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Why We Cannot Separate Evidence From Values in Public Policy

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ABSTRACT

Whether or not any particular policy is adequate by EBP's own standard—being evidence-based—cannot be decided without appeal to value-based considerations. We support this claim in two steps. First, we argue that which evidence gets used in policy-making depends on our value commitments, which are rarely made explicit, let alone being the subject of critical and transparent reflection. In other words, value commitments are not just important at the point of spelling out specific policy details and choosing between policy options but they are absolutely essential right from the very beginning of the policy-making process: all the way from deciding which problem should be addressed by policy or regulation to determining which evidence to use and where to look for it. Second, in order to determine when we have enough evidence, we need to take into account relevant value-based considerations.

RESUMEN

La idoneidad de una política en particular según el propio estándar de la EBP (basada en la evidencia) no puede determinarse sin recurrir a consideraciones basadas en valores. Respaldamos esta afirmación en dos pasos. En primer lugar, argumentamos que la evidencia que se utiliza en la formulación de políticas depende de nuestros compromisos de valor, que rara vez se explicitan, y mucho menos son objeto de una reflexión crítica y transparente. En otras palabras, los compromisos de valor no solo son

importantes al detallar las políticas específicas y elegir entre las opciones, sino que son absolutamente esenciales desde el inicio del proceso de formulación de políticas: desde la decisión sobre qué problema debe abordarse mediante una política o regulación hasta la determinación de qué evidencia utilizar y dónde buscarla. En segundo lugar, para determinar cuándo disponemos de suficiente evidencia, debemos tener en cuenta las consideraciones basadas en valores pertinentes.

1 | Introduction

The core commitment of the Evidence-Based Policy (EBP)[1] paradigm is to base policy decisions on a solid evidential foundation, where that usually means scientific evidence (Botterill 2017). Critics point out that, within the EBP paradigm, problems in translating scientific evidence into public policy are generally perceived as either resulting from political interference or as less-than-optimal knowledge transfer between the domains (Hawkins and Parkhurst 2016). However, political scientists and—to a lesser degree—philosophers have long pointed to the integral part that values play in policy-making and the political process, criticizing the idea that policy problems can have mere 'technical' solutions that leave robust discussions of political and ethical values aside (Boston et al. 2010, Botterill and Hindmoor 2012, Parkhurst 2016, Botterill 2017, Fischer 2019 [1980]).[2]

Our argument goes much further than existing discussions of the importance of values to policy-making: we argue that ethical and political values should be recognized as an *integral* part of EBP because of the *value-dependence of both evidence and evidential support themselves*, and not just for the political nature of public policy-making. This centrality of values[3] for the evidence-based policy-making process and the intricate relationship between values and evidence have thus far not been recognized anywhere in the EBP literature. We make our case by presenting a series of epistemological arguments that challenge the separability of evidence and values in general and in policy-making in particular. Robust value discourse, we contend, is essential for evidence-based decision-making and its absence has detrimental effects on such decisions. Ultimately, whether or not any particular policy is adequate by EBP's own standard—being evidence-based—cannot be decided without appeal to values, more specifically, to ethical considerations.

Our main point, then, is to demonstrate the value-dependence of evidence itself and how it impacts EBP. We demonstrate this dependence by bringing together arguments from epistemology and philosophy of science to show how values impact every stage of the policy-making process where evidence plays a role and we discuss the implications for EBP. As a matter of fact, the choice of evidence in policy-making will *depend on* our value commitments. These commitments are rarely made explicit, let alone being the subject of critical and open reflection.

In other words: values play a much greater and more fundamental role in the EBP process than is generally acknowledged, their impact is inevitable, and what is more, it concerns all stages of the process.[4] This means that in order for EBP to achieve that goal and make good on its commitment to a solid scientific evidence base it must be just as committed to a solid ethical values base and transparently so.

At this point—to make our position clearer—a disambiguation is needed: the term 'value' is used in a number of different ways across disciplines and discourses, and in the political sciences and economics it tends to be used descriptively as meaning 'what people happen to value'. In contrast, in moral and political philosophy, 'values' are understood normatively as those things we ought to value, or which are by some plausible standard 'valuable,' where 'standards' refers to widely accepted moral or political theories that can be justified through shared reasons. To give an example, 'freedom of movement' might be a 'value' in both the descriptive and the normative sense, whereas some people might 'value' political inequality (for instance if they are the beneficiaries of it) without it therefore being 'valuable' in the normative sense. Our argument in this paper is about value in the second, normative sense. Where we cite scholars who use the term in the descriptive sense, we do so under the assumption that their point equally holds for values in the normative sense and that they would see the latter as a subset of the former.

With this understanding of values in mind, we argue that, rather than downplaying the importance of values for evidence-based policy-making (EBPM), what is called for is an explicit commitment to a set of values for each and every policy-making process. We suggest that these values should themselves be subject to requirements of transparency and critical scrutiny as much as the evidence base itself.[5] Just like policy goals are set early on in the policy-making process, ethical values should be adopted by way of explicit commitments rather than being implicit or even unconscious factors, hidden from sight or awareness. Importantly, understanding values in the normative sense, rather than as merely reflective of subjective attitudes (the descriptive sense), makes meaningful disagreement about such values possible.[6]

Evidence-based policy needs ethical foundations in a number of ways:

1. Selecting policy problems: which issues need to be addressed by policy (novel or revised) in the first place?
2. Epistemic responsibilities regarding evidence-based decisions more generally, these include:
   - How and where to look for evidence?
   - What counts as relevant evidence?
   - What kind of evidence is considered?
3. When is a policy evidentially adequate?
   - When do we have 'enough' evidence for the hypotheses our policy relies on?

Naturally, the process of selecting policy problems (1) is itself subject to the challenges of gathering evidence specified in questions of type (2).

There are at least two further questions concerning the relationship between values and evidence-based policy. Since we feel that both are well-rehearsed issues, they will not form part of our discussion:

4. Ethical implications of different *policy options*: who is going to be affected by the policy and how? How do we compare and trade off different ethical values?[7]
5. Values impacting the very *production of evidence*. It is well accepted that science and the generation of scientific results are not value neutral[8]

Our focus will be squarely on the part of the policy-process where evidence is procured, selected, and assessed by decision-makers for the purpose of policy design. All the while, we acknowledge that these processes are not always linear, and their different parts are often hard to separate. We concentrate on evidence users and evidence use in the policy-making process rather than on evidence producers and production. For the sake of argument, we operate with a somewhat simplified picture of the policy-making process, wherein we speak of evidence users and decision-makers as the group responsible for acquisition, consideration, and selection of evidence, including deciding what counts as evidence. This means that we are bracketing the question of knowledge brokers and other mediaries for the purpose of this paper, but on our understanding, the conclusions we draw apply to them in equal measure.[9]

2 | Choosing What Problems Require Policy Solutions

Discussions of evidence-based policy-making (EBPM) usually skirt the question of how an issue gets tabled or selected for policy-making in the first place. To the extent that public policy is a tool for addressing and potentially solving social, political, or environmental problems, deciding which problem needs addressing through (novel or revised) policy measures is not a value-neutral decision. Not all problems that could be improved through appropriate policy and regulation end up getting addressed—some arguably never come to the attention of policy-makers.

Why are some problems salient to policy-makers while others are not? On what basis are they 'selected'? This question is not easily answered since there is no uniform process for determining which issues get tabled or re-tabled and there are usually multiple and diverse determinants of such decisions; the trajectories of individual policies are often not linear.[10]

However, to the extent that policy-making is always also a kind of prioritizing (the issues that get addressed over those that do not get addressed) these choices are morally relevant. They have moral implications and impacts on social justice and civil liberties. And in many cases, they may well be seen as an expression of a value judgment, of what is deemed important, whatever exactly 'important' may mean in the particular context and to the concrete decision-maker(s). In judging problems to be important or not, we are making value judgments, often implicitly.

Further, the answer to the question of what issue gets addressed by policy-makers in the first place itself depends on the answer to question (2): What evidence should be used? Because, naturally, in selecting a problem that requires a policy solution we are regularly using evidence; evidence to the effect that a state of affairs exists that is socially, politically, or environmentally suboptimal in a particular regard and that novel or revised policy can form part of (or be) the solution to the problem. Further, evidence that intervening with the issue at hand falls within the state's legitimate use of power.

What is more, the type of evidence used will also determine what kind of issues get addressed by policy-makers. Parkhurst points out that a preference for certain research methods and the evidence they generate has an impact on which issue gets tabled in the first place (2016, 380). Donal Khosrowi and Julian Reiss argue that RCTs and other "average treatment-effect evidence favoured and prevalently produced in evidence-based policy... remains largely uninformative for those who care about distributive issues." (2019, 183–4). In other words, how a policy will differentially affect social groups will not be captured by the kind of evidence that is regularly favored in evidence hierarchies. As a result, they argue that "policy makers who pursue distributive goals may find it more difficult to justify their calls for policy action by appeal to evidence, for example, because evidence on distributive effects is not available; or, if it is available, because appealing to such evidence makes them more vulnerable to resistance on epistemic grounds" (Khosrowi 2018, 184).[11] Favoring certain types of evidence systematically can stymie the pursuit of certain ethically and socially valuable policy goals. In sum, the choice of, and preferences for, certain types of evidence impacts on the selection of policy problems in a number of ways.

3 | Evidence and Values

3.1 | Distinguishing the Descriptive From the Normative Claim

Evidence enters the policy-making process at different stages. But what evidence should be used? What criteria exist for selecting evidence? In this section, we argue that policy-makers need ethical frameworks in the *acquisition, consideration, and selection of evidence*, including deciding what counts as evidence.[12] We are making both a descriptive *and* a normative claim.

The descriptive claim is that—inevitably—our value commitments will influence where we look for evidence and which evidence is taken into consideration but also how we weigh evidence. Importantly, the descriptive claim can be understood in two different ways, corresponding to the unconscious and conscious ways in which values influence processing of the evidence.

Firstly, the descriptive claim is about unconscious biases and heuristics[13] that may or may not be epistemically problematic.[14] Justin Parkhurst describes how people's values will influence how they interpret evidence:

> A more subtle politics of evidence can arise in particular when individuals are unaware how their value systems, or their group identities, bias their understandings and interpretations of evidence. Researchers in the field of cognitive psychology have particularly explored how heuristics (simplifying processes) can lead to biases in understanding information—typically defined as departures from 'rational' or purely analytical decision processes.[15]

Similarly, Dan Kahan points to 'ideologically motivated cognition': "a form of information processing that promotes individuals' interests in forming and maintaining beliefs that signify their loyalty to important affinity groups" (2023, 407).

And we know that evidence such as people's testimony and expert advice, when seen through the lens of partisanship, will be trusted less if those providing the evidence are perceived to be aligned with political causes one is opposed to (O'Connor and Weatherall 2019).

Secondly, the descriptive claim is about conscious selection of evidence: on most issues it is impossible to consider *all* available evidence—decision-makers need to select amongst the available[16] evidence; no one has unlimited resources to invest into their quest for information. On what basis do we select evidence and when do we stop searching? Granted that much of the evidence selection in the policy-making process will be opportunistic—policy-makers work under pressure in an environment that fosters availability bias, for instance: We know that research has greater uptake where it is published in open access formats or where it is published in English, often to a detrimental effect (Amano et al. 2021).

But one's value commitments, too, will have an impact on one's evidence selection. Given limited resources and the need to prioritize, it is perfectly rational for a policy-maker who, let us say, wants to ensure that a public health policy they are in the process of designing does not disproportionately affect the indigenous community, to invest greater time and resources into sourcing (or procuring) evidence that is relevant to this specific issue. This may mean that they relatively neglect evidence concerning the policy's impact on the elderly or those living in institutions (see also Section 5 below). Such selective acquisition and consideration of evidence is, of course, not always innocuous. There may be willful ignorance, negligence, abuse of power, and outright corruption at play. Our point here is that even where this is not the case, that is, even where policy-makers act in good faith and are—if you will—epistemically and politically virtuous, they cannot be equally attentive to *all* available evidence. It is perfectly rational to limit one's inquiries to aspects of particular concern. In other words, in order to find the evidence they need, policy-makers must have some idea of what good they are trying to achieve with the policy and how, in other words they need to have *some* notion of what is at stake and what is important. However, for the most part, value commitments of policy-makers (i.e., 'evidence-users') in the process of evidence gathering will not be consciously chosen, let alone be made explicit.[17]

The normative claim we are making is twofold: (i) In Sections 5.1 and 5.2 we argue that our values fix our concrete epistemic responsibilities concerning evidence acquisition and selection—it is only relative to our value commitments that we can assess if we applied appropriate standards of due care to the process of evidence gathering. We demonstrate that moral values *ought to* enter into the question of how much evidence is *objectively* enough. And (ii): not only are our epistemic decisions inseparable from the values we hold, their interdependence ought to be acknowledged rather than ignored or minimized. Making not just conscious but explicit value commitments should be an integral part of a rigorous policy-making process. Normative claim (ii) is independently supported by the descriptive claims. That is, given that ethical values do influence the *acquisition, consideration, and selection of evidence* it should be imperative to declare such influence.[18] It is further supported by normative claim (i): if moral and political values fix our epistemic responsibilities in determining how much evidence is objective enough, then an assessment of our compliance with epistemic responsibilities is not possible without knowing actors' value commitments. This means that we have two independent arguments for (ii), the view that ethical values should be explicitly acknowledged in EBPM.[19]

4 | What Evidence is Taken Into Account?

EBP has become widely adopted by international organizations such as the United Nations and its subsidiary organizations, where evidence-based policy making is understood as "a policy process that helps planners make better-informed decisions by putting the best available evidence at the centre of the policy process" (UNICEF 2008). Naturally, one of the questions that EBP advocates are concerned with is what constitutes the "best available evidence."

At this point it might be worth pausing to look at the very concept of evidence in EBP[20] itself, which is generally understood as differing from mere 'facts' or 'information.' Writing about EBP specifically, Eileen Munro suggests that evidence "is more correctly seen as a three-place relationship. It is *of* something, and it is useful *to* someone to use as good grounds *for* accepting some assertion or claim. Research results become evidence only when someone decides that they will support the case they are trying to make" (Munro 2014, 51).

Munro adds that "being an item of evidence is not a neutral, objective fact but the result of someone, in some context, deciding that it is evidence for their purpose" (ibid.). Deborah Stone, in a similar vein, contends that:

> The rational ideal [of EBP] presupposes the existence of neutral facts—neutral in the sense that they accurately describe the world but don't serve anybody's interest, promote any value judgments, or exert persuasive force beyond the weight of their correctness. Yet, facts don't exist independent of interpretive lenses.[21]

In that sense, then, what counts as evidence is always and inevitably already selected from the available data or information relative to a specific purpose or interest. Since the very point of policy-making is to effect changes in the world that are—by

some standard—improvements over the status quo, the act of elevating data or information to the status of evidence is not value-neutral.

This means that the goal or purpose pursued plays a decisive role for whether data or information is considered to be evidence.[22] How evidence users conceive of the purpose of a proposed policy (including their views on why it is morally or otherwise important) will impact what information gets selected and included in the evidence base. To make this even clearer: facts or information that are relevant to a policy question may not be taken into account as evidence because they do not support the specific goal or purpose of the policy. To give a somewhat crude example: a policy meant to prevent the overloading of the health system during a pandemic by a sudden influx of patients requiring emergency treatment will call for different kinds of evidence than a policy primarily focused on mitigating unequal health impacts for different social groups. Hence, facts supporting insights regarding the latter may not be included in the evidence base because they are not relevant to the former purpose. Of course, pandemic-related policies can (attempt to) pursue both goals and there are many examples where Covid-related policies tried to do that. However, this does not affect our point that the very idea of what a policy is trying to achieve—and the value judgments underpinning the formulation of such goals—impacts what is considered to be evidence and what is not.

The kind of evidence policy makers are looking at will restrict *whose* information gets to be evidence and whose view is therewith taken into account. Some types of information will get neglected or dismissed as evidence. 'Situated knowledge'—knowledge held by marginalized groups who are not on the policy-makers' radar—may get missed (Vaditya 2018).[23]

What makes matters worse is the fact that policy-makers and EBP advocates have tended to privilege certain types of data or information as evidence. Policy-makers regularly use so-called evidence hierarchies giving relatively greater weight to evidence types at the top of the evidence pyramid adopted. A number of organizations involved in policy-making explicitly endorse particular evidence hierarchies.[24] These heuristic devices are meant to allow policy-makers to navigate diverse types of evidence and to do so consistently across different policy decisions. Evidence hierarchies, as the name suggests, privilege certain types of evidence over others and often justify their ranking on methodological (or epistemological) grounds. Both synthetic reviews such as meta-analyzes and studies based on RCTs regularly top evidence pyramids.[25]

Many would concur with the view that not all research—and, by implication, not all evidence—is created equal. And so it may seem obvious at first glance that evidence based on the most rigorous methodology *ought* to be epistemically privileged over less rigorously generated evidence. However, such privileging can be challenged in at least two ways: there may be reasonable disagreement over what methods are more or most rigorous. Further, it is obvious that the availability of certain types of evidence is unequally distributed across policy problems. In other words: for many issues there exists no broad suite of evidence that would allow us to pick and choose our preferred type of evidence (see e.g., Khosrowi and Reiss 2019) such that what is the best evidence in the circumstances and what is methodologically most rigorous will come apart.

What is more, some problems do not allow for the generation of certain types of evidence: we already talked about how evidence concerning average treatment-effects is blind to distributive issues. Further, there are moral, legal, and practical barriers to testing certain types of questions in RCTs. We cannot have RCTs on the relative safety of road cycling at night with lights where our control group is sent out to cycle without lights.[26] We also cannot have RCTs on the effect of community-based support programs aimed at reducing domestic violence.

Parkhurst (2016) writes that "The prioritization of particular research methods (e.g., RCTs)—can therefore skew political attention to those issues conducive to experimental evaluation, or those strategies for which evidence has already been created" (Barnes and Parkhurst 2014, 380). Khosrowi and Reiss (2019) argue that the hierarchic ranking of evidence is itself informed by values and that in privileging RCTs, for instance, evidence users or decision-makers potentially privilege certain epistemic values over ethical values. They point out that there is no neutral stance here, because there is always a trade-off between epistemic and ethical values when it comes to choosing one's methods for evidence generation (Khosrowi and Reiss 2019, 192–3) and that "it is plausible to think that non-epistemic [e.g., ethical] concerns may justifiably override epistemic concerns" (ibid., p. 194, our insertion). This leads them to insist that "participants in methodological debates need to make transparent which value commitments are implied by the choices they advocate." (ibid. p. 193; see also Khosrowi 2018).

It should be noted that, indirectly, privileging certain types of evidence amounts to prioritizing certain problems (and the social groups most affected by them) over other problems (and the social groups most affected by them) whenever the respective policy does not affect social groups equally. This is problematic where these priorities are not the result of conscious, transparently made choices but 'sneak' into the process under the guise of a supposedly value-neutral methodological decision.

What is more, marginalized groups, for instance indigenous peoples, may be *systematically evidentially underprivileged* in that the data that is available on issues specific to them is not of the preferred kind, that is, the kind that gets taken seriously or accepted by policy-makers. This can result in a lack of adequate evidence or a lack of perceived-to-be-adequate evidence (relative to the perspective of policy-makers), when really policy-makers may just be dismissing certain types of information *as* evidence. In other words, evidential (under)privileging means that policy-makers regularly fail to take would-be evidence on board. Evidential under-privileging of some groups (and, conversely, the over-privileging of others) is a type of epistemic injustice (Fricker 2007; Cummings et al. 2023) that has to be counteracted from the very early stages of the policy process.

The remedy we propose—more on that further down—is a well-argued value-base for each policy-making process: evidence-selection is adequate (or not) only relative to the values we are aiming to promote. A moral commitment to including certain groups' interests and perspectives in the policy-making process

and ensuring good policy outcomes for them should regularly broaden the spectrum of what information is elevated to the status of evidence. This will result in a (perfectly acceptable, we believe) form of *evidential particularism*: what type of data or information counts (or should count) as evidence and what evidence should be used (or procured) depends on the problem at hand, including its ethical dimensions. Concretely, this would involve turning away from a rigid, unreflective implementation of hierarchies of evidence towards assessments tailored to each concrete policy problem of what type of evidence is best suited to the specific problem relative to the (ethical) values at play in this context.

5 | How Much Evidence is Enough?

As we mentioned in the introduction, EBP's distinguishing mark according to many is a sharp separation between the way evidence and values enter policymaking (Khosrowi 2018). While value is acknowledged to play a role at the stage of policymaking itself, it is not supposed to enter at the stage of policymakers' processing of the evidence in order to form the preliminary hypotheses that inform the policy. If this is one's distinguishing mark, one had better have a story about when one's evidence is *sufficient* for the hypotheses one forms. Without an answer to this question, we don't have a sense for when a policy is *well supported* by the evidence and hence no sense of when it is adequate by its own lights—being evidence-based.

In this section, we argue that this question cannot be answered without appeal to moral values, thus undermining the separability of the epistemic and moral presupposed by EBP. We do so by building on two influential arguments in the philosophy of science and moral epistemology. The motivation for using these arguments is that the question of when the evidence is enough has equivalents in both fields: when is a scientific hypothesis or a person's belief adequately supported by the evidence? Since these fields have already developed tools for answering these questions, it makes sense to use these tools.

As in the rest of the paper, we are focusing on the stage of EBP at which policy-makers form hypotheses (on the basis of evaluating and conglomerating competing evidence, scaling up, and so on) before deciding on a particular policy. Both arguments conclude that values not just *do* but also *ought to* enter into settling the question of when the evidence is enough for a hypothesis. The first shows how values of all kinds enter hypothesis formation, while the second shows that *moral* considerations in particular are integral to determining how much evidence is enough to support a policy maker's hypothesis.

5.1 | Inductive Risk

What role do values play in justifying a hypothesis? There are two answers in the literature.

The first is the so-called argument from inductive risk. Originally made by Rudner (1953), its most recent development is by Heather Douglas (2000); Heather E. Douglas (2009). It aims to show that accepting or rejecting scientific hypotheses ought to involve non-epistemic value judgments.

Rudner argues that due to the inductive gap between hypothesis and evidence,[27] there is always a risk of making a false-positive or a false-negative mistake when accepting or rejecting a hypothesis. Thus, to decide whether the available evidence is sufficiently strong, the scientist has to weigh the consequences of those mistakes. This can only be done by taking values into account. Consider a hypothesis like 'Toxin A is not present in lethal quantities'. Since the consequences of a mistake would be grave, accepting this hypothesis requires relatively high evidential standards (Rudner 1953, 2).

Heather Douglas (2000) extends this argument to all internal stages of science: scientists have to deal with inductive risks in their choice of methodology, characterization of data, and interpretation of data. Moreover, making value judgments cannot be avoided by shifting the responsibility to accept or reject hypotheses, for example by claiming that scientists should merely provide decision makers with probabilities for the hypotheses (an argument already made in response to Rudner, cf. Jeffrey 1956). Heather E. Douglas (2009) argues that this holds for scientists as well as for scientific advisors. Because of their 'broadly authoritative position in our society' (2009, 82), scientists and scientific advisors cannot dismiss basic moral responsibilities, including reflecting on the implications of their work and the possible consequences of error. The argument from inductive risk is thus a normative argument for the consideration of values: 'non-epistemic values are required for good reasoning' (Heather Douglas 2000, 11).

Consider the following simplified example from Douglas (2009, 81). Suppose a science advisory panel is reviewing a claim about a particular pollutant. Epidemiological records are showing a correlation between the pollutant and spikes in respiratory deaths. Moreover, the pollutant is cheap to control or eliminate. Now, should the advisory panel support the claim that the pollutant is a public health threat? This question cannot be answered without first determining how important the risks of being mistaken are. If the claim is accepted as sufficiently well supported but turns out to be false, acting on the advice would not cause much damage. In contrast, if the claim is mistakenly rejected and no policy is implemented, the consequences of this error would be grave for public health. The decision to support the claim then clearly involves a value judgment. And we can easily imagine more difficult decisions with conflicting values: just suppose controlling the pollutant would be extremely costly.

This argument already wears its relevance to EBP on its sleeve: the science advisory panel is the source of the policymaker's evidence. Policymakers will still need to go through this evidence, weigh it, upscale, and so on, finally forming their own hypotheses. Once we are here, the inductive gap is open again and must be closed by values.[28]

5.2 | Moral Encroachment

So far, we have argued that one of the things that should plug the gap between evidence and policymakers' hypotheses is value. In

this section, we provide an additional argument, from epistemology, to the conclusion that *ethical* values are intrinsic to the notion of evidential support more generally.

Similar to the last argument, according to some epistemologists, what is morally at stake in believing a proposition partly determines when believing this proposition is sufficiently supported by the evidence, where sufficient support is understood as an objective notion.[29] This view is known as moral encroachment.[30]

Here is the classical example that motivates moral encroachment:

> COSMOS CLUB: The night before he is to be presented with the Presidential Medal of Freedom, John Hope Franklin hosts a celebratory dinner party at the Cosmos Club, at which he is a member. All the other black men in the club are uniformed attendants. While walking through the club, a woman sees him, calls him over, presents her coat check ticket and orders him to bring her coat.[31]

The intuition that moral encroachers have about *Cosmos Club* is twofold. First, the woman has formed a belief that she should not have—that Franklin is an attendant. Second, what makes it the case that she should not have formed this belief are the racist, high moral stakes: even though the statistical evidence in fact makes it highly probable that the belief is true, she should still not believe this on the basis of this evidence alone. A belief with the same probabilistic support but without the moral stakes, in other words, would count as knowledge while this one doesn't.[32]

There are several ways of cashing out this basic intuition in the literature. Our preferred way is this: the moral stakes serve to raise the threshold for when the evidence is enough to properly support the belief, where proper support means that the belief qualifies for knowledge (Basu and Schroeder 2019; Mitova 2024).[33] For lack of space, let us just offer an intuitive argument for this view: it dovetails best with how we think about stakes and risk in general.[34] Suppose you and a colleague are leaving the office and you ask her if she closed the window. She seems to remember doing so. In fine weather, this will be good enough given the general reliability of her memory. But if a blizzard is coming, not so: she should double-check before assuring you that the window is closed.

What we have just described is how the (practical) risk of error raises the bar for how much evidence is enough to adequately support a belief. Memory is enough in the low-stakes situation (to put it in encroachment-speak), but not enough in the high-stakes. The moral encroachment view we favor is similar: the risk of racism makes it the case that the otherwise good statistical evidence in *Cosmos Club* isn't good enough to support the belief that this person is an attendant.

If we find this view compelling, then objective evidential support is never just a matter of the evidence. In order to know whether we have enough evidence for a belief, we always need to also know what the moral risks of being wrong are when adopting the belief. Our suggestion here is that this is exactly how evidential support in EBP works: whether we have enough evidence for a particular hypothesis depends on the *moral* risks of getting things wrong. Hence, views that advocate that evidential support and values are separable at the hypothesis-formation stage are misguided.[35]

5.3 | How Much Evidence Is Enough?

If these thoughts are on the right track, adequate evidential support is never just a matter of the evidence: in order to determine how much evidence is enough for any particular hypothesis, belief, or policy, we need to think about values. The fact that the arguments come both from the philosophy of science and (moral) epistemology is good news for our overarching conclusion, since they provide two independent sets of considerations in support of our claim. Even if one is skeptical of the moral encroachment considerations, that is, one might still be persuaded by the inductive risk argument or vice versa.

Notice, too, that the two arguments offered in this section are not just mutually independent, but also independent from the other arguments we provide in this paper on how values come into EBP. That is, even if we rejected, say, the conclusion from Section 3 that values enter into determining *what counts as evidence*, the claims of this section—that values enter into *how much evidence is enough*—remain untouched. For the arguments of this section assume that we have already agreed on what counts as evidence and are now wondering *how much* of it would properly support our hypothesis (and indirectly the ensuing policy). This dual independence of the arguments is additional grist to our mill.

6 | Where to Now? How to Improve EBP

We hope to have shown that ethical values are an *integral* part of EBP because of the *value-dependence of both evidence and evidential support themselves*, and that they should be recognized as such. This goes beyond an acknowledgment that the policy-making process is inherently political, as several critics of EBP have already (and correctly, in our view) pointed out (Stone 1997; Parkhurst 2016; Botterill 2017). Inevitably, values impact every stage of the policy-making process where evidence plays a role, but this impact is rarely noticed, explicitly acknowledged, let alone critically reflected.

'Good' evidence-based policy, we argue, should be explicit about its own value commitments. Because a policy does not have a solid scientific evidence base while it does not have a solid value base. The practical implications of neglecting this insight are far-reaching. The evidence selected and procured may not suit the policy's express goal. At different steps, competing or contradicting value commitments may creep into the policy-making process, leading to choices that jeopardize the integrity and efficacy of the policy. And, last but not least, without explicit and transparent value commitments, evidence-based policy loses the claim to greater epistemic (and, arguably, political) legitimacy it seeks to establish.

The value-dependence of both evidence and evidential support, therefore, can be problematic for political reasons, too. In

democratic systems, policy decisions are expected to be reflective of collectively endorsed values. EBP that is not true to such values may easily be perceived as lacking in legitimacy. Further, if the values that determine evidence selection and usage are opaque, inconsistent, or simply unreflected, policy decisions cannot function as expressions of collectively-held values.

Concretely, this means that explicit deliberation about values underlying the policy-initiative ought to take place at an early stage in the policy-design process. This can be done in an iterative way where, as evidence is being sought, value discussions and expertise, for example, from ethics experts, are also sought, potentially more than once and in a repeat fashion until there is a level of congruence between both (values adopted and evidence used). This may give rise to a novel type of expert professionals, namely trained ethicists and social justice experts who consult with policy-makers and help make explicit the values that are held unconsciously, as well as detecting possible tensions between the values endorsed and pursued. The *German Ethics Council*[36] is an example of a higher-level expert body, which the German government consults on questions that are potentially controversial and require broad expertise in ethics. Another example of such practices in a different context is ethics committees at research institutions that assist researchers in meeting ethical standards with the aim to minimize potential risks to participants or subjects in advance. In other words, ethics consultants and consulting bodies already form part of best practice in some areas but are, arguably, not as widely used as they ought to be. When it comes to policy-making, we suggest that ethics input (for instance, from consultants or ethics boards, but not necessarily restricted to those) becomes as integral as evidence input.

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Ethics Statement

The authors have nothing to report.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

Data sharing not applicable to this article as no datasets were generated or analyzed during the current study.

Endnotes

[1] It should be noted that the discourse around 'evidence-based policy' has in large parts shifted to 'evidence-informed policy-making,' which can be seen as having a more modest goal. We have, mainly for pragmatic reasons, decided to stick with the more established l term 'EBP' or 'EBPM.' Importantly, we do not think that the difference between evidence-based and evidence-informed policy has any impact on our argument.

[2] Some scholars have advocated for a return to the insights of early public policy scholars writing before the rise of the EBP paradigm. Linda Botterill points for instance to Herbert Simon's (1944) work on values and policy-making in criticizing the move to depoliticize policymaking and failing to recognize "the values basis of policy" (Botterill 2017, 5). Justin Parkhurst argues that the EBP paradigm ignores how the policy process is inherently concerned with adjudicating between different socio-political interests (2016). Brian Head points out that "Policy scholarship has clearly demonstrated that the neutral and objective evidence of scientific knowledge does not, and cannot, drive policy in a democratic political system. Evidence is harnessed to competing arguments about ends and means, and the political decision-making process is inherently marked by conflicts, trade-offs, and compromises" (2016, 472–3).

[3] We use this term broadly to include concerns regarding social justice, human rights and liberties, and well-being. In the following, when we speak of values without specifying we mean ethical values in that broad sense. When we speak of values in a different sense (e.g., epistemic) we will clearly indicate that. We do not refer to values that may attach to policies themselves such as effectiveness, efficiency, relevance, since we are concerned with the evidence-value dependence here.

[4] To put it differently: Ethical commitments are not just important at the point of spelling out specific policy details and choosing between policy options but they are involved right from the very beginning of the evidence-based policy-making process: from deciding which problem should be addressed by policy or regulation to determining which evidence to use, where to look for it and for deciding when we have sufficient evidence. We demonstrate in this paper how—inevitably—value judgments are relevant to all of these questions.

[5] In a different context, a related argument was made by Heather Douglas concerning the accountability of science advisors for the values embedded in their claims (Heather E. Douglas 2021).

[6] Normative values can be justified through reasons—reasons that can be shared between people. Even so, we will not always agree on our values—there is often room for reasonable disagreement.

[7] Policies will impact different social groups differently, potentially advantaging some and disadvantaging others. In choosing between policy options and designs we will end up with value conflicts (potentially even dilemmas) that need resolving. This applies not just to a policy's intended effects, but to its side effects, too, whether or not they are acknowledged or ignored.

[8] Not all evidence is created equal. There is a large literature in philosophy of science on the value-ladenness not just of evidence production but of scientific theories themselves (see Section 4). However, as pointed out above, we use 'values' here in a more narrow sense to mean 'ethical values,' see also FN1. In the context of EBP, Parkhurst demonstrates "how the choice of social categories or concepts to include in research (such as race, class, socio-economic status, etc.) will have implications for whether or how these issues are addressed in public health policies" (2016, 379).

[9] Naturally, all mediaries between evidence producers and users introduce another element of bias, including preferences for certain actions, outcomes or greater awareness of certain type of evidence based on one's value commitments. At least with some knowledge brokers, such as politically aligned think tanks, their value commitments are out in the open. A much less transparent filter comes with databases and search engines (see Sanford Goldberg on "Curating Evidence," unpublished manuscript).

[10] The immediate triggers for the generation of new policies or revising existing ones are manifold, of course. Other than addressing an emergent public health crisis such as the COVID-19 pandemic, domestic policy-making processes may result from (often long-term) pressure by stakeholder groups, such as environmental legislation pushed for

by activists and environmental scientists. Further, compliance with international treaties may trigger the need for novel or revised policy measures, to name just a few possibilities.

[11] The more general point is that any type of evidence will allow some and preclude other types of insight. For policy-making, this means that the type of evidence can determine whether or not a problem is made visible or not.

[12] We see our contribution as complimentary to those by Hawkins and Parkhurst (2016) and Parkhurst (2016).

[13] This is illustrated by Parkhurst (2016).

[14] They are integral features of our cognition that *can* but need not be epistemically undesirable (or otherwise at odds with rational decision-making). See also Thomas Kelly's recent book on bias (Kelly 2023).

[15] Parkhurst (2016, 383).

[16] We will not discuss what exactly it means for evidence to be 'available' to policy-makers but only not that availability might differ from technical accessibility and depend on issues such as language skills and disciplinary knowledge.

[17] Policy-makers, in the process of gathering and selecting evidence, will often rely on stakeholder groups (including knowledge brokers) with a clearly defined political or value-based agenda. Inevitably, the values—conscious or not—that are already built into the selection of evidence such groups present to policy-makers will permeate policy.

[18] To preclude misunderstanding, our point is neither of the well-known ones that policy marginalizes or that it hides behind science to do so (thanks to an anonymous reviewer for making us realize that we may be misunderstood in this way). Rather, the point is a principled one: decisions concerning generating and gathering evidence, and how much evidence is enough, are not entirely independent of value judgments. These judgments will often be implicit and under-acknowledged, as explained throughout the paper and while they remain implicit we cannot assess if the gathering of the evidence has been adequate relative to the policy to be developed. What's worse, policy-makers may prioritize and over-emphasize evidence that is ultimately contrary to their purported goals and values, simply because they didn't make consciously value-informed evidence choices in the initial phase of policy-making.

[19] The question remains whether explicit endorsement and open acknowledgement can help—on a practical level—with unconscious bias, partisanship and ideologically motivated cognition.

[20] We are not aspiring to making a claim about the notion of evidence in general, that is, outside the context of evidence-based policy-making.

[21] Stone (1997, 314).

[22] This claim itself has a descriptive and a normative version. It supports the descriptive claim that values inevitably impact on choice of evidence as well as the normative claim (i) on the importance of value commitments for our epistemic responsibilities.

[23] To be clear, we do not suggest by any means that all evidence is equal in quality or that we cannot compare pieces of evidence in this regard.

[24] For examples and their critical discussion, see Cartwright and Hardie (2013).

[25] Justin Parkhurst: "A particularly relevant form of issue bias therefore can be seen in the contemporary EBP movement's demands for policies to be guided by RCTs or by the application of so-called hierarchies of evidence (which place RCTs, or meta-analyses of multiple trials, at the top)" (2016).

[26] A satirical paper often cited for making this point is Smith and Pell (2003).

[27] This is the well-known idea in science that the evidence never uniquely determines a hypothesis. This gives rise to the so-called New Demarcation Problem (e.g., Holman and Wilholt 2022). It shows that the value-free view of evidence in science has been so thoroughly rejected now, that the debate has moved entirely to demarcating legitimate from illegitimate uses of value. This can be the basis for another potential argument against the value-free view of evidence in policy but we leave applying this argument to policy for another occasion.

[28] For applications of Douglas' framework to more complex cases of policy advice and expertise, see for example, Elliott and Richards (2017), de Melo-Martín and Intemann (2016), Weinberg and Elliott (2012).

[29] In this section we are not interested in another sense of evidential support—how much a particular person takes to be enough evidence. That was the topic of Section 5.

[30] For just a handful of examples of moral encroachers, see Basu (2019a, 2019b), Basu and Schroeder (2019), Bolinger (2020b), Moss (2018), and Schroeder (2018). For the neighboring view of pragmatic encroachment, closely related to the one is Section 5.1, see Stanley (2005). For thinking of moral encroachment as a species of pragmatic, see Moss (2018). For arguments that the two are distinct, see Basu (2019a).

[31] Bolinger (2020a).

[32] Although this is the *classical* example (based on Gendler 2011), other examples in the literature are by no means homogenous. For a nice overview of the varieties as well as the kinds of differences in encroachment conceptions, see Bolinger (2020a).

[33] There are at least two other prominent alternatives in the literature. One is that demographic generalizations are never good evidence given the harms they cause (Moss 2018). A second is that given the racism (and other prejudice) of certain beliefs, we should never hold them, regardless of how they are supported or whether they are true (Basu 2019b).

[34] For an additional argument, see Moss (2018) who points out that it also dovetails with pragmatic encroachment views in the literature.

[35] For how these suggestions could fit into a more formal framework, see Heesen (2015).

[36] See https://www.ethikrat.org/en/.

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