

Beyond evidence: experimental policy-making in uncertain times

Ana Honnacker

To cite this article: Ana Honnacker (25 Apr 2023): Beyond evidence: experimental policy-making in uncertain times, *Inquiry*, DOI: [10.1080/0020174X.2023.2203162](https://doi.org/10.1080/0020174X.2023.2203162)

To link to this article: <https://doi.org/10.1080/0020174X.2023.2203162>



Published online: 25 Apr 2023.



Submit your article to this journal [↗](#)



Article views: 388



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 4 View citing articles [↗](#)



Beyond evidence: experimental policy-making in uncertain times

Ana Honnacker

Lehrstuhl für Praktische Philosophie, Hochschule für Philosophie, München, Germany

ABSTRACT

Evidence-based policy-making (EBP) is widely seen as a key instrument for good policy-making. Yet in the wake of the Covid-19 pandemic, the debate on the relation of science and policy-making gained new momentum. The premises of EBP, its narrow understanding of what kind of knowledge counts and how to make decisions, appeared inapt to provide a sound foundation for policy-making under conditions of high complexity and uncertainty. This paper addresses the major shortcomings of EBP and argues for revising its evidentialist framework. First, the idea of evidence itself has to be extended and pluralized by including alternative forms of knowledge. Second, uncertainty has to be taken seriously as a fundamental epistemic condition. To arrive at a more apt model of policy-making, this paper suggests to adopt a pragmatist perspective on the relation of politics, science and the public. This leads to an experimentalist account in the meliorist spirit. Such an account highlights the role of experience, participatory processes and collective learning. Furthermore, and in contrast to scientific models, it underlines political responsibility and demands to cultivate sensitivity for possible failures and tragic constellations. Finally, a non-evidentialist model of policy advice is outlined.

ARTICLE HISTORY Received 15 February 2023; Accepted 10 April 2023

KEYWORDS Evidence-based policy; uncertainty; pragmatism; experimentalism; pluralism; meliorism

1. Introduction: ‘Listen to the science’ and the paradigm of evidence-based policy

In the wake of the covid-19 pandemic, the relation of science and politics became the subject of a heated public as well as academic debate. Experts, especially from the field of medical disciplines such as virology or epidemiology, suddenly played a leading role in shaping the lives of many people as they were considered to be able not only to provide information on the new virus but also to give advice in a hitherto

CONTACT Ana Honnacker  ana.honnacker@hfph.de  Lehrstuhl für Praktische Philosophie, Hochschule für Philosophie, München, Germany

© 2023 Informa UK Limited, trading as Taylor & Francis Group

unprecedented situation and thus reduce uncertainty. They were largely trusted by the public as well as politicians to know what to do next (Lavazza and Farina 2020; Bromme et al. 2022). Yet their influence on the political arena raised serious concerns. Were scientific findings used to legitimate unpopular policies as unavoidable? Did politicians choose certain experts to bolster their political agenda? And what role should science play in policy-making anyway? Quite similar to the climate discourse, the demand for 'listening to the science' marked a vital necessity with regard to good policy-making for some – for others, it meant a minatory surrender to experts and thus the imminent end of democratic politics. Whereas one side highlighted the relevance of scientific research for grounding policy decisions such as mandatory facemasks, curfews or travel restrictions, the other side scented epistemic authoritarianism under the cloak of scientific evidence. Hence, the pandemic turned out to be a catalyst for questioning the status of science in democratic societies (Bogner and Menz 2021).

In my paper, I will argue that particularly the current focus on evidence-based policy-making (EBP) leads to a problematic understanding of what kind of knowledge should count as well as how decision-making works, and is eventually inapt to provide a sound foundation for cooperative problem-solving. Its evidentialist framework may even lead to frustrations and loss of trust in science, since it seemingly provides certainty and a clear idea of adequate solutions to the problem at hand. Yet EBP, when chosen as an exclusive approach, is inherently doomed to fail in unprecedented situations, as it cannot handle ignorance and complexity.

Still, evidence-based policy is widely seen as a key instrument for good governance. It aims to improve and objectify policy decisions by implementing scientific knowledge into political processes (Weiland 2013, 9–10).¹ Its core strategy is to rely on policies that have proven effective beforehand and thus can be trusted to solve a particular problem. This way, one can expect to arrive at reliable conclusions about what to do next. Finally, politics become sound. And is that not exactly what citizens desperately wish for?

'The American people want a government that solves problems', writes the American Commission of Evidence-Based Policymaking, '[t]his requires that decision makers have good information to guide their choices about how

¹In the EU, evidence-based policies as well as technology assessments were institutionalised after the Lisbon process in 2000, which aimed at making governments smarter and more efficient with regard to their economic performance (see Weiland 2013, 9).

current programs and policies are working and how they can be improved' (2017, 8). Without any doubt, to have 'good information' seems to be a natural starting point for arriving at adequate policies. So what is the problem with the idea of evidence-based policy?

In a nutshell, there are two major shortcomings: one with regard to the concept of evidence that is used in 'orthodox' EBP, and the other concerning the role of evidence in policy-making. Whereas evidence could be defined broadly as any information that aids the generation of a conclusion, traditional evidence-based policy employs a narrower understanding: Evidence is used as a 'shorthand [...] to refer to information produced by "statistical activities" with a "statistical purpose" that is potentially useful when evaluating government programs and policies' (American Commission of Evidence-Based Policymaking, 8). Thus, the applied concept restricts evidence to a special kind of information, thereby concluding wide areas of knowledge from the sciences and the humanities, not to speak of non-standard forms of knowledge.

The only evidence that counts is derived from randomised controlled trials (RCTs), meta studies and systematic reviews. Evidence is more or less identified with statistical data.² With relying on this kind of quantifiable information, evidence-based policy amounts to be rather data-based policy: 'The ideal form of knowledge to provide a firm basis for this project is seen derived through qualitative methodologies, empirically-tested and validated' (Sanderson 2002, 6).

Another premise of evidence-based policy is the reproducibility of schemes in sufficiently similar situations. This leads to a further restriction, as Cartwright and Hardie point out: 'For evidence-based policy you are urged to use only policies that have been shown to work somewhere' (54). Taking this demand seriously results in at least two problems.

First, it leaves evidence-based policies less flexible than real situations call for. Sticking to the principle of fidelity requires implementing policies based on their success in other situations. Yet the imperative 'be faithful' (Cartwright and Hardie 2012, 145) obscures the instability as well as the complexity of problematic situations. Reality does not work like a laboratory experiment, where you can control the conditions and reproduce the outcomes if you just stick to the exact program. Whereas for example

²Consequently, EBP strives to collect more data, which can be problematized on its own. See for example the statement of the Commission of Evidence-Based Policy Making: 'For evidence-based policymaking to occur, a supply of evidence must first exist. Thus, the Commission recognizes that evidence-based policymaking requires the generation of evidence, which relies on access to data' (2017, 11–12, see also 26–30).

physical forces remain constant over time and provide for a reliable fabric of cause and effect, in other fields 'causal roles often don't travel' (Cartwright and Hardie 2012, 88). Thus the inductive method should be rather handled with care in areas in which unstable causal relations compromise setting up universal principles, such as economics or public health (43). As soon as there are social parameters, the predictability of outcomes drops – there are always unanticipated consequences. Even worse: As Robert Merton has flagged, the prediction itself affects the frame conditions and interferes with the course of events: 'Other things will not be equal just because the scientist has introduced a new "other thing" – his prediction' (Merton 1936, 904). In the most extreme case, this effect leads to the paradox of prevention, as observed in the Covid-19 pandemic: If a prediction leads to preventive behaviour, let's say, people start wearing masks and keeping distance when they learn about the massive infection rate to be expected, the prediction finally turns out wrong.³

Second, EBP comes with a limited understanding of what it means to make policy decisions and eliminates deliberation in favour of processing evidence. It is one of its underlying assumptions, that 'research evidence is [...] feeding directly and more or less unproblematic into policy's decision-making apparatus' (Greenhalgh and Engebretsen 2022, 1). This 'apparatus' is framed as following formal rules, working in the manner of rational choice scenarios. Yet real situations of decision-making are way fuzzier, especially when it comes to questions of social policies. In 'the difficult cases that dominate policy discussions', Cartwright and Hardie note, 'you start asking the policy maker to think. And that is by nature a diffuse and unstructured process. It is not rule-based and systematic' (2012, 160–161). It would, of course, be nice if a pre-set procedure would be available for policy makers: The best possible result would be guaranteed – and at the same time, the result would be ultimately legitimised and thus unburden those in charge from really making decisions, that is, from responsibility.

Yet following Habermas' prominent criticism of collapsing policy decisions into computable procedures as inherently problematic (1968, especially 120–127), this is nothing but a technocratic fantasy: 'Rules are not typically a substitute for thinking' (Cartwright and Hardie 2012, 161), and deliberation cannot be replaced by collecting data. This is

³Merton calls these self-defeating forecasts 'suicidal prophecies', as counterpart to the much more famous 'self-fulfilling prophecies', Merton (1968), 478.

especially true for settings with a high level of *complexity* and *uncertainty*. However, with regard to policy-making, the proviso is not merely epistemic. The problems that have to be addressed here tend to have a political dimension, that is, they could be well defined by being problems that in principle lack clear best solutions, perhaps even a clear description (Brown 2009, 11). Moreover, they involve value questions and balancing conflicting interests. That is, evidence-based policy offers an instrument that is incompatible with the task: the form of the problem and the form of the suggested way of solving it do not fit.

Summing up, the paradigm of evidence-based policy arouses illusionary expectations of what science can do for policy-making, potentially leading to frustrations and loss of trust with regard to both. If decision-makers would fully buy into an evidentialist framework, they would on the one hand shift away from deliberative concepts of politics and adopt a technocratic understanding that comes not only with reductive rationalization but also problematic progressivism (Sanderson 2002, 1–2, 4–7).⁴ On the other hand, they would face the practical problem of being doomed to inaction. As I have outlined before, evidence-based policy is backward-bound and unable to operate in open systems. This criticism echoes William James' defensive considerations of William Clifford's evidentialism (James 2009b). Waiting until all evidence is in and one can act on certain grounds is not always the best strategy. Sometimes, it may boil down to not acting at all or acting late, and even too late. In these cases, James states, inaction is also a kind of action (James 2009a, 55). In unprecedented and dynamic situations like a pandemic, the moment of giving an exhaustive prediction of policy outcomes may never arrive, if at all, certainty is available only in hindsight. When we finally have clear evidence, the damage is done. Any delay may cause harm. This fatal dynamic applies to climate policies and could be observed during the pandemic with regard to public health measures.⁵

Thus the evidentialist paradigm seems to preclude preventive action to a considerable and unacceptable degree. In what follows, I would first like to rough out ways to move beyond evidence, that is, *evidentialist* evidence, and suggest how to make sound politics in uncertain times. Second, I will move on to an account of policy-making in the meliorist spirit. Finally, I will argue that both endeavours can be promoted by drawing on pragmatist insights and concepts.

⁴Similarly, evidence-based medicine has been criticised for its modernist vision, see Wieringa et al. 2017, 965–967. For an extensive discussion of evidence-based medicine see Howick (2011).

⁵See, for example, Greenhalgh (2020).

2. Beyond evidence, part I: towards an extended understanding of evidence

Even though I have highlighted the flaws and shortcomings of the evidentialist paradigm of EBP, I'd like to advocate its underlying idea: providing solid grounds for policy decisions. If we dispense with the fundament of adequate information about 'what works', policies cannot be effective. They would become accidental, arbitrary, a question of luck. In terms of political theory, a mere decisionist account would be taken.⁶ Nevertheless, the question 'what works' goes beyond tracing chains of cause and effect.

Thus, the first and obvious strategy would be to revise the concept of evidence, that is, to aim at a broader, softer understanding and move beyond RCTs and systematic reviews. Though the term evidence can play various functional roles in philosophy, some of them in tension, its dominant epistemological use (for example following Kant, Brentano or Descartes) is quite at odds with the introduced paradigm, as it denotes insights that stand for themselves, in contrast to methodologically gained knowledge. Put in a very general way, evidence provides certainty without further explanation or arguments – it cannot be proven, only recognised: it just shows itself (Kelly 2016; Mittelstraß 2004). Notwithstanding that this philosophical understanding may be not directly helpful for the issue of grounding policy decisions, it points to an essential caveat with regard to the political function of referring to evidence as something neutral, objective and therefore non-debatable. While it seems unproblematic to concede the idea that some beliefs may be indeed self-evident from a subjective perspective, and give rise to hold certain sentences for true, appealing to this kind of evidence seems to be inapt to convince others that do not share my introspective experience. For them, the same belief may not be as evident as for me – ignoring that would mean to use epistemic force. Yet this problem also emerges for attempts to conceptualise evidence as objective justification of truth, as it is the case in its scientific understanding also employed in EBP. As newer critical approaches have underlined, we find a massive pluralization of knowledge perspectives and an according plurality of how evidence is produced in different disciplines. There are various 'cultures of evidence', each with its own rules of construction and validation – which means that there is no unanimous way of determining what counts

⁶The counterpart to the technocratic account, see Habermas (1968).

as evidence (and what counts as a problem in the first place). The concept of evidence thus has become fragile (Böschen 2013, 4–5).

So as a first premise of using evidence as basis for policy decisions, I would like to suggest getting rid of the ideal of evidence as a provider of one-for-all objectivity and acknowledge its context-sensitivity. Furthermore, to be reliable and valid, evidence cannot be restricted to quantifiable data. The 'orthodox' model has a strict hierarchy of evidence, classifying RCTs and meta-analyses as most valuable, and other forms of evidence as 'second best'. To provide reliable information on how and why a certain policy works (and under which conditions will work in the future), abandoning this ranking in favour of a pluralism of possible evidence, including evidence from experience and social knowledge, is crucial (Cartwright and Hardie 2012, 157; Greenhalgh and Engebretsen 2022, 8; Sanderson 2002, 3). This would change the foundation of evidence-based policy significantly. Yet drawing on more context-dependent forms of evidence raises other questions, and I will come back to that point later.

This leads to a second, more radical suggestion: We may drop the concept of evidence itself and focus on the concept of knowledge instead. There is certainly no shortage of divergent philosophical definitions of what knowledge means, some of them making knowledge-based policy no less problematic than evidence-based policy. Thus, I want to suggest to employ a deflated concept of knowledge which can function as a tool for building a common ground for policy decisions. Understanding knowledge as a practice might be helpful here.

The perspectivity and plurality of knowledge belong to the core insights of pragmatist thinking. Feminist, queer and postcolonial theorists have further emphasised this fundamental particularity of knowledge, which led to a thoroughgoing criticism of the ideas of neutrality and objectivity (Haraway 1988; Zeeman et al. 2014). First, if we understand knowledge as situated and embodied, it becomes diverse and fluid. Furthermore, if any perspective is partial, claiming to offer a universal standpoint appears ignorant at best, repressive at worst. And finally, if we think of knowledge as a result of discursive processes, questions of who can speak and who is heard become highly relevant. To arrive at the best description of reality, including problems, we need to strive for a most inclusive and multi-perspective conversation.

Hence, the shift from evidence to knowledge facilitates to highlight the importance of reflexivity (as opposed to formal rationality) in terms of problem-solving in general and policy-making in particular. Furthermore,

considering the conditions of knowledge production allows for talking about value issues and conflicting interests (Weiland 2013, 13), and hence about power structures and exclusions. With regard to policy advice, the ideal of value-free science as well as that of the primacy of scientific knowledge is seriously challenged.

That is, other forms of knowledge must be taken into account when it comes to mapping the social and political scenery and looking for good solutions. This covers all types of non-standard knowledge that have been widely neglected as non-valuable in policy-making. In addition to scientific and expert knowledge, everyday lay knowledge comes into play. Of course, a strict demarcation is difficult to draw, but spoken generally, the latter is non-systematic, personal and experience-based (Demszky and Nassehi 2012, 171–172). In contrast to the scientific ‘view from nowhere’, it does not abstain from its genealogy and standpoint. That is, its particularity is reflected and embraced. Concepts like traditional knowledge (Zamparo), local knowledge (Geertz), residential knowledge (Kohler) or citizen knowledge (Vetter) refer to types of knowledge that are often implicit or tacit (Polanyi), embedded in practices and narration, which makes them also hard to manage. As Demszy and Nassehi state:

Involving experience-based knowledge in the course of policy is in many aspects a kind of revolution against the usual political order. Experience of local actors and their knowledge not only relativizes, but questions the knowledge means of experts and policy makers. At the same time, the involvement of experience based knowledge means the involvement of new actors in the course of policy-making, and their struggle for recognition. (2012, 172)

Turning to experience-based knowledge thus also means a radical democratization of knowledge. This indeed revolutionary demand entails a harsh criticism of cognitive elites that has been already brought forward by John Dewey. The relation of expert knowledge and lay knowledge, of scientific research and everyday life seems to be disconnected, that is to say: estranged (Abbott 2012). Put very generally, scientific research and common sense form a continuum from the pragmatist perspective. Both seek to inquire reality, though with different systematic levels, different means (and different languages). Therefore, both cannot claim to offer a total view, and experts cannot rule as the new philosopher kings. As Dewey put it:

It is impossible for high-brows to secure a monopoly of such knowledge as must be used for the regulation of public affairs. In the degree in which they become a specialized class, they are shut off from knowledge of the needs which they

are supposed to serve. [...] The man who wears the shoe knows best that it pinches and where it pinches, even if the expert shoemaker is the best judge of how the trouble is remedied. (Dewey 1927, 206–207)

Accordingly, the pragmatist view acknowledges citizens as experts on their own lives. Therefore, it is essential to include their knowledge in the processes of identifying and addressing problems. At the same time, it allows for a division of epistemic labour against the idea of epistemic equality, that is, it advocates the ‘idea that, with respect to some issues, some people know more than others’ (Kitcher 2011, 20; 20–25). Hence, it remains a democratic challenge to decide who has relevant expertise in which case, and who is to be heard.

Apart from that, including experience-based knowledge does not only lead to more apt policies but supports successful policy implementation since it adds to their credibility and legitimacy. Yet its transformation into politically applicable knowledge remains problematic: Converting it into more abstract and systematic knowledge amounts to a scientification that threatens to take away its distinctive features and thus the very particularity and significance it was included for (Demszky and Nassehi, 2012, 173–179). Integrating non-standard knowledge into policy-making thus remains a major challenge and calls for a revision of the standard model of policy advice.

Whether we stick to a broadened concept of evidence or reject the idea of evidence as a sound basis for policy-making altogether, scientific policy advice must move beyond a linear model of providing information that clearly leads to political actions. I will come back to that issue later. For now, I would like to address a second weakness of the evidentialist paradigm.

3. Beyond evidence, part II: acting under uncertainties

As I have mentioned beforehand with reference to William James, evidence-based policy is quite hogtied when it comes to new situations. That is, it hinders any decision for (or against) a certain policy unless it is proven effective by a study. Yet usually this is exactly the situation we are confronted with: we don’t have a study at hand. Having to act under uncertainties is the default setting of action in everyday life as well as in politics.⁷ We neither have complete knowledge of every

⁷As Erman Sozudogru (2022) has pointed out, this also applies to the field of medicine and public health, leading to an analogous criticism of evidence-based medicine.

parameter nor are we able to predict for sure what our actions will engender. Rather, we typically need to act based on opinion, estimate and habit (Merton 1936, 900–901).⁸ That is, our actions rely a lot more on trust and bets than we might like to believe.

I would like to suggest that a pragmatist concept of knowledge is on the one hand congenial with regard to incorporating non-standard forms of knowledge. On the other hand, it is apt to cope with new situations and accommodates the general future-orientedness of actions. Thus the traditional idea of knowledge as exact representation of reality, which also grounds the evidentialist paradigm, is dropped in favour of an idea of knowledge as leading to successful action. Following that instrumental understanding, knowledge is not about fidelity to an original, but about coming ‘from here to there’ (Koopman 2009, 109).⁹ It is not about copying the world, but coping with it.¹⁰ That is, ‘the epistemic relation holds between prior practical projections (e.g. beliefs, skills) and the future practical eventualities at which they aim, e.g., the objects of belief, the aims of skillful action’ (Koopman 2009, 109). Adopting such a deflated concept of knowledge resolves the epistemic deadlock of evidentialism and unburdens from the evidentialist urge to cover every eventuality. It is allowed and demanded to rely on imperfect knowledge. Neither can we preclude contingency nor evade responsibility for our decisions.

Rejecting the evidentialist paradigm and embracing uncertainty eventually questions the concept of EBP in principle and calls for a more fundamental shift. The moment one withdraws from the idea of policy-making as technical exercise, as the application of formal rules, practical reason can unfold, and judgment and discretion can have their say (Sanderason 2002; Cartwright and Hardie 2012, 157–159). This implies a transition from a rational-objective model to an argumentative-subjective (or rather: intersubjective) model of policy-making (van der Knaap 1995, 190; see also Greenhalgh and Engebretsen 2022, 1–2). Information still plays a crucial role, yet ‘intelligent politics’ (van der Knaap 1995, 192) seek to get engaged in rather unstructured dialogical learning processes.

⁸Though habits of action should be critically evaluated from time to time. As Robert Merton has elaborated with reference to John Dewey’s ‘philosophical fallacy’ (see Pappas 2008, 26–28) and Whitehead’s ‘misplaced concreteness’, being too true to habits of action is a common source of flaws: Only because an action has been successful in the past and became a habit, that is, became automatic, non-deliberate, it doesn’t mean that it will be under any future circumstances (Merton 1936, 901).

⁹See Dewey, *Middle Works*, 4: ‘Knowledge, on this view, is not a copy whose truth is to be judged by its fidelity to an original; it is an instrument or organ of successful action’.

¹⁰See Anacker 2016, 229: ‘we do not believe in order to have to representations of the world, we have to have beliefs in order to cope with the world’.

That is, the ‘what-has-led-to-what’ feedback that refers to systematic evidence is complemented with conversations about values (van der Knaap 1995, 190–192). In this model, responsible decision-making requires governments to acquire grounded knowledge by becoming interactive and reflexive learning systems (Sanderson 2002, 1). Adopting this kind of policy-making does not only involve deliberative but also experimental elements. Hence, failures and errors appear as constitutive and even productive for improvement (Cartwright and Hardie 212, 130–131).

Furthermore, acknowledging that knowledge is ‘a bet on a future reality’ (Koopman 2009, 117) calls for adopting a certain *epistemic humility* and turning to the *precautionary principle*. Having in mind that there might be large gaps in our anticipation of consequences fosters acting with a higher level of deliberation and emphasizing prevention.¹¹ I would like to suggest that if we take uncertainty seriously as fundamental epistemic condition, that is, that we have to deal with ‘unsaturated evidence’ (Böschchen 2013, 6) all the time, a twofold demand arises: First, the need to act more experimental, and second, to give ignorance a more prominent normative role.¹² Consequently, we arrive at an *experimentalism with precaution*.

4. Experimentalist policy-making in the meliorist spirit

With regard to policy-making, this means to let go of the premise of ‘ex ante correctness’ and establish an awareness of the limits of prediction and manageability: The more complex a system is, the more unintended consequences occur and the less it can be controlled. So ‘we need to recognise that policies are essentially ‘conjectures’ based upon the best available evidence’ (Sanderson 2002, 19). What we know so far and in all conscience is, from an experimentalist perspective, a sufficient basis for decision making and action. Only that these decisions and actions rather resemble working hypotheses than true statements about ‘how it really is’ (or will be). That is, they are taken as provisional and tentative, educated guesses that are trusted to prove productive. Questions of (absolute) truth are bracketed in favour of being able to act.

However, the pragmatist calls to experimentalist problem-solving may sound irresponsible, even cynical when the stakes are high. For example,

¹¹Hence, I advocate the precautionary principle as an epistemic ‘shortcut’ to prevent possible harms that is ignorance-oriented instead of a stronger, evidence-oriented version (meaning there has to be evidence of harms), see Böschchen 2013, 4.

¹²For a reflection on ignorance with regard to the question of biodiversity, see Hetzel 2015.

policy-decisions during a pandemic may cost lives and cause serious health damages as well as social and economic harms. This is no situation to set up experiments. Yet at the same time, it is a situation that cannot be mastered with following old scripts. Thus, I would like to suggest thinking of experimental policy-making in the meliorist spirit. Let me elaborate a bit on that. First, drawing on John Dewey can shed some light on what experimentalism is (not) about: 'When we say that thinking and beliefs should be experimental, not absolutistic, we have then in mind a certain logic of method, not primarily, the carrying on of experimentation like that of laboratories' (Dewey 1927, 202). Hence, experimentalism is not the philosophical grounding for turning citizens into human guinea pigs. Rather, it is to understand concepts and theories 'shaped and tested as tools of inquiry' and highlight the anti-evidentialist postulation 'that policies and proposals for social action be treated as working hypotheses, not as programs to be rigidly adhered to and executed' (Dewey 1927, 202–203).

This openness and flexibility render experimentalism adaptive and responsive to dynamic situations. That is, even though the expectations to govern policy outcomes may have to be lowered, an experimentalist account appears to be much better prepared to deal with unforeseen challenges. The social premise of engaging in such intelligent policy-making is an 'experimenting society':

The experimenting society would be active, preferring innovation to inaction; it would be an evolutionary, learning society and an honest society, committed to reality-testing, to self-criticism and to avoid self-deception; it would be non-dogmatic, accountable, decentralised and scientific (Oakley 2000, 230 cited in Sanderson 2002, 9).

It is needless to say that no actual society meets these ideals. Yet we may use the idea of an 'experimenting society' and its characteristics as a critical tool to evaluate and modify existing social practices and thus move towards a *more* experimenting society, for example by advocating an affirmative culture of trial-and-error.

Furthermore, adopting an experimentalist account of policy-making means to set value on experience and its role in knowledge production. As opposed to rather rationalist and ideal liberal political theories, it is the interplay of individual and collective experiences in all their multifariousness – and also contrariness – that is considered to be at the core of society and that has to be well-organized. This challenge is best met by a democratic setup that enables growth, the multiplication of experience by way of interaction, both on the individual and collective level (Reder

2018, 187–190). The inevitable plurality of competing and often contradicting perspectives is acknowledged as a fruitful source of experimentation. That is, it does not have to be resolved in a final consensus, but feeds into practical working hypotheses about what to do (Kettner 1998, 62). Experimentalist democratic theory thus takes a dialectic middle ground between normativistic and realistic models (Kettner 1998, 50).

This focus on collective learning and growth characterises experimental politics also as inherently meliorist. In contrast to utopian and dystopian politics, it does not follow an ideal political theory or a messianic impetus. Rather, it strives for a better future by means of situated reason. That is, it lies between a conservative tie-up with the past and the revolutionary advance to the future (Koopman 2009, 157–165).¹³

In a quite Jamesian vein, Koopman holds that it is the troublemakers which provide newness and disturb an all-to-homogenous status quo. In Koopman's words: 'Experimentation is at its best where inventive persons break free of the routine crusts of consensus to generate dynamic new possibilities of democratic individuation and association' (Koopman 2009, 166).¹⁴

Thus 'making trouble' is no end in itself. Rather, it is essentially related to articulate problematic aspects of common practices. Neither should we conflate highlighting dissent against consent with the legitimization of principled contrarianism. Nor should the recognition of uncertainty as a fundamental condition of decision-making be confused with a devil-may-care attitude or ruthlessness. Rather, experimentalism in the meliorist spirit goes hand in hand with an awareness of responsibility and accountability for the result of one's decisions. This may also mean, especially in situations marked by a high degree of uncertainty, that the risk of actions that go beyond the field manual of interventions has to be taken. As Cartwright and Hardie concede: 'Even if there is zero evidence of effectiveness, you may adopt it [a policy] because there is a strong requirement to do something to reduce public anxiety' (173). Furthermore, we have seen the importance of symbolic actions throughout the Covid-19 pandemic, and I would like to suggest that these kinds of public political performances, for example of grief or recognition, belong to the repertoire of responsible experimentalism. This is even

¹³Koopman characterises utopian models as rationalist and essentially oriented towards ideal political theories (e.g. Rawls), dystopian models irrationalist and messianic (e.g. Benjamin, Heidegger, Levinas, or Zizek).

¹⁴Insofar as democratic experimentalism offers a lot of sympathy for divergent individuals, it also goes beyond deliberative as well as communitarist models (Koopman 2009, 165–172).

more important if policies fail to address a problem and perhaps even lead to damages and losses. Meliorism amounts to blind optimism if it fails to cultivate sensitivity for possible failures and losses as well as for tragic constellations.

5. Non-evidentialist scientific policy advice

Let me come full circle now and address the question of how science can contribute to the experimental account of policy-making I have suggested. The pragmatist concept of science does not feed into the evidentialist paradigm. Though science is understood as a highly relevant way of collective learning and problem-solving, it is no supplier of absolute truth. As a systematic and specialised way of human inquiry, it provides grounded knowledge by way of trial and error. That is, scientific inquiry is experimental in itself: When a problem is identified, a hypothesis is set up, tested and eventually modified until a sufficiently working one is found. Since this process is open-ended, scientific knowledge is preliminary in principle. Moreover, the whole endeavour is not neutral but value-laden. That is: what is identified as a problem in the first place and which research programs are considered worthwhile is influenced by social and political conditions. This situatedness of science as human activity has to be reflected, especially when it comes to referring to science as an important voice in political deliberation.¹⁵

Given that the logic and conditions of inquiry and its built-in fallibilism are recognised and made transparent, scientific knowledge is less likely to be hijacked by political interest groups. Another premise of a pragmatist model of scientific policy advice (and of fruitfully integrating science into democratic societies in general), thus, is an at least basic understanding of how science works, that is, a scientifically literate public (Kitcher 2011, 128; 187–189).¹⁶

Furthermore, a pragmatist concept of science demands to abstain from the promises of control and predictability enclosed in EBP which are only bound to frustrate expectations both of politicians and the public and thus feed anti-science resentments.

¹⁵Kitcher's ideal of 'well-ordered science' could be a model for a critical evaluation of actual scientific research Kitcher 2011, 105–137.

¹⁶The idea of scientific literacy exceeds or complements the idea of being merely informed, which could lead back to an authoritarian understanding. In a way, it points to a precondition of Dewey's insight that a community has to be scientifically informed in order to organize as it needs to share a sufficiently similar evaluation of consequences (and the interest to control them) (Kettner 1998, 62–64).

Taking all that has been said into consideration, what kind of (scientific) policy advice contributes to knowledge-based policy-making and, in the end, sound politics? As indicated before, the classic linear model of policy advice has to be removed in favour of a dialogical, cooperative and responsive model. That is, politicians and scientific advisers have to get engaged in a common learning process that starts with getting a clear vision of the problem at hand. Following Otmar Edenhofer and Martin Kowarsch and their pragmatic-enlightened model (2015), science provides the epistemic infrastructure or cartography for making policy decisions. This includes two aspects: First, policy advice has to provide relevant information, 'like database, a library, or an independent expert' (van der Knaap 1995, 190). Second, it has to offer orientation with regard to alternative pathways and policy options: Which consequences can probably be expected if we take this or that route? It is important to notice, that '[t]here is no a priori method that can help decide what the best policy pathway is, because such an approach would always mistakenly presuppose fixed objectives and criteria instead of interdependency with practical consequences' (Edenhofer and Kowarsch 2015, 60).

Besides communicating research results and being radically open with regard to policy decisions, it is the task of scientific advisors to propagate a variety of policy options. This way, 'listen to the science' does not mean to establish TINA-politics. On the contrary, it means to aim for more alternative options and be able to evaluate them. Evaluating these options includes not only expert knowledge in all its diversity but also the interests and values of citizens as well as stakeholders. Given all that, science can play the role of an 'honest broker', to borrow a term by Roger Pielke (2004, 414–415, see also 2007, 2–3, 17–18). Following this idea, experts, or groups of experts such as committees, research councils and other institutionalised collectives, abstain from advocating a single best solution. Rather, 'having a diversity of perspectives reflected in clarifying or even expanding the scope of available options to decision-makers is the defining characteristic of the Honest Broker of Policy Alternatives' (Pielke 2007, 154). That is, a pragmatist approach favours pluralist inquiry over hierarchies of evidence and seeks to promote diversity within scientific research (Greenhalgh and Engebretsen 2022, 8; Kitcher 2011, 193–208).¹⁷

¹⁷How a pragmatist approach might have changed pandemic policies is outlined in Greenhalgh and Engebretsen (2022), 3–5).

Furthermore, the essential pluralism of scientific practice should be manifest in the commissions themselves and follow what Robert Merton called a 'disciplined eclecticism' (Merton 1982, 235): Different research methodologies, different intellectual perspectives, and different understandings of evidence foster a better understanding of the problems at hand (Merton 1982, 229–234).

6. Conclusion

As I hope to have shown, the narrow understanding of traditional evidence-based policy faces some major challenges. Adopting a pragmatist framework, good governance involves being part of a joint learning process of politics, science, and the public. Thus policy-making becomes much more experimental. In consequence, this means to let go of the idea of manageability of complex political problems. Policy outcomes cannot be fully controlled and predicted. The idea of deleting epistemic uncertainty with regard to policy decisions ignores that not knowing for sure what will happen next is an intrinsic property of social realities. Revising the paradigm of evidence-based policy from a pragmatist perspective leads to a meliorist account of policy-making which on the one hand acknowledges the epistemic precarity of future-oriented action and on the other hand is willing to be informed by grounded knowledge and, thus, listen to the science.

Acknowledgements

An earlier version of this paper was presented at the 4th European Pragmatism Conference in August 2022 at University College London. Furthermore, I want to thank my colleagues with whom I have the pleasure to work on the project 'Politics in Search of Evidence: Political responses to the Covid-19 pandemic', funded by the Deutsche Forschungsgemeinschaft: Michael Reder, Christian Apfelbacher, Julia Pielke, Julian Prugger and Marilena von Köppen gave me important feedback.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

The work was supported by the Deutsche Forschungsgemeinschaft.

References

- Abbott, Andrew. 2012. "Wissen Zwischen Elitismus und Demokratie." In *Wissenschaft und Demokratie*, edited by Michael Hagner, 140–162. Berlin: Suhrkamp.
- American Commission on Evidence-Based Policymaking. 2017. The Promise of Evidence-Based Policymaking. <https://www2.census.gov/adrm/fesac/2017-12-15/Abraham-CEP-final-report.pdf> (accessed 25.01.23).
- Anacker, Michael. 2016. *Knowledge Unlimited. On the Scope and Content of the Concept of Knowledge. In Limits of Knowledge. The Nineteenth-Century Epistemological Debate and Beyond*, edited by Michael Anacker, and Nadia Moro, 223–233. Mimesis International.
- Bogner, Alexander, and Wolfgang Menz. 2021. "Wissen und Werte im Widerstreit. Zum Verhältnis von Expertise und Politik in der Corona-Krise." *Leviathan* 49 (1): 111–132. doi:10.5771/0340-0425-2021-1-111
- Bromme, Rainer, Niels G. Mede, Eva Thomm, Bastian Kremer, and Ricarda Ziegler. 2022. "An Anchor in Troubled Times: Trust in Science Before and Within the COVID-19 Pandemic." *PLoS One* 17 (2). doi:10.1371/journal.pone.0262823.
- Brown, Mark B. 2009. *Science in Democracy. Expertise, Institutions, and Representation*. Cambridge: The MIT Press.
- Cartwright, Nancy, and Jeremy Hardie. 2012. *Evidence-based Policy. A Practical Guide to Doing Better*. Oxford: Oxford University Press.
- Demszky, Anna, and Armin Nassehi. 2012. "Perpetual Loss and Gain: Translation, Estrangement and Cyclical Recurrence of Experience-Based Knowledges in Public Action." *Policy and Society* 31 (1): 169–181. doi:10.1016/j.polsoc.2012.04.006
- Dewey, John. 1927. *The Public and Its Problems*. New York City: H. Holt.
- Edenhofer, Ottmar, and Martin Kowarsch. 2015. "Cartography of Pathways: A New Model for Environmental Policy Assessments." *Environmental Science & Policy* 51: 56–64. doi:10.1016/j.envsci.2015.03.017
- Greenhalgh, Trish. 2020. "Will Covid-19 be Evidence-Based Medicine's Nemesis?" *PLoS Medicine* 17 (6): 1–3. doi:10.1371/journal.pmed.1003266.
- Greenhalgh, Trish, and Eivind Engebretsen. 2022. "The Science-Policy Relationship in Times of Crises: An Urgent Call for a Pragmatist Turn." *Social Science and Medicine* 306: 1–10. doi:10.1016/j.soscimed.2022.115140.
- Habermas, Jürgen. 1968. "Verwissenschaftlichte Politik und öffentliche Meinung." In *Technik und Wissenschaft als "Ideologie"*, edited by Jürgen Habermas, 120–145. Frankfurt a. M.: Suhrkamp.
- Haraway, Donna. 1988. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." *Feminist Studies* 14 (3): 575. doi:10.2307/3178066.
- Hetzel, Andreas. 2015. "Zur Normativen Relevanz von Nichtwissen für Eine Ethik der Biodiversität." In *Vom Nutzen des Nichtwissens. Sozial- und Kulturwissenschaftliche Perspektiven*, edited by Peter Wehling, 247–270. Bielefeld: Transcript.
- Howick, Jeremy H. 2011. *The Philosophy of Evidence-Based Medicine*. Chichester, UK: Wiley-Blackwell, BMJ Books.
- James, William. 2009a. "Is Life Worth Living?" In *In The Will to Believe and Other Essays in Popular Philosophy*, 32–62. Charleston, SC: Forgotten Books.

- James, William. 2009b. "The Will to Believe." In *The Will to Believe and Other Essays in Popular Philosophy*, edited by William James, 1–31. Charleston, SC: Forgotten Books.
- Kelly, Thomas. 2016. "Evidence." In *The Stanford Encyclopedia of Philosophy (Winter 2016 Edition)*, edited by Edward N. Zalta. Accessed January 27, 2023. <https://plato.stanford.edu/archives/win2016/entries/evidence/>.
- Kettner, Matthias. 1998. "John Deweys Demokratische Experimentiergesellschaft." In *Demokratischer Experimentalismus. Politik in der Komplexen Gesellschaft*, edited by Hauke Brunkhorst, 44–66. Frankfurt a. M.: Suhrkamp.
- Kitcher, Philip. 2011. *Science in a Democratic Society*. Amherst, MA: Prometheus Books.
- Koopman, Colin. 2009. *Pragmatism as Transition. Historicity and Hope in James, Dewey, and Rorty*. New York: Columbia University Press.
- Lavazza, Andrea, and Mirko Farina. 2020. "The Role of Experts in the Covid-19 Pandemic and the Limits of Their Epistemic Authority in Democracy." *Frontiers in Public Health* 8: 356. doi:10.3389/fpubh.2020.00356
- Merton, Robert K. 1936. "The Unanticipated Consequences of Purposive Social Action." *American Sociological Review* 1 (6): 894–904. doi:10.2307/2084615
- Merton, Robert K. 1968. "The Self-Fulfilling Prophecy." In *Social Theory and Social Structure*, edited by Robert Merton, 475–490. New York: The Free Press.
- Merton, Robert K. 1982. "Social Knowledge and Public Policy." In *Social Research and the Practicing Professions*, edited by Robert Merton, 224–247. Cambridge: Abt Books.
- Mittelstraß, Jürgen. 2004. "Evidenz." In *Enzyklopädie Philosophie und Wissenschaftstheorie*, edited by Jürgen Mittelstraß, 609–610. Stuttgart: Metzler.
- Oakley, Ann. 2000. *Experiments in Knowing: Gender and Method in the Social Sciences*. Cambridge, UK: Polity Press.
- Pappas, Gregory. 2008. *John Dewey's Ethics: Democracy as Experience*. Bloomington: Indiana University Press.
- Pielke, Roger. 2004. "When Scientists Politicize Science: Making Sense of the Controversy Over *The Sceptical Environmentalist*." *Environmental Science & Policy* 7: 405–417. doi:10.1016/j.envsci.2004.06.004
- Pielke, Roger. 2007. *The Honest Broker. Making Sense of Science in Policy and Politics*. Cambridge: Cambridge University Press.
- Reder, Michael. 2018. "Demokratie als experimentelle Praxis und radikale Gesellschaftskritik. Vergleich pragmatistischer und radikal-demokratischer Impulse für die Demokratietheorie." *Zeitschrift für Philosophische Forschung* 72 (2): 184–204. doi:10.3196/004433018823769129.
- Sanderson, Ian. 2002. "Evaluation, Policy Learning and Evidence-Based Policy Making." *Public Administration* 80 (1): 1–22. doi:10.1111/padm.2002.80.issue-1.
- Sozudogru, Erman. 2022. "Uncertainty in Medicine: An Active Definition." In *The Future Circle of Healthcare*, edited by Sepehr Esahni, Patrick Glauner, Philipp Plugmann, and Florian M. Thieringer, 329–341. Heidelberg and Berlin: Springer Nature.
- van der Knaap, Peter. 1995. "Policy Evaluation and Learning. Feedback, Enlightenment or Argumentation?" *Evaluation* 1 (12): 189–216. doi:10.1177/135638909500100205
- Weiland, Sabine. 2013. "Evidenzbasierte Politik Zwischen Eindeutigkeit und Reflexivität." *TATuP - Zeitschrift für Technikfolgenabschätzung in Theorie und Praxis* 22 (3): 9–15. doi:10.14512/tatup.22.3.9

- Wieringa, Sietse, Eivind Engebretsen, Kristin Heggen, and Trish Greenhalgh. 2017. "Has Evidence-Based Medicine Ever Been Modern? A Latour-Inspired Understanding of a Changing EBM." *Journal of Evaluation in Clinical Practice* 23: 964–970. doi:[10.1111/jep.12752](https://doi.org/10.1111/jep.12752)
- Zeeman, Laetitia, Kay Aranda, and Alec Grant. 2014. "Queer Challenges to Evidence-Based Practice." *Nursing Inquiry* 21 (2): 101–111. doi:[10.1111/nin.2014.21.issue-2](https://doi.org/10.1111/nin.2014.21.issue-2).