and expertise (NCCPE, no date; Goodwin, 2013; Jo Clift Consulting, 2016; Petes and Meyer, 2018).
 5. **Decide if you want to be an ‘issue advocate’ or ‘honest broker’** (Pielke, 2007).
 - There is a commonly-cited ethical dilemma about whether to go beyond providing evidence to recommend specific policy options (Morgan, Houghton and Gibbons, 2001; Morandi, 2009) or remain an ‘honest broker’ (Pielke, 2007) explaining the options (Nichols, 1972; Knottnerus and Tugwell, 2017).
 - If making recommendations, use storytelling to persuade policymakers of a course of action (Evans, 2013; Fischhoff, 2015; Docquier, 2017; Petes and Meyer, 2018).
 - However, note the consequences of becoming a political actor. David Nutt famously lost his advisory role after publicly criticising government drugs policy, some describe the loss of one’s safety if adopting an activist mindset (Zevallos, 2017), and anecdotal conversations describe the risk of losing credibility in government if seen as too evangelical while giving policy advice. However, more common consequences include

criticism within one's peer-group (Hutchings and Stenseth, 2016), being seen as an academic 'lightweight' (Maynard, 2015), being used to add legitimacy to a policy position (Himmrich, 2016) (Reed and Evely, 2016; Crouzat *et al.*, 2018), and the risk of burnout (Graffy, 1999) (Fischhoff, 2015).

6. **Build relationships (and ground rules) with policymakers**

- Relationship-building activities require major investment and skills, but working collaboratively is often necessary to get evidence into policy (Sebba, 2011; Green D, 2016; Eisenstein, 2017).
- Academics could identify policy actors to provide better insight into policy problems (Chapman *et al.*, 2015; Colglazier, 2016; Lucey *et al.*, 2017; Tilley *et al.*, 2017), act as champions for their research (Echt, 2017a), and identify the most helpful policy actors, who may be advisors rather than ministers (Farmer, 2010; Pain, 2014; Green D, 2016; Jo Clift Consulting, 2016).
- However, collaboration can also lead to conflict and reputational damage (de Kerckhove, Rennie and Cormier, 2015). Therefore, when possible, produce ground rules acceptable to academics and policymakers. Successful engagement may require all parties to agree about processes (ethics, consent, and confidentiality) and outputs (data, intellectual property) (de Kerckhove, Rennie and Cormier, 2015; Game, Schwartz and Knight, 2015; Hutchings and Stenseth, 2016).

7. **Be 'entrepreneurial' or find someone who is**

- Much advice projects an image of a daring, persuasive scientist, comfortable in policy environments and always available when needed.
- Develop 'media-savvy' skills (Sebba, 2011) to 'sell the sizzle' (Farmer, 2010).
- Become able to 'convince people who think differently that shared action is possible,' (Fischhoff, 2015) and that real, tangible impacts are deliverable (Reed and Evely, 2016).
- If not able to act in this way, hire brokers to act on your behalf (Marshall and Cvitanovic, 2017; Quarmby, 2018).

8. **Reflect continuously: should you engage, do you want to, and is it working?**

- Academics may be a good fit in the policy arena if they 'want to be in real world', 'enjoy finding solutions to complex problems' (Echt, 2017a; Petes and Meyer, 2018), or are driven 'by a passion greater than simply adding another item to your CV' (Burgess, 2005)
- Keep track of when and how you have had impact, and revise your practices continuously (Reed and Evely, 2016).

It is difficult to conclude that these solutions would boost research impact significantly, largely because they are based on questionable diagnoses and remain unlikely to happen (e.g. boosting science literacy in policymakers), or because they only address one part of a larger problem (e.g. communicating simply). For example, there is minimal focus on the competition to define good evidence. Most policymakers – and many academics - prefer a wide range of sources of information, combining their own experience with information ranging from peer reviewed scientific evidence and the 'grey' literature, to public opinion and feedback from consultation (Weiss, 1979; Nutley *et al.*, 2000; Nilsson *et al.*, 2008; Lomas and Brown, 2009; Nutley, Powell and Davies, 2013; Cairney and Oliver, 2017; Davidson, 2017). In that context, the task is not simply to summarise concisely what you think is the best evidence, but also to frame its implications to make it policy relevant and in demand by policymakers (Topp *et al.*, 2018).

Further, there is insufficient focus on the factors that political scientists and policy process scholars would use to understand the role of evidence in policymaking: the ways in which

policymakers address ‘bounded rationality’, and dilemmas created by a complex policymaking environment in which the discrete effect of individual action is often impossible to determine (Parkhurst, 2016; Cairney, St Denny and Matthews, 2016; Andrews, 2017; Cairney, 2017; Witting, 2017; Cairney, 2018b; Cairney and Kwiatkowski, 2017; Cairney and Oliver, 2017; Cairney and Weible, 2017; D. Jones and Anderson Crow, 2017; Sohn, 2018; Zampini, 2018; Cairney and Rummery, 2018; Cairney and Yamazaki, 2018).

How do theory-informed policy studies challenge this advice?

Policy studies provide two profound qualifications to the dos and don’ts literature. First, they seek to capture the effect of ‘bounded rationality’ which – in comparison to the ideal-type ‘comprehensive rationality’ - describes the inability of policymakers to separate their values from facts, rank their preferences consistently, make policy in linear ‘stages’, or analyse the policy and policymaking context comprehensively (Simon, 1946; Lindblom, 1959). Although advances in scientific method and technology *might appear* to help solve this problem, they do not. The ‘radical uncertainty’ of policy problems makes them difficult to predict (Tuckett and Nikolic, 2017). More evidence does not help us adjudicate between unclear preferences or simplify the policy process in which they are considered. Policy-relevant science remains value-laden, from the decision to ask a specific research question on a problem in a specific way, to the ways in which we evaluate the success of a solution (Douglas, 2009; Botterill and Hindmoor, 2012; Cairney, 2019).

Although it is possible for scientists to ignore wider debates on their own knowledge claims and values, they must contend with the bounded rationality of policymakers. Indeed, there are profound consequences to the ways in which policymakers deal with it. Cairney and Kwiatkowski (2017) describe cognitive shortcuts provocatively as ‘rational’, to use simple rules (including trust in expertise) to identify good enough sources of information, and ‘irrational’, to use their beliefs, emotions, habits, and familiarity with issues to identify policy problems and solutions (see Haidt, 2001; Kahneman, 2011; Lewis, 2013; Baumgartner, 2017; Jones and Thomas, 2017; Sloman and Fernbach, 2017). Yet, the key point is the focus on cognitive shortcuts *overall*, to turn our understanding of the role of policy-relevant research evidence on its head. Ditch the idea of a ‘knowledge deficit’ to be solved by *more* scientific evidence in the pursuit of comprehensive rationality (Crow and Jones, 2018). In its place, embrace the image of policymakers seeking ‘computationally cheap’ (Gigerenzer, 2001) ways to *ignore* almost all evidence to allow them to make choices decisively.

This focus on cognitive shortcuts helps us understand the ways in which effective actors present information to influence policy: a narrow scientific emphasis on producing more information to reduce scientific uncertainty should be expanded to a wider emphasis on *framing* research evidence to address ambiguity (Cairney, 2016; Wellstead, Cairney and Oliver, 2018). Ambiguity generally describes disagreement on how to interpret the world, and specifically the many ways in which we can describe an issue as a policy problem. Actors compete to draw attention to one ‘image’ of a problem at the expense of all others and, if successful, they limit attention to a small number of feasible solutions (Kingdon, 1984; Majone, 1989; Baumgartner and Jones, 1993; Zahariadis, 2007). Indeed, the competition to resolve ambiguity helps determine the demand for evidence. This is a highly political process, to exercise power to determine who describes the world and its most important problems, not a technical process, to research naturally important issues objectively without considering how we define them.

Second, theory-led studies examine the implications of policymaking complexity. The classic ideal-type of policymaking identifies a policy cycle containing a series of well-defined and linear stages (Wegrich and Jann, 2006): 44). In this scenario, we know when and how to present evidence, to: help measure the size of a problem (agenda setting), generate evidence-informed solutions (formulation), and use evidence to implement and evaluate solutions before deciding if they should continue. This image is one of the few described in the ‘barriers’ literature (Oliver, Lorenc and Innvær, 2014) but is, at best, a story for policymakers to tell about their work, not an accurate description of it (Cairney, 2015; Topp *et al.*, 2018). In contrast, policy theories combine key political science concepts to capture the constituent parts of policymaking environments, summed up as follows (John, 2003: 488; Cairney and Heikkila, 2014: 364-6):

1. Many actors making and influencing choices at many levels of government. Researchers are competing with many actors to present evidence and secure a policymaker audience, and there are many ‘venues’, or arenas in which authoritative decisions can take place.
2. A proliferation of ‘institutions’, or the rules and norms maintained by many policymaking organisations in each venue. Studies of ‘new institutionalism’ suggest that these rules can be formal and well understood, or informal, unwritten, and difficult to grasp (Ostrom, 2007a; 2007b). They include the many possible rules of evidence gathering, from who takes the lead to the sources and types of evidence they favour.
3. The pervasiveness of policy networks, or the relationships between policymakers and influencers, many of which develop in ‘subsystems’ and contain relatively small groups of specialists.
4. A tendency for well established ‘ideas’ – as the ‘core beliefs’ of policymakers or ‘paradigms’ in which they operate - to dominate discussion (Hall, 1993). They provide context for policymaking, influencing levels of receptivity to new policy solutions proposed to policymakers (Kingdon, 1984).
5. Policy conditions and events that can reinforce stability or prompt policymaker attention to shift. Social or economic ‘crises’ or ‘focusing events’ (Birkland, 1997) can prompt lurches of attention from one issue to another.

Seeking impact: when safe advice meets professional dilemmas

These concepts describe a wider context in which to gauge the meaning and applicability of practical advice, in three main ways. First, note the extent to which general ‘how to’ advice would change with these factors in mind. If there are so many potential authoritative venues, devote considerable energy to finding where the ‘action’ is (and someone specific to talk to). Even if you find the right venue, you will not know the unwritten rules unless you study them intensely. Some networks are close-knit and difficult to access because bureaucracies have operating procedures that favour some sources of evidence. Research advocates can be privileged insiders in some venues and excluded completely in others. If your evidence challenges an existing paradigm, you need a persuasion strategy good enough to prompt a shift of attention to a policy problem and a willingness to understand that problem in a new way. You can try to find the right time to use evidence to exploit a crisis leading to major policy change, but the opportunities are few and chances of success low.

In that context, policy studies recommend investing your time over the long term – to build up alliances, trust in the messenger, knowledge of the system, and to seek ‘windows of opportunity’ for policy change – *but offer no assurances that any of this investment will ever pay off* (Cairney, 2016: 124; Stoker, 2010; Weible *et al.*, 2012; Cairney and Oliver, 2017). This advice can also be found in parts of the grey literature, which suggests that not everyone has the motive or skills to be effective in persuasion or network formation. Influencing policy is ‘a specialist, time-consuming activity’ (Lloyd, 2016) that takes huge cognitive and emotional labour, often requiring community and institutional support (Kerr, Riba and Udow-Phillips, 2015). Addressing, but not solving, complex problems with real-world ramifications should excite you, perhaps to the extent that entering public service is the most likely route to impact (Farmer, 2010; Petes and Meyer, 2018).

Second, note how this wider policymaking context - and the weak link between engagement and payoff - informs discussions in the grey literature about common dilemmas:

- Should academics advocate for policy positions (Tilley 2017) and offer policy implications from their research (Goodwin, 2013)? Or, should they be careful not to promote particular methods and policy approaches (Gluckman, 2014; Hutchings and Stenseth, 2016; Prehn, 2018), leaving this political role to specialist scientific advisors (Hutchings and Stenseth, 2016), to maintain academic independence and impartial advice (Whitty, 2015; Alberts *et al.*, 2018; Dodsworth and Cheeseman, 2018) or reduce conflict (de Kerckhove, Rennie and Cormier, 2015)? The academic literature on policy networks and communities suggests that policymakers and influencers engage so regularly that they adapt to each other’s beliefs, and often begin to share an outlook on the policy problem, which blurs the boundaries between formal authority and informal influence (Jordan and Cairney, 2013). Therefore, the dichotomy between engaging to provide advice versus recommendations becomes artificial; successful evidence advocacy requires a level of engagement in networks that blurs the divide between scientist and policymaker (Himmrich, 2016).
- Should academics help ‘co-produce’ knowledge and policy with others? Co-production is often hailed as the most useful way to promote research evidence in policy (Geddes et al, 2018) but, to do so in a meaningful way, researchers must cede control over the research agenda (Flinders et al, 2016; Matthews et al, 2017). There are reputational risks: it can prompt accusations of bias, partisanship, or partiality for one political view over another. Yet, the implicit or explicit framing of these risks is often in relation to (a) an artificial image of the academic as impartial, and/ or (b) the idea that academics have other, more straightforward, options to achieve policy impact. Alternatively, if we accept that impact requires a more profound level of engagement, we see that the risks to co-production are no higher than other feasible strategies.
- Should academics engage for instrumental reasons or engage in more sincere engagement, perhaps even to change their outlook and improve their research? Much advice rests on the assumption that academics are engaging primarily to persuade policymakers to privilege and act on their research. A better choice is to engage primarily to listen and learn, then reflect on their research practices, outputs, and most useful contribution (Parry-Davies and Newell, 2014). Indeed, the instrumental academics may be damaging 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).

Third, policy studies and political science concepts help raise specific issues about the dilemmas associated with impact. For example, ‘new institutionalism’ studies help us understand the *profoundly unequal payoffs to engagement*. Broadly speaking, historical institutionalism might suggest that evidence may not influence policy dramatically if it goes against a series of choices made and reinforced over decades (Pierson, 2000), while discursive institutionalism suggests that policymaking is more open to the types of communicative discourse that may suit some social scientists (Schmidt, 2010). More notably, feminist institutionalism suggests that the ‘rules of the game’ in politics provide unequal access to men and women (Lovenduski, 1998; Mackay, 2004; Kenny, 2007; Chappell and Waylen, 2013). Further, if we combine institutionalist studies with the wider literature on power and knowledge, we find that many women form feminist networks built partly on their experiences of exclusion (Woodward, 2004; Cairney and Rummery, 2018), there is a stronger tendency for women of colour to be abused and threatened in debate (Zevallos, 2017) and erased in intellectual and activism history (Cooper, 2017; Emejulu, 2018), while some forms of knowledge – primarily from the Global South - are marginalised in academic studies and policy debate (Hall and Tandon, 2017; Oliver and Faul, 2018). These imbalances in respect for knowledge claims, and opportunities to communicate or engage, combine with similar types of inequality within the academic profession, in which white men are more likely to be in senior academic positions, published and cited in high ‘impact’ journals, and submitted to the REF publication and impact process (see for example HEFCE, 2015; Williams *et al.*, 2015). To play the REF game without acknowledging these problems is to legitimise and reinforce the inequalities that many of us profess to oppose.

Concluding discussion

On the one hand, the UK’s impact agenda is a sincere attempt to provide new incentives and rewards to scholars. The older peer review dominated system tended to reward scientific work that appeals primarily to an academic audience, and the rewards for impact perhaps encourage a change of mindset in some academics, or provide more reward for academics already invested in social and political impact. In that context, the ‘how to’ advice is very useful to scholars new to the field, seeking advice on impact, and uninterested in reinventing the wheel or learning primarily from their own mistakes. Many people have engaged in impact activities and their experiences provide a wealth of practical information and reflection on dilemmas.

On the other hand, the written rules of impact often help exacerbate the unwritten rules of professional inequalities. For example, the resources and opportunities to seek impact are not shared equally, and the current system has encouraged Universities to invest primarily in stories of heroic scientists – usually white male professors – overcoming the odds to impact (Dunlop, 2018). In contrast, women and ‘those from BAME backgrounds’ are the least likely to engage in professionally rewarding impact activities such as giving access to parliaments (Foxen, 2017; Geddes, 2018). More generally, people of colour are under-represented in senior academic positions and therefore have fewer opportunities to engage (Bhopal, 2018; Khan, 2017). In that context, generic ‘how to’ descriptions of impact activities hide the highly uneven opportunities, incentives, and payoffs.

Some ‘how to’ advice seems to scratch the surface of the problem, inviting us to communicate clearly or wait for a sufficiently science literate policymaking audience to appear. Or, it helps highlight (unintentionally) the inequalities of opportunity for academics to produce impact, such as when identifying the need to form relationships with policymakers and engage directly

and intensely in political debate. Safe ‘how to’ advice also helps perpetuate a cycle in which (a) enough people know about, and have described, key dilemmas in the academic literature (Jasanoff and Polsby, 1991; Hendriks, 2002; Pielke, 2007), but (b) the messages are crowded out by naïve or normative understandings of research and policy, which leaves (c) each generation of scientists to learn the same lessons through trial-and-error over many years rather than at the beginning of their career.

Regardless of the hand you choose, the policy theory literature helps us make sense of the ‘how to’ advice in practice. To be a ‘policy entrepreneur’ is to: find out where the action is, learn the rules of the game, form alliances, frame your evidence in relation to the dominant language of policy debate, and respond to socioeconomic context and events which help create windows of opportunity (Cairney, 2018b). However, to be a reflective scholar is to recognise that few entrepreneurs succeed, and relative success results more from societal structures and the policymaking environment than simply from skilful entrepreneurship.

References

Aguinis, H. *et al.* (2010) ‘Customer-Centric Science: Reporting Significant Research Results With Rigor, Relevance, and Practical Impact in Mind’, *Organizational Research Methods*, 13(3), pp. 515–539. doi: 10.1177/1094428109333339.

Alberts, B. *et al.* (2018) ‘How to bring science and technology expertise to state governments’, *Proceedings of the National Academy of Sciences of the United States of America*. National Academy of Sciences, 115(9), p. 19521955. doi: 10.1073/pnas.1800543115.

Andermann, A. *et al.* (2016) ‘Evidence for Health II: Overcoming barriers to using evidence in policy and practice’, *Health Research Policy and Systems*. BioMed Central, 14(1), p. 17. doi: 10.1186/s12961-016-0086-3.

Andrews, L. (2017) ‘How can we demonstrate the public value of evidence-based policy making when government ministers declare that the people “have had enough of experts”?’’, *Palgrave Communications*, 3(1), p. 11. doi: 10.1057/s41599-017-0013-4.

Aurum (1971) ‘Letter From London : Science Policy and the Question of Relevancy’, *Bulletin of the Atomic Scientists*. Routledge, 27(6), pp. 25–26. doi: 10.1080/00963402.1971.11455376.

Baumgartner, F. R. (2017) ‘Endogenous disjoint change’, *Cognitive Systems Research*, 44, pp. 69–73. doi: 10.1016/j.cogsys.2017.04.001.

Baumgartner, F. R. and Jones, B. D. (1993) *Agendas and instability in American politics*. University of Chicago Press.

Bhopal, K., 2018. *White privilege: The myth of a post-racial society*. Bristol: Policy Press.

Bilotta, G. S., Milner, A. M. and Boyd, I. L. (2015) ‘How to increase the potential policy impact of environmental science research’, *Environmental Sciences Europe*, 27(1), p. 9. doi: 10.1186/s12302-015-0041-x.

Birkland, T. A. (1997) ‘After Disaster: Agenda Setting, Public Policy, and Focusing Events’, *American governance and public policy*. Georgetown University Press, p. 178. Available at: <http://press.georgetown.edu/book/georgetown/after-disaster> (Accessed: 17 July 2018).

Boswell, C. and Smith, K. (2017) ‘Rethinking policy “impact”: four models of research-

- policy relations', *Palgrave Communications*, 3(1), p. 44. doi: 10.1057/s41599-017-0042-z.
- Botterill, L. C. and Hindmoor, A. (2012) 'Turtles all the way down: bounded rationality in an evidence-based age', *Policy Studies*, 33(5), pp. 367–379. doi: 10.1080/01442872.2011.626315.
- Boyd, I. (2013) 'Research: A standard for policy-relevant science.', *Nature*, 501(7466), pp. 159–60. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/24032133> (Accessed: 6 July 2018).
- Burgess, J. (2005) 'Follow the argument where it leads: Some personal reflections on "policy-relevant" research', *Transactions of the Institute of British Geographers*, 30(3), pp. 273–281. doi: 10.1017/S147474720500209X.
- Caird, J. *et al.* (2015) 'Mediating policy-relevant evidence at speed: are systematic reviews of systematic reviews a useful approach?', *Evidence & Policy: A Journal of Research, Debate and Practice*, 11(1), pp. 81–97. doi: 10.1332/174426514X13988609036850.
- Cairney, P. (2015) 'Policymaking in the UK: what is policy and how is it made?', in *Policy and policymaking in the UK*, pp. 1–22. Available at: <https://paulcairney.files.wordpress.com/2013/08/chapter-2-20-8-13-cairney-policy-policymaking-uk.pdf>.
- Cairney, P. (2016) *The Politics of Evidence-Based Policy Making*. London: Palgrave Macmillan UK. doi: 10.1057/978-1-137-51781-4.
- Cairney, P. (2017) 'Evidence-based best practice is more political than it looks: a case study of the "Scottish Approach"', *Evidence & Policy: A Journal of Research, Debate and Practice*, 13(3), pp. 499–515. doi: 10.1332/174426416X14609261565901.
- Cairney, P. (2018b) 'Three habits of successful policy entrepreneurs', *Policy and politics*, 46(2), pp. 199–215. doi: 10.1332/030557318X15230056771696.
- Cairney, P., 2018a. The UK government's imaginative use of evidence to make policy. *British Politics*, pp.1-22.
- Cairney, P. (2019) 'Evidence and policy making', in Boaz, A., Davies, H., and Fraser, A. (eds) *What Works Now?* Bristol.
- Cairney, P. and Heikkila, T. (2014) 'A comparison of theories of the policy process', *Theories of the Policy Process*.
- Cairney, P. and Kwiatkowski, R. (2017) 'How to communicate effectively with policymakers: combine insights from psychology and policy studies', *Palgrave Communications*. Nature Publishing Group, 3(1), p. 37. doi: 10.1057/s41599-017-0046-8.
- Cairney, P. and Oliver, K. (2017) '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(1). doi: 10.1186/s12961-017-0192-x.
- Cairney, P. and Rummery, K. (2018) 'Feminising Politics to Close the Evidence-Policy Gap: The Case of Social Policy in Scotland', *Australian Journal of Public Administration*. doi: 10.1111/1467-8500.12266.
- Cairney, P., St Denny, E. and Matthews, P. (2016) *Preventative spend: Public Services and Governance*. Available at: <https://www.stir.ac.uk/research/hub/publication/24639> (Accessed:

22 January 2018).

Cairney, P. and Weible, C. M. (2017) 'The new policy sciences: combining the cognitive science of choice, multiple theories of context, and basic and applied analysis', *Policy Sciences*, 50(4), pp. 619–627. doi: 10.1007/s11077-017-9304-2.

Cairney, P. and Yamazaki, M. (2018) 'A Comparison of Tobacco Policy in the UK and Japan: If the Scientific Evidence is Identical, Why is There a Major Difference in Policy?', *Journal of Comparative Policy Analysis: Research and Practice*, 20(3), pp. 253–268. doi: 10.1080/13876988.2017.1323439.

Cairney P (2017) *Three habits of successful policy entrepreneurs* | Paul Cairney: Politics & Public Policy, <https://paulcairney.wordpress.com/2017/06/05/three-habits-of-successful-policy-entrepreneurs/>. Available at: <https://paulcairney.wordpress.com/2017/06/05/three-habits-of-successful-policy-entrepreneurs/> (Accessed: 9 July 2018).

Chapman, J. M. *et al.* (2015) 'Being relevant: Practical guidance for early career researchers interested in solving conservation problems', *Global Ecology and Conservation*, 4, pp. 334–348. doi: 10.1016/j.gecco.2015.07.013.

Chappell, L. and Waylen, G. (2013) 'Gender and the hidden life of institutions', *Public Administration*, 91(3), pp. 599–615. doi: 10.1111/j.1467-9299.2012.02104.x.

Colglazier, B. (2016) 'Encourage governments to heed scientific advice', *Nature*. Nature Publishing Group, 537(7622), p. 587. doi: 10.1038/537587a.

Cooper, B. C. (2017) *Beyond respectability : The Intellectual Thought of Race Women*. Available at: https://www.amazon.com/Beyond-Respectability-Intellectual-Thought-American-ebook/dp/B0717794JN/ref=sr_1_1?s=digital-text&ie=UTF8&qid=1510116027&sr=1-1&keywords=brittney+cooper (Accessed: 17 July 2018).

Crouzat, E. *et al.* (2018) 'Researchers must be aware of their roles at the interface of ecosystem services science and policy', *Ambio*. Springer Netherlands, 47(1), pp. 97–105. doi: 10.1007/s13280-017-0939-1.

Crow, D. and Jones, M. (2018) 'Narratives as tools for influencing policy change', *Policy & Politics*, 46(2), pp. 217–234. doi: 10.1332/030557318X15230061022899.

D. Jones, M. and Anderson Crow, D. (2017) 'How can we use the “science of stories” to produce persuasive scientific stories?', *Palgrave Communications*, 3(1), p. 53. doi: 10.1057/s41599-017-0047-7.

Davidson, B. (2017) 'Storytelling and evidence-based policy: lessons from the grey literature', *Palgrave Communications*, 3, p. 17093. doi: 10.1057/palcomms.2017.93.

Docquier, D. (2017) *Communicating your research to policy makers and journalists - Author Services*, <https://authorservices.taylorandfrancis.com/communicating-science-to-policymakers-and-journalists/>. Available at: <https://authorservices.taylorandfrancis.com/communicating-science-to-policymakers-and-journalists/> (Accessed: 9 July 2018).

Dodsworth, S. and Cheeseman, N. (2018) *Five lessons for researchers who want to collaborate with governments and development organisations but avoid the common pitfalls*, *LSE Impact Blog*. Available at: <http://blogs.lse.ac.uk/impactofsocialsciences/2018/02/05/five->

lessons-for-researchers-who-want-to-collaborate-with-governments-and-development-organisations-but-avoid-the-common-pitfalls/ (Accessed: 9 July 2018).

Donnelly, C. A. *et al.* (2018) 'Four principles to make evidence synthesis more useful for policy', *Nature*. Nature Publishing Group, 558(7710), pp. 361–364. doi: 10.1038/d41586-018-05414-4.

DOUGLAS, H. E. (2009) *Science, Policy, and the Value-Free Ideal*. University of Pittsburgh Press. doi: 10.2307/j.ctt6wrc78.

Echt, L. (2017a) "Context matters": a framework to help connect knowledge with policy in government institutions, *LSE Impact blog*. Available at: <http://blogs.lse.ac.uk/impactofsocialsciences/2017/12/19/context-matters-a-framework-to-help-connect-knowledge-with-policy-in-government-institutions/> (Accessed: 10 July 2018).

Echt, L. (2017b) *How can we make our research to be policy relevant? | Politics & Ideas: A Think Net, Politics and Ideas*. Available at: <http://www.politicsandideas.org/?p=3602> (Accessed: 10 July 2018).

Eisenstein, M. (2017) 'The needs of the many', *Nature*, 551(November). doi: 10.1038/456296a.

Emejulu, A. (2018) 'On the problems and possibilities of feminist solidarity: The Women's March one year on', *IPPR Progressive Review*. Wiley/Blackwell (10.1111), 24(4), pp. 267–273. doi: 10.1111/newe.12064.

Evans, J. (2013) 'How Arts and Humanities Can Influence Public Policy', *HuffPost*, (19/02). Available at: https://www.huffingtonpost.co.uk/jules-evans/arts-humanities-influence-public-policy_b_2709614.html (Accessed: 9 July 2018).

Farmer, R. (2010) 'How to influence government policy with your research: Tips from practicing political scientists in government', *PS - Political Science and Politics*, 43(4), pp. 717–719. doi: 10.1017/S1049096510001368.

Fischhoff, M. (2015) 'How can academics engage effectively in public and political discourse? At a 2015 conference, experts described how and why academics should reach out.', *Network for Business Sustainability 2015*.

Fleming, A. H. and Pyenson, N. D. (2017) 'How to Produce Translational Research to Guide Arctic Policy', *BioScience*. Oxford University Press, 67(6), pp. 490–493. doi: 10.1093/biosci/bix002.

Flinders, M., Wood, M. and Cunningham, M. (2016) 'The politics of co-production: risks, limits and pollution', *Politics and Policy*, 12, 2, 261-79

Foxen, L. (2017) 'Women academics and those from BAME backgrounds engage less with Parliament. But why?' LSE Impact Blog <http://blogs.lse.ac.uk/impactofsocialsciences/2017/07/24/women-academics-and-those-from-bame-backgrounds-engage-less-with-parliament-but-why/> (Accessed 28 August 2018)

Game, E. T., Schwartz, M. W. and Knight, A. T. (2015) 'Policy Relevant Conservation Science', *Conservation Letters*, 8(5), pp. 309–311. doi: 10.1111/conl.12207.

Geddes, M., 2018. Committee Hearings of the UK Parliament: Who gives Evidence and does this Matter?. *Parliamentary Affairs*, 71(2), pp.283-304.

- Geddes, M., Dommett, K. and Prosser, B., 2018. A recipe for impact? Exploring knowledge requirements in the UK Parliament and beyond. *Evidence & Policy: A Journal of Research, Debate and Practice*, 14(2), pp.259-276.
- Gigerenzer, G. (2001) 'The adaptive toolbox', in *Bounded rationality The adaptive toolbox*. Edited by G. Gigerenzer & R. Selten. Cambridge, pp. 37–50. doi: 10.1002/mar.10060.
- Gluckman, P. (2014) 'The art of science advice to the government', *Nature*, 507, pp. 163–165. doi: 10.1038/507163a.
- Goodwin, M. (2013) 'How academics can engage with policy: 10 tips for a better Conversation', *The Guardian*, 25 March. Available at: <https://www.theguardian.com/higher-education-network/blog/2013/mar/25/academics-policy-engagement-ten-tips>.
- Graffy, E. A. (1999) 'Enhancing policy-relevance without burning up or burning out: A strategy for scientists', in *SCIENCE INTO POLICY: WATER IN THE PUBLIC REALM*. The Association, pp. 293–298. Available at: http://apps.webofknowledge.com/full_record.do?product=UA&search_mode=AdvancedSearch&qid=3&SID=D3Y7AMjSYyfgCmiXBUw&page=21&doc=208 (Accessed: 9 July 2018).
- Green D (2016) *How academics and NGOs can work together to influence policy: insights from the InterAction report, LSE Impact blog*. Available at: <http://blogs.lse.ac.uk/impactofsocialsciences/2016/09/23/how-academics-and-ngos-can-work-together-to-influence-policy-insights-from-the-interaction-report/> (Accessed: 10 July 2018).
- Green, L. W. *et al.* (2009) 'Making Evidence from Research More Relevant, Useful, and Actionable in Policy, Program Planning, and Practice. Slips "Twixt Cup and Lip"', *American Journal of Preventive Medicine*, 37(6 SUPPL. 1), pp. S187–S191. doi: 10.1016/j.amepre.2009.08.017.
- Haidt, J. (2001) 'The emotional dog and its rational tail: A social intuitionist approach to moral judgment.', *Psychological Review*, 108(4), pp. 814–834. doi: 10.1037/0033-295X.108.4.814.
- Hall, B. L. and Tandon, R. (2017) 'Decolonization of knowledge, epistemicide, participatory research and higher education', *Research for All*, 1(1), pp. 6–19. doi: 10.18546/RFA.01.1.02.
- Hall, P. A. (1993) 'Policy Paradigms, Social Learning, and the State: The Case of Economic Policymaking in Britain', *Comparative Politics*, 25(3), p. 275. doi: 10.2307/422246.
- Havens, B. (1992) 'Making research relevant to policy', *Gerontologist*, 32(2), p. 273. doi: 10.1093/geront/32.2.273.
- HEFCE (2015) *An analysis of staff selection for REF 2014, Higher Education Funding Council for England*. Higher Education Funding Council for England. Available at: <http://www.hefce.ac.uk/news/newsarchive/2015/Name,104986,en.html> (Accessed: 17 July 2018).
- Hendriks, C. (2002) 'Institutions of deliberative democratic processes and interest groups: Roles, tensions and incentives', in *Australian Journal of Public Administration*, pp. 64–75. doi: 10.1111/1467-8500.00259.
- Hillman, N. (2016) *The 10 commandments for influencing policymakers | THE Comment, Times Higher Education*. Available at: <https://www.timeshighereducation.com/comment/the-10-commandments-for-influencing-policymakers> (Accessed: 9 July 2018).

Himmrich, J. (2016) *How should academics interact with policy makers? Lessons on building a long-term advocacy strategy.*, *LSE Impact Blog*. Available at: <http://blogs.lse.ac.uk/impactofsocialsciences/2016/06/20/how-should-academics-interact-with-policy-makers-lessons-on-building-a-longterm-advocacy-strategy/> (Accessed: 10 July 2018).

Hutchings, J. A. and Stenseth, N. C. (2016) 'Communication of Science Advice to Government', *Trends in Ecology & Evolution*, 31(1), pp. 7–11. doi: 10.1016/j.tree.2015.10.008.

Jasanoff, S. and Polsby, N. W. (1991) 'The Fifth Branch: Science Advisers as Policymakers.', *Contemporary Sociology*, 20(5), p. 727. doi: 10.2307/2072218.

Jo Clift Consulting (2016) *Are you trying to get your voice heard in Government? - Jo Clift's Personal Website*. Available at: <http://joclifftconsulting.strikingly.com/blog/are-you-trying-to-get-your-voice-heard-in-government> (Accessed: 10 July 2018).

John, P. (2003) 'Is There Life After Policy Streams, Advocacy Coalitions, and Punctuations: Using Evolutionary Theory to Explain Policy Change?', *Policy Studies Journal*, 31(4), pp. 481–498. doi: 10.1111/1541-0072.00039.

Jones, B. D. and Thomas, H. F. (2017) 'The cognitive underpinnings of policy process studies: Introduction to a special issue of Cognitive Systems Research', *Cognitive Systems Research*, 45, pp. 48–51. doi: 10.1016/j.cogsys.2017.04.003.

Jordan, G. and Cairney, P. (2013) 'What is the 'Dominant Model' of British Policy Making? Comparing Majoritarian and Policy Community Ideas', *British Politics*, 8, 3, 233-59

Kahneman, D. (2011) *Thinking, fast and slow*. Allen Lane.

Kenny, M. (2007) 'Gender, Institutions and Power: A Critical Review', *Politics*, 27(2), pp. 91–100. doi: 10.1111/j.1467-9256.2007.00284.x.

de Kerckhove, D. T., Rennie, M. D. and Cormier, R. (2015) 'Censoring government scientists and the role of consensus in science advice: A structured process for scientific advice in governments and peer-review in academia should shape science communication strategies', *EMBO reports*. Wiley-VCH Verlag, 16(3), pp. 263–266. doi: 10.15252/embr.201439680.

Kerr, E. A., Riba, M. and Udow-Phillips, M. (2015) 'Helping health service researchers and policy makers speak the same language', *Health Services Research*. Blackwell Publishing Inc., 50(1), pp. 1–11. doi: 10.1111/1475-6773.12198.

Khan, C. 2017 'Do universities have a problem with promoting their BAME staff?' The Guardian <https://www.theguardian.com/higher-education-network/2017/nov/16/do-universities-have-a-problem-with-promoting-their-bame-staff> (Accessed 28 August 2018)

King, A. (2016) 'Science, politics and policymaking', *EMBO reports*, 17(11), pp. 1510–1512. doi: 10.15252/embr.201643381.

Kingdon, J. (1984) *Agendas, alternatives, and public policies*.

Knottnerus, J. A. and Tugwell, P. (2017) 'Methodology of the "craft" of scientific advice for policy and practice', *Journal of Clinical Epidemiology*. Elsevier USA, 82, pp. 1–3. doi: 10.1016/j.jclinepi.2017.01.005.

Lewis, P. G. (2013) 'Policy Thinking, Fast and Slow: A Social Intuitionist Perspective on

- Public Policy Processes'. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2300479 (Accessed: 17 July 2018).
- Lindblom, C. E. (1959) 'The Science of "Muddling Through"', *Public Administration Review*, 19(2), p. 79. doi: 10.2307/973677.
- Lloyd, J. (2016) *Should academics be expected to change policy? Six reasons why it is unrealistic for research to drive policy change*, *LSE Impact Blog*. Available at: <http://blogs.lse.ac.uk/impactofsocialsciences/2016/05/25/should-academics-be-expected-to-change-policy-six-reasons-why-it-is-unrealistic/> (Accessed: 9 July 2018).
- Lomas, J. and Brown, A. D. (2009) 'Research and advice giving: A functional view of evidence-informed policy advice in a Canadian ministry of health', *Milbank Quarterly*, pp. 903–926. doi: 10.1111/j.1468-0009.2009.00583.x.
- Lovenduski, J. (1998) 'GENDERING RESEARCH IN POLITICAL SCIENCE', *Annual Review of Political Science*, 1(1), pp. 333–356. doi: 10.1146/annurev.polisci.1.1.333.
- Lucey, J. M. *et al.* (2017) 'Reframing the evidence base for policy-relevance to increase impact: a case study on forest fragmentation in the oil palm sector', *Journal of Applied Ecology*. Blackwell Publishing Ltd, 54(3), pp. 731–736. doi: 10.1111/1365-2664.12845.
- Mackay, F. (2004) 'Gender and Political Representation in the UK: The State of the "Discipline"', *The British Journal of Politics and International Relations*, 6(1), pp. 99–120. doi: 10.1111/j.1467-856X.2004.00129.x.
- Maddox, G. (1996) 'Policy-Relevant Health Services Research: Who Needs It?', *Journal of Health Services Research & Policy*, 1(3), pp. 167–168. doi: 10.1177/135581969600100309.
- Majone, G. (1989) *Evidence, argument, and persuasion in the policy process*. Yale University Press. Available at: <https://yalebooks.yale.edu/book/9780300052596/evidence-argument-and-persuasion-policy-process> (Accessed: 17 July 2018).
- Malakoff, D. (2017) 'A battle over the "best science"', *Science*. American Association for the Advancement of Science, pp. 1108–1109. doi: 10.1126/science.355.6330.1108.
- Marshall, N. and Cvitanovic, C. (2017) *Ten top tips for social scientists seeking to influence policy*, *LSE Impact Blog*.
- Matthews, P., Rutherford, R., Connelly, S., Richardson, L., Durose, C. and Vanderhoven, D., 2017. Everyday stories of impact: interpreting knowledge exchange in the contemporary university (Forthcoming/Available Online). *Evidence and Policy*.
- Maynard, A. (2015) 'Is public engagement really career limiting?', *Times Higher Education*, 14 July.
- Moran, C.R. and Browning, C.S., 2018. REF impact and the discipline of politics and international studies. *British Politics* 1-21 Early View <https://link.springer.com/article/10.1057/s41293-018-0080-1>
- Morandi, L. (2009) 'Essential Nexus. How to Use Research to Inform and Evaluate Public Policy', *American Journal of Preventive Medicine*, 36(2 SUPPL.), pp. S53–S54. doi: 10.1016/j.amepre.2008.10.005.
- Morgan, M. G., Houghton, A. and Gibbons, J. H. (2001) 'Science and government: Improving science and technology advice for congress', *Science*, pp. 1999–2000. doi:

10.1126/science.1065128.

NCCPE (no date) *How can you engage with policy makers?* Available at: <https://www.publicengagement.ac.uk/do-engagement/understanding-audiences/policy-makers> (Accessed: 10 July 2018).

Nichols, R. W. (1972) 'Some practical problems of scientist-advisers', *Minerva*, 10(4), pp. 603–613. doi: 10.1007/BF01695907.

Nilsson, M. *et al.* (2008) 'The use and non-use of policy appraisal tools in public policy making: an analysis of three European countries and the European Union', *Policy Sciences*, 41(4), pp. 335–355. doi: 10.1007/s11077-008-9071-1.

Norse, D. (2005) 'The nitrogen cycle, scientific uncertainty and policy relevant science.', *Science in China. Series C, Life sciences / Chinese Academy of Sciences*, 48 Suppl 2, pp. 807–817. doi: 10.1007/BF03187120.

Nutley, S. M., Smith, P. (Peter C. . and Davies, H. T. O. (2000) *What works? : evidence-based policy and practice in public services*. Policy Press.

Nutley, S., Powell, A. and Davies, H. (2013) 'What counts as good evidence?', *Provocation Paper for the Alliance for Useful Evidence*. doi: 10.1002/trtr.1318.

Olander, L. *et al.* (2017) 'So you want your research to be relevant? Building the bridge between ecosystem services research and practice', *Ecosystem Services*. Elsevier B.V., 26, pp. 170–182. doi: 10.1016/j.ecoser.2017.06.003.

Oliver, K. *et al.* (2014) 'A systematic review of barriers to and facilitators of the use of evidence by policymakers', *BMC Health Services Research*, 14. doi: 10.1186/1472-6963-14-2.

Oliver, K. and Faul, M. V. (2018) 'Networks and Network Analysis in Evidence, Policy and Practice', *Evidence & Policy: A Journal of Research, Debate and Practice*2, 14(3).

Oliver, K., Lorenc, T. and Innvær, S. (2014) 'New directions in evidence-based policy research: A critical analysis of the literature', *Health Research Policy and Systems*, 12(1). doi: 10.1186/1478-4505-12-34.

Oliver, K. and Pearce, W. (2017) 'Three lessons from evidence-based medicine and policy: increase transparency, balance inputs and understand power', *Palgrave Communications*. doi: 10.1057/s41599-017-0045-9.

Ostrom, E. (2007a) 'Institutional Rational Choice: An Assessment of the Institutional Analysis and Development Framework', in *Theories of the Policy Process*, pp. 21–64. doi: 10.1017/CBO9781107415324.004.

Ostrom, E. (2007b) 'Sustainable social-ecological systems: an impossibility', *Presented at the 2007 Annual Meetings of the American Association for the Advancement of Science, "Science and Technology for Sustainable Well-Being,"*. doi: 10.2139/ssrn.997834.

Pain, E. (2014) 'How Scientists Can Influence Policy', *Science*. doi: 10.1126/science.caredit.a1400042.

Parkhurst, J. O. (no date) *The politics of evidence : from evidence-based policy to the good governance of evidence*. Available at: <http://eprints.lse.ac.uk/68604/> (Accessed: 17 July 2018).

Parry-Davies, E. and Newell, P. (2014) '10 ways to make public engagement work for you | Higher Education Network | The Guardian', *The Guardian*, 21 July. Available at: <https://www.theguardian.com/higher-education-network/blog/2014/jul/21/10-ways-make-public-engagement-work-for-you> (Accessed: 10 July 2018).

Petes, L. E. and Meyer, M. D. (2018) 'An ecologist's guide to careers in science policy advising', *Frontiers in Ecology and the Environment*, 16(1), pp. 53–54. doi: 10.1002/fee.1761.

Pielke, R. A. (2007) *The honest broker: Making sense of science in policy and politics*, *The Honest Broker: Making Sense of Science in Policy and Politics*. doi: 10.1017/CBO9780511818110.

Pierson, P. (2000) 'Increasing Returns, Path Dependence, and the Study of Politics', *American Political Science Review*, 94(02), pp. 251–267. doi: 10.2307/2586011.

POST (2017) *Getting your research into parliament - Author Services*, <https://authorservices.taylorandfrancis.com/getting-your-research-into-parliament/>. Available at: https://authorservices.taylorandfrancis.com/getting-your-research-into-parliament/?utm_source=external_party&utm_medium=ad&utm_campaign=JMJ02728 (Accessed: 9 July 2018).

Prehn, T. (2018) 'Thomas Prehn's innovation diary: What I learned at MindLab', *Apolitical*, 24 May.

Quarmby (2018) *Evidence-informed policymaking: does knowledge brokering work?*, *LSE Impact Blog*.

Reed, M. and Evely, A. (2016) 'How can your research have more impact? Five key principles and practical tips for effective knowledge exchange .', *LSE Impact blog*, pp. 1–5. Available at: <http://blogs.lse.ac.uk/impactofsocialsciences/2015/07/07/how-can-your-research-have-more-impact-5-key-principles-tips/> (Accessed: 10 July 2018).

Schmidt, V. A. (2010) 'Taking ideas and discourse seriously: explaining change through discursive institutionalism as the fourth "new institutionalism"', *European Political Science Review*, 2(01), p. 1. doi: 10.1017/S175577390999021X.

Sebba, J. (2011) *Getting research into policy: the role of think tanks and other mediators*, *LSE Impact blog*. Available at: <http://blogs.lse.ac.uk/impactofsocialsciences/2011/03/07/getting-research-into-policy-the-role-of-think-tanks-and-other-mediators/> (Accessed: 10 July 2018).

Shergold, P. (Interviewee) (2011) 'Let's close the gap between academics and policy makers: Peter Shergold on changing the system', *The Conversation*, 8 November.

Simera, I. *et al.* (2010) 'Transparent and accurate reporting increases reliability, utility, and impact of your research: Reporting guidelines and the EQUATOR Network', *BMC Medicine*, p. 24. doi: 10.1186/1741-7015-8-24.

Simon, H. A. (1946) 'Administrative Behavior. A Study of Decision- Making Processes in Administrative Organizations', *Administrative Organisations*. doi: 10.1111/1468-0297.t01-17-00050.

Slooman, S. and Fernbach, P. (2017) *The knowledge illusion: Why we never think alone*.

Sohn, J. (2018) 'Navigating the politics of evidence-informed policymaking: strategies of

- influential policy actors in Ontario’, *Palgrave Communications*, 4(1), p. 49. doi: 10.1057/s41599-018-0098-4.
- Stoker, G. (2010) ‘Translating Experiments into Policy’, *The ANNALS of the American Academy of Political and Social Science*, 628(1), pp. 47–58. doi: 10.1177/0002716209351506.
- Sutherland, W. J. (2013) ‘Review by quality not quantity for better policy’, *Nature*, 503(7475), p. 167. doi: 10.1038/503167a.
- Sutherland, W. J. and Burgman, M. A. (2015) ‘Policy advice: Use experts wisely’, *Nature*, pp. 317–318. doi: 10.1038/526317a.
- Tesar, C., Dubois, M. A. and Shestakov, A. (2016) ‘Toward strategic, coherent, policy-relevant arctic science’, *Science*. American Association for the Advancement of Science, 353(6306), pp. 1368–1370. doi: 10.1126/science.aai8198.
- Tilley, H. *et al.* (2017) *10 things to know about how to influence policy with research*. London. Available at: <https://www.odi.org/publications/10671-10-things-know-about-how-influence-policy-research> (Accessed: 9 July 2018).
- Topp, L. *et al.* (2018) ‘Knowledge management for policy impact: the case of the European Commission’s Joint Research Centre’, *Palgrave Communications*. Nature Publishing Group, 4(1), p. 87. doi: 10.1057/s41599-018-0143-3.
- Tuckett, D. and Nikolic, M. (2017) ‘The role of conviction and narrative in decision-making under radical uncertainty’, *Theory & Psychology*, 27(4), pp. 501–523. doi: 10.1177/0959354317713158.
- Tyler, C. (2013) ‘Top 20 things scientists need to know about policy-making’, *The Guardian*, (December), pp. 1–7. doi: 10.1136/bmjopen.
- Tyler, C. (2017) ‘Wanted: Academics wise to the needs of government’, *Nature*, p. 7. doi: 10.1038/d41586-017-07744-1.
- Wegrich, K. and Jann, W. (2006) ‘Theories of the Policy Cycle’, in, pp. 43–62. doi: 10.1201/9781420017007.pt2.
- Weible, C. M. *et al.* (2012) ‘Understanding and influencing the policy process’, *Policy Sciences*, 45(1), pp. 1–21. doi: 10.1007/s11077-011-9143-5.
- Weiss, C. H. (1979) ‘The Many Meanings of Research Utilization’, *Public Administration Review*, 39(5), p. 426. doi: 10.2307/3109916.
- Wellstead, A., Cairney, P. and Oliver, K. (2018) ‘Reducing ambiguity to close the science-policy gap’, *Policy Design and Practice*, 1(2), pp. 115–125. doi: 10.1080/25741292.2018.1458397.
- Whitty, C. J. M. (2015) ‘What makes an academic paper useful for health policy?’, *BMC Medicine*, 13(1), p. 301. doi: 10.1186/s12916-015-0544-8.
- Williams, H. *et al.* (2015) ‘Gender and journal authorship: An assessment of articles published by women in three top british political science and international relations journals’, in *European Political Science*, pp. 116–130. doi: 10.1057/eps.2015.8.
- Witting, A. (2017) ‘Insights from “policy learning” on how to enhance the use of evidence by policymakers’, *Palgrave Communications*, 3(1), p. 49. doi: 10.1057/s41599-017-0052-x.

Woodward, A. E. (no date) 'Building velvet triangles: gender and informal governance', in *Informal Governance in the European Union*. Edward Elgar Publishing. doi: 10.4337/9781843769729.00011.

Zahariadis, N. (2007) 'The Multiple Streams Framework', *Theories of the Policy Process*. doi: 10.1081/E-EPAP2-120041405.

Zampini, G. F. (2018) 'Evidence and morality in harm-reduction debates: can we use value-neutral arguments to achieve value-driven goals?', *Palgrave Communications*, 4(1), p. 62. doi: 10.1057/s41599-018-0119-3.

Zevallos, Z. (2017) 'Protecting Activist Academics Against Public Harassment', *The Other Sociologist*.