

## WHAT DO EXPERTS KNOW?

BY ISKRA FILEVA\*

*Abstract: Reasonable people agree that whenever possible, we ought to rely on experts to tell us what is true or what the best course of action is. But which experts should we rely on and with regard to what issues? Here, I discuss several dangers that accompany reliance on experts, the most important one of which is this: positions that are offered as expert opinion frequently contain elements outside an expert's domain of expertise, for instance, values not intrinsic to the given domain. I also talk about the practical implications of accepting my view.*

**KEY WORDS:** expert knowledge, expert opinion, expert agreement, expert disagreement, values

There is a broad consensus that we ought to believe that what experts say is true, and do what they say we should. How to apply this reasonable general principle, however, is not clear. Just who are the experts on a given issue? At the time of writing this essay, April of 2020, for instance, much of the world is under lockdown amid fears of the spread of a potentially deadly disease, COVID-19, caused by a strand of coronavirus. The hope is that self-isolation will keep down infection rates. Why are we enacting these measures? The answer is that expert epidemiologists recommended them. We are doing what the experts say we should. Or are we?

There are at least two reasons to believe that things are more complicated than it might, initially, appear. First, the lockdown has many different effects, both health and economic ones, and epidemiologists are not expert on all of those effects. They may not even be expert on *all health effects*. For instance, self-isolation adversely affects people who live alone. Some of these people become seriously depressed and may have suicidal ideation. An expert judgment on whether the lockdown is a good idea *all things considered*, and if so, how long it should last would be adequately informed by these different kinds of expected costs and benefits, not just the potential health risks associated with the spread of COVID-19 in particular. To take the epidemiologist's word for it is to rely on partial expertise.

Second, what we ought to do depends not only on considering all expected costs and benefits but also on properly weighing them against each other. There is, thus, a value component to the policy recommendation. Are epidemiologists experts on *that component*? It is difficult to see why they would be.

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Competing Interests: The author declares none.

doi:10.1017/S026505252200005X

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In this essay, I will discuss these and related pitfalls associated with reliance on experts, and I will ask what to do in order to avoid those pitfalls. In addressing my task, I proceed as follows: I first ask what an expert is (Section I), and how a layperson can recognize an expert in general (Section II). I then turn to the question of how we, as laypeople, can tell whether the view expressed by an expert is a matter of expert knowledge, of expert opinion, or neither. I investigate this question in three parts. I first inquire into the role of expert disagreement in distinguishing expert knowledge from expert opinion and make some observations on how an expert's position on an issue may become, so to speak, contaminated by elements outside an expert's area of expertise (Section III). Then I discuss in more detail the reasons why an expert's position may contain elements of non-expertise (Section IV). Next, I warn against another pitfall: treating partial expertise as global expertise (Section V). And I discuss the role of intuition in expert judgment, and the ways in which reliance on intuition may influence the status of an expert's judgment (Section VI). I go on to make some important qualifications and suggest that we must be careful not to draw the wrong conclusion and throw the baby out with the bathwater when it comes to expertise (Section VII). Finally, I summarize the results briefly and suggest some additional points for consideration (Section VIII).

### I. WHAT IS AN EXPERT?

Different views about the nature of expertise have been proposed, such as that expertise is: having more true beliefs and fewer false beliefs than most people<sup>1</sup>; having understanding; and being able to contribute to one's field.<sup>2</sup>

As a theoretical matter, I believe that the first view mentioned does not succeed. First, one may know a little more—or even a lot more—about an area than most people yet remain a nonexpert. Everyone who has taken college classes in chemistry is likely to know more about chemistry than most people (since most people haven't studied chemistry at the college level), but not every undergraduate student with a chemistry course under his or her belt is a chemistry expert.

We might be able to get over this particular hurdle by sufficiently strengthening the belief condition, perhaps by requiring that a person's percentile rank when it comes to holding true beliefs about a subject and not holding false ones be very high, say 99.99th percentile or higher.<sup>3</sup> Even if this first hurdle can be cleared in this way, however, there is a second

<sup>1</sup> Alvin Goldman calls this proposal "veritistic." See his "Experts: Which Ones Should You Trust?" *Philosophy and Phenomenological Research* 63, no. 1 (2001): 85–110.

<sup>2</sup> Michael Croce calls this latter type of account "research-oriented" and argues that it is superior to Goldman's proposal, which he calls "novice-oriented." See Croce's "On What It Takes to Be an Expert," *Philosophical Quarterly* 69, no. 274 (2019): 1–21.

<sup>3</sup> Note here that one's standing relative to that of one's contemporaries may not suffice. Democritus may have had more true beliefs about matter than any of his contemporaries, but it doesn't follow from this that he was an expert on the composition of matter.

obstacle: while expertise is correlated with the possession of true beliefs and the absence of false ones, expertise does not seem reducible to beliefs. A layperson may, after all, acquire many true beliefs about cosmology, say by reading the relevant books, without thereby becoming an expert. (She may, of course, be the “expert” in her household and be in a position to overrule family members who know less about the subject than she.) What is missing?

Understanding is an obvious candidate. A person who has many true beliefs and few false ones without deeper understanding could hardly count as an expert. Before we add understanding to the list of conditions on expertise, though, I should point out that some degree of understanding may be already entailed by belief, which in turn may make the addition of an understanding condition redundant. Consider this: if you memorize a proposition in a language you do not speak, and you don’t know what the proposition means, you cannot be said to *believe* (or *disbelieve*) that proposition. Why not? For the simple reason that you do not understand what it says.

But the understanding required for belief ascription in general is fairly minimal. For instance, I may truly be said to believe that time travel is impossible or that time has only one dimension without having deep understanding of the nature of time. I may simply understand enough to be able to hold the relevant beliefs. Let us accept, then, that while belief may entail some level of understanding, belief is compatible with the absence of deeper understanding, and it is deeper understanding that is required for expertise. So we should add understanding to our list of conditions.

Belief plus understanding may not yet give us expertise.<sup>4</sup> It is possible for a layperson to acquire both true beliefs and understanding by carefully reading a lot of books on a subject matter without thereby becoming an expert. What else is missing?

As mentioned earlier, some have suggested that a candidate element of expertise is the ability to contribute to a field. I believe that such an ability is a *sufficient* condition of expertise, but likely not a *necessary* one. A person who understands a certain subject matter well enough to teach college courses but who lacks the will or creativity needed to contribute to the relevant field may still be an expert. I would argue that a different condition is more plausible: an ability to form justified beliefs about the subject matter without

<sup>4</sup> One can argue also that the possession of the relevant beliefs is entailed by understanding, so that the addition of *belief* is moot, and that we can say simply that expertise requires deeper understanding. I find this suggestion plausible, but I note that in some cases, it is possible to have understanding while lacking various relevant beliefs. For instance, a person may understand very well why acid-base reactions have the features that they do but not know whether some chemical compound is an acid or not. (People who have a propensity for a given subject often understand well an explanation in that domain as soon as it is given, but they still have to learn various facts.) Presumably, experts have not only understanding but a sufficient number of relevant beliefs. For present purposes, however, nothing hinges on whether beliefs are subsumed under understanding or not.

relying entirely on another expert's testimony.<sup>5</sup> In order to qualify as a coffee connoisseur, for instance, one must be able to evaluate the qualities of a batch of coffee by tasting it oneself. Similarly, one cannot be an expert pathologist if one doesn't know how to examine bodily tissues for signs of disease for oneself. So to be an expert, one must be able to form beliefs about the relevant subject matter autonomously.<sup>6</sup>

I think this account gives us a good general picture of expertise.<sup>7</sup> Suppose it were granted. The problem is that laypeople cannot apply the criteria listed. For the most part, we have no way of determining whether person X meets the belief, understanding, and autonomous belief-formation conditions specified here. So an answer to the question of how we can *recognize* an expert when we see one does not simply fall out of an account of expertise. What, then, is the answer to that question?

## II. HOW CAN WE TELL WHO THE EXPERTS ARE?

Laypeople's best bet, I wish to suggest, is to identify experts by using institutional criteria, such as the highest level of training in a given area,<sup>8</sup> professional employment, or recognition on the part of the community of experts as evidenced by awards won, and so on.

Institutional criteria may, upon occasion, yield both false positives and false negatives. If there is an autodidact who understands a field as well as—or even better than—trained researchers, then that person may be an expert in the relevant sense, but a layman or woman would have no good reason to believe this, unless and until the community of experts who are part of the relevant institutional framework recognize that person as an expert.<sup>9</sup> On the flipside, a person with strong institutional credentials may have acquired those credentials through bribes and nepotism. But a layperson generally has no reason to suppose that an expert with credentials is a fraud unless she

<sup>5</sup> Rachel McKinnon ascribes something like this account to Jennifer Lackey. See Lackey's "Why We Don't Deserve Credit for Everything We Know," *Synthese* 158, no. 3 (2007): 345–61 quoted at Rachel McKinnon, "How to Be an Optimist about Aesthetic Testimony," *Episteme* 14, no. 2 (2017): 177–96, at 185.

<sup>6</sup> How exactly the autonomy condition is to be understood is an issue I won't take up here. For present purposes, I assume that we have a good enough intuitive sense of the difference between forming beliefs on one's own and relying entirely on someone else.

<sup>7</sup> The picture is not complete. In certain domains, one must possess relevant skills in order to count as an expert. For instance, no one can be said to be an expert violinist or chef if one cannot play the violin well or cook, whatever one's beliefs, understanding, and ability to make judgments for oneself.

<sup>8</sup> Depending on the subject matter, this may or may not mean the possession of an advanced degree.

<sup>9</sup> Arguably, this is how things stood with famous Indian autodidact mathematician Srinivasa Ramanujan. Ramanujan was already a mathematician before he was institutionally recognized as such, but a layperson would not have had sufficient reason to take him to be one (though again, friends and family may have, even then, had good reason to recognize him as the family expert).

happens to live in a society in which such practices are known to be rampant.

To say this is not enough, however. Institutional criteria do not come with an instructional manual. This is what my earlier example involving expert advice on the benefits of a lockdown during a pandemic was meant to show. Epidemiologists appear to be the relevant experts precisely because they seem to meet a certain institutional criterion. But to pronounce them experts on the issue of whether a lockdown is a good idea all things considered and for how long may be too quick.

Now, consider another problem with properly applying institutional criteria. So far, we talked about expertise simpliciter, but expertise encompasses two disparate components that have very different epistemic weight: expert knowledge, on the one hand, and expert opinion, on the other. I will have more to say about the difference shortly, but for now, I wish to emphasize that we mistake one for the other at our own peril.<sup>10</sup> What guard rails can we erect so as to make sure our reliance on experts is appropriately tied and limited to what precisely those experts are expert on, taking into account, moreover, the differences between expert knowledge and expert opinion?

The first step here is to identify the main types error we could make in identifying experts and the scope of their expertise. Laypeople—and experts themselves—make several different kinds of mistakes in this regard:

- (a) Wrongly attribute expert knowledge to someone who has neither expert knowledge nor expert opinion.
- (b) Wrongly attribute expert knowledge to someone who has expert opinion but not knowledge.
- (c) Wrongly attribute either expert knowledge or expert opinion to a person whose stance on an issue contains elements outside his or her scope of expertise.
- (d) Fail to attribute either expert knowledge or expert opinion to a person who has them.

An example of case (a) is a person who believes that a “holistic” healer has knowledge of human diseases and how to treat them. The holistic healer has neither expert knowledge nor expert opinion. (One can argue that the holistic healer’s views on the matter do not even rise to the level of ordinary opinion.) A person who relies on a holistic healer is likely rejecting institutional criteria altogether.

<sup>10</sup> One could, perhaps, propose a very demanding standard of expertise according to which expert knowledge exhausts the scope of expertise and the class of expert opinions is nil. I set this possibility aside as it cannot explain why we should listen to, say, physician opinion in cases in which the best we can expect of a physician is opinion, not knowledge. Expert opinion should be allowed to be a proper part of expertise.

An example of case (b) is a person who hears one expert venture a position on an issue and concludes this expert *knows*; if other experts have different positions on the same issue, what the layperson should assume, for practical purposes, is that the first expert has at best, expert opinion.

Case (c) is the case I began with. A position staked out by an expert may be fully informed by expertise and yet fail to qualify as either expert knowledge or expert opinion, because it contains elements that fall outside the expert's proper domain of expertise. The second and third cases, in contrast with the first, involve subtle errors. Expertise is attributed without *sufficient* ground but not without *any* ground.

Case (d) is the inverse of case (a). An example would involve a person who does not accept a physician's opinion as authoritative and thinks, for instance, that he knows what is best for his child better than a physician does. This rubric also covers cases of under-attribution of expertise, for instance, attributing only expert opinion to someone who has expert knowledge. This latter type of error is likely to be rare, but it may occur. For instance, Valerie may attribute expert opinion rather than knowledge to Paige because Valerie believes wrongly that there is a disagreement among experts about the relevant issue when, in fact, there is unanimity.<sup>11</sup>

Over the next three sections, I will discuss how some of these errors arise and how to prevent them. I start with an attempt to distinguish among expert knowledge, expert opinion, and ordinary opinion.

### III. EXPERT KNOWLEDGE, EXPERT OPINION, ORDINARY OPINION, AND THE ROLE OF DISAGREEMENT

What weight we should accord the statements made by a given expert depends on whether those statements amount to expert knowledge, expert opinion, or neither. But how are we to tell?

When experts agree, we often have good reason to think that they have knowledge. Thus, one would be hard pressed to find a chemist who does not think that the benzene molecule has six carbon atoms joined in a ring, with a hydrogen atom attached to each; or a mathematician who rejects the Pythagorean theorem; or a physicist who does not accept the laws of thermodynamics. In all these cases, it is reasonable for a layperson to think that experts have knowledge, and what makes this reasonable is their unanimity.

Note, however, that while it would no doubt be handy if expert agreement could serve as a litmus test for expert knowledge, as laypeople, we cannot endorse this rough-and-ready test without qualifications. First, we must pay attention to how agreement appears to have been produced. If, for instance, we have reason to think that agreement is not a result of free and

<sup>11</sup> Note: unanimity among experts does not actually guarantee knowledge, but it provides strong evidence. I will return to this issue in the next section.

open discussion among specialists (for example, if some experts say that their voices have been silenced or marginalized), that should give us pause. Agreement must be produced without pressure, coercion, and so on.<sup>12</sup>

There are other reasons not to attribute knowledge to experts who agree. In particular, experts may be unanimous, but the position they hold may be one that contains elements of ordinary opinion. This may be the case in the scenario I began with: all epidemiologists may agree that we should go under lockdown. It would not follow from this that they have expert knowledge on the relevant matter. Indeed, it does not even follow that it is their *expert opinion* that we should since the advice contains elements that fall outside the scope of their expertise, such as an implicit assessment of economic and mental health costs plus an implicit value ranking that pits those against the costs associated with COVID-19 in a scenario without lockdown versus one with lockdown.

So even when experts agree, laypeople ought to ask questions before attributing knowledge: questions about how agreement is produced and whether it is influenced by factors outside the experts' scope of training. Agreement among experts, then, does not suffice for knowledge attribution though it gives laypeople a powerful reason to believe there is knowledge. What about disagreement?

Disagreement, I wish to suggest, precludes knowledge of all disagreeing parties. This is because if knowledge is factive, as is commonly and reasonably assumed, then in cases of expert disagreement, at most one position may be correct and so constitute knowledge, provided other conditions of knowledge are met. All experts who have a different position may be said to have *at best* expert opinion rather than knowledge. Assuming factivity, it could not be that expert A knows that  $p$  while expert B knows that  $not-p$ . But since laypeople have no way of determining which, if any, of these positions is correct, laypeople have to assume that all disagreeing experts have, at best, expert opinion.<sup>13</sup>

<sup>12</sup> Roger Koppl, *Expert Failure* (Cambridge, UK: Cambridge University Press, 2018) makes a strong case for the view that we need to be wary of expert monopoly—a small group of experts who come to dominate the expertise market, so to speak—and that we ought to make it relatively easy for new experts to come in and offer rival theories. I think that's right. Laypeople should try to monitor the "health" of the expert opinion market. For instance, if the same two or three experts are always the ones consulted and given a chance to speak on behalf of their field, that is probably not a good sign.

<sup>13</sup> An anonymous referee notes (without endorsement) that the following may be true: in the face of peer disagreement, experts should lower their credence in a proposition below the level required for knowledge, in which case, knowledge becomes incompatible with disagreement. I think that this is a suggestion worth exploring, and one that takes us to the broader issue of peer disagreement. But I don't want to rely on this possibility here for two reasons. First, I don't know whether expert knowledge would be incompatible with expert disagreement even on that assumption. Suppose an expert rationally must, but in fact does not, lower her confidence in a proposition in the face of peer disagreement, and that expert is correct. Should we say that the expert doesn't know? It is not clear. Second, and more importantly, my point is not that no disagreeing experts can have knowledge but that laypeople, having no way to tell whether any do or not, should assume, for practical purposes, that none do.



I argued a little earlier, however, that experts who agree may fail not only to have knowledge but also to have expert opinion since their positions may contain elements outside the scope of their expertise, that is, elements of ordinary opinion. We can expect the same in the case of disagreeing experts. Here again, we must ask whether the rival positions include beliefs outside the experts' area of specialization. As I suggested, the opinion of epidemiologists with regard to the advisability of a lockdown may not rise to the level of expert opinion even when unanimous. If that's true, then such an opinion does not rise to the level of expert opinion in the case of disagreement either since *disagreement* cannot turn rival positions that contain elements of ordinary opinion into *expert opinion*.

It is important not to go too far in the direction of attributing to experts ordinary opinion only. Some laypeople incline to the view that when experts agree, we can attribute knowledge to them but when they disagree, we don't have to listen to them at all since all they have is opinion. This would be a grave error. There is expert opinion, and it differs from ordinary opinion. Expert opinion should be understood as a position that does not rise to the level of knowledge but that nonetheless falls strictly within the given expert's domain. How might this happen? It may occur when the evidence is genuinely open to more than one rational interpretation.<sup>14</sup>

Of course, a layperson may have no way of independently verifying that some expert position is a rational interpretation of the evidence, but she can do her due diligence in trying to make sure that the position in question does not contain elements of ordinary opinion. If it does not, and we have expert agreement, there is generally good reason to attribute knowledge. If it seems not to, but we have disagreement, there is good reason to attribute expert opinion. If positions contain elements outside the scope of an expert's area of expertise, laypeople ought to put pressure on experts to speak only to those aspects of a problem they are expert in.

<sup>14</sup> This may or may not translate into *actual* disagreement. It is possible, for instance, that there is only one expert in the world on a very narrowly defined topic. That expert may face no disagreement from other experts since there are no other experts. Nonetheless, if multiple plausible interpretations of the evidence can be given, the expert in question has expert opinion, not knowledge. A layperson would, generally, have no way of ascertaining that the evidence is or is not open to multiple interpretations, so if there is only one expert on an issue, laypeople may have to believe that expert. Still, there is something they can do: they can ask the lone expert whether the evidence allows for more than one plausible interpretation. They can also simply keep in mind that a person whose authority goes unchallenged can easily go wrong.

I should note also that my remarks here assume the truth of Permissivism—roughly, the view that different doxastic attitudes with regard to a given proposition may be licensed by the same body of evidence. Some epistemologists have defended the truth of the Uniqueness Thesis: the view that only one attitude toward a proposition is rationally permissible in light of a given body of evidence. For a defense of Permissivism, see Thomas Kelly, "Evidence Can Be Permissive," in Matthias Steup, John Turri, and Ernest Sosa, eds., *Contemporary Debates in Epistemology* (Malden, MA: Wiley-Blackwell, 2013), 298–312. For a defense of the Uniqueness Thesis, see Roger White, "Evidence Cannot Be Permissive," in Matthias Steup, John Turri, and Ernest Sosa, eds., *Contemporary Debates in Epistemology* (Malden, MA: Wiley-Blackwell, 2013), 312–23.



## IV. THE ROLE OF VALUES AND MORE ABOUT DISAGREEMENT

A. *Extraneous elements in the soup*

In “Why Does Economics Only Help with Easy Problems?” Thomas Schelling discusses a study by Victor Fuchs, which finds that while there is a broad consensus among economists on “positive” questions, economists are close to evenly split on value-laden questions.<sup>15</sup> What this finding suggests is that alleged expert disagreement is often disagreement about values. To the extent that a disagreement is a disagreement about values, it is frequently not *expert* disagreement, strictly speaking. This is what I am going to argue now. Values commonly—though not invariably—constitute an element outside an expert’s area.

I say “not invariably” because there are cases in which values have a legitimate role to play in shaping an expert’s judgments. Certain values and value rankings may be intrinsic to a given field in the following sense: every expert in the field ought to be committed to said values and value rankings at least *qua* expert (as opposed to *qua* private citizen or individual person, say). For instance, a physicist *qua* physicist ought to be committed to the value of truth over and above aesthetic value. If a theory that has more aesthetic value (for instance, because it is simpler, symmetric, and so on) is less well supported by the evidence than another—clumsier and less aesthetically pleasing—theory, the physicist ought to favor the theory for which we have stronger evidence. To prioritize aesthetic considerations over evidence is a problem in physics, though it may not be in science fiction due to the different purposes science and science fiction respectively serve: the former aims to discover the truth (though it may also please us) while the latter aims to please (though it may also inform us).<sup>16</sup>

Sometimes, the ranking of values that are intrinsic to a given field is subject to reasonable disagreement among experts. For instance, originality and flawless execution are both virtues in art, and there may be reasonable disagreement among experts in any given case about how to weigh them against each other. This is why different members on a literary prize committee may pick a different novel as overall best: one expert may think that a book is sufficiently original for us to overlook its technical flaws while another may hold that a different book’s perfect execution makes up for the lack of that book’s originality. In such cases, the presence of a value component, including a disagreement driven by different value rankings, does not preclude the opinion of an expert from qualifying as expert opinion, properly speaking.

<sup>15</sup> See Thomas Schelling, “Why Does Economics Only Help with Easy Problems” in his *Strategies of Commitment and Other Essays* (Cambridge, MA: Harvard University Press, 2007), 152–65, esp. 156–57.

<sup>16</sup> Sabine Hossenfelder, *Lost in Math: How Beauty Led Physics Astray* (New York, NY: Basic Books, 2018) argues that physicists are in fact frequently motivated by aesthetic considerations, and that this, as the title of her book suggests, leads physics astray.

The problem is that if we look carefully, we will notice many cases that are quite unlike the essay contest case. In those cases, what passes for expert opinion contains *extraneous* value judgments, that is, values that are not intrinsic to or constitutive of a given field. This was the case with the economists interviewed by Fuchs. Sometimes, values may not be simply extraneous to the field they shape but at odds with it. Consider an example from fiction. E. M. Forster has a novel, *Maurice*, featuring a homosexual protagonist (Maurice). The novel was written in 1913–1914 but published posthumously in 1971, because homosexuality was considered a crime at the time the novel was written, and Forster feared reprisal. At one point in the novel, Maurice goes to see a doctor, Dr. Barry, about his homosexuality and wants to know whether homosexual inclinations are a medical problem. Dr. Barry thinks that in a man like Maurice, who appears not to be “depraved,” some situational factor has caused “morbid thoughts,” and the thoughts can be dispelled:

He [Dr. Barry] held that only the most depraved could glance at Sodom, and so, when a man of good antecedents and physique confessed the tendency, “Rubbish, rubbish,” was his natural reply. He was quite sincere. He believed that Maurice has heard some remark by chance, which had generated morbid thoughts, and that the contemptuous silence of a medical man would at once dispel them.<sup>17</sup>

Is Dr. Barry’s an expert opinion? Forster says:

Averse to it [homosexuality] by temperament, he endorsed the verdict of society gladly; that is to say, his verdict was *theological* (italics added).<sup>18</sup>

Forster’s label “theological” seems apt here. We can say something similar about the verdict of psychiatrists who once held that homosexuality is a psychiatric problem, one worthy of DSM inclusion. I don’t know whether that verdict was exactly theological, but it clearly wasn’t simply medical, so it was not a matter of expert opinion, let alone expert knowledge.

Note here that the issue of the role of values in expert opinion must be disentangled from the issue of disagreement. As mentioned previously, and as psychiatry’s pathologizing of homosexuality illustrates, broad consensus among experts and extraneous value influences may coexist, because all experts may endorse the same extrinsic to the field value judgments. It remains true that a layperson ought to be wary when a purportedly expert opinion seems partially shaped by factors outside the relevant scope of expertise. It may, of course, be difficult for laypeople to exercise due

<sup>17</sup> E. M. Forster, *Maurice* (New York: W.W. Norton and Company, 1971), 160.

<sup>18</sup> *Ibid.*

diligence if they themselves share experts' presuppositions—as things likely stood with views on homosexuality for a long time—which is why it is important to have free and open discussion not only among experts but in the broader society the expert community is a part of.

I would like to point out also that there are cases in which values that may be considered extraneous to a given field play a role, but there is only one value ranking that seems rationally permissible. Suppose, for instance, that Vincent's life can be saved by administering an injection that is neither painful nor has side effects. If Vincent rejects the injection, he may be showing himself to be utterly unreasonable, although, strictly speaking, the only component of the recommendation he may be rejecting might be the value ranking according to which "minimally painful injection with no side effects is not as bad as dying." There is a social policy question that has to do with the permissibility of overriding Vincent's judgment in this case and saving his life, but to the extent that we think it may be permissible to override Vincent, this is not because according to expert opinion, we should do that—expert opinion contains a nonexpert component, namely, a value ranking—but rather because the value ranking implicit in the judgment of the expert recommending the injection is the only rationally permissible one in the given circumstances. The fact that an expert maintains that value ranking is not what makes it appropriate to incorporate the ranking into the decision, rather, the fact that it is the only ranking within the bounds of reason and sanity is.

Problems arise in cases where expert opinions are shaped by values that are both extraneous to the given field and are *not* the only rationally permissible ones. Perhaps one can argue that even if extraneous values influence a given expert's judgment, and even if the relevant value ranking is not the only rationally permissible one, it may be the *best*. If experts happen to be expert on the normative component, we have an expert judgment, but one that involves the combination of two different kinds of expertise, one of which is value expertise.<sup>19</sup> This possibility requires first that there be such a thing as value expertise, not in the sense of understanding the nature of value better than others do (a philosophical and metaethical question, not a normative one), but in the sense of knowing what values are more important.<sup>20</sup> Even if there is such a thing, however, there is no good reason to think

<sup>19</sup> A translator, for instance, may be said to be an expert in both English and French. The judgment, "This is a good English translation of Proust" necessarily involves both of these kinds of expertise. The two elements, however, are separate: one can be an expert in one language but not in the other and vice versa.

<sup>20</sup> There are related debates on whether there could be aesthetic experts and moral experts. Several philosophers have argued that there is something wrong or inappropriate about either moral deference or aesthetic deference. One reason given is the possible non-existence of experts we could defer to. See, for instance, Sarah McGrath's "Skepticism about Moral Expertise as a Puzzle for Moral Realism," *The Journal of Philosophy* 10, no. 3 (2011): 111–37. Aaron Meskin considers, though ultimately rejects, the view that aesthetic deference in general is inappropriate, and that the explanation for this has to do with the difficulty of identifying

that people who have expertise on the descriptive matters involved in a given normative issue are also expert on the normative part. What I would like to propose in light of this is that laypeople ought to disentangle the normative and the descriptive parts of expert opinion. If the results of Fuchs' study generalize, we can expect considerably less disagreement on the descriptive part of expert opinion. But that part, arguably, *exhausts* the scope of expertise.

Here is another important point to consider here. However things may stand with the existence of experts on values, there will be many cases—particularly cases that concern an individual's own life—in which a person has a good reason to choose what would promote *her own* values. Consider: I have a good reason to go to see that movie I am likely to enjoy even if there is such a thing as “aesthetic experts,” and those experts know better than I do what movie has real aesthetic merit.

Or take another example. Suppose Ana has cancer, and her oncologist recommends chemotherapy. This seems like a perfectly natural thing for the oncologist to do. Who else would know better whether chemotherapy is a good choice for Ana but an oncologist? However, there is a problem. The problem is that the treatment involves both risks and expected benefits, and whether or not the choice is good for Ana depends on her own value ranking. Imagine, for instance, that the treatment would reduce the chance of cancer-recurrence by 10 percent, but it would have serious and unpleasant side effects—hair loss, anemia, and nausea, among others—that would force Ana to take several months off work, setting her back in her professional development. She may or may not think that the expected benefits are worth the risks. While the option may be a good choice for seventy-five-year-old Sam, who is retired and bald already, it may or may not be so for Ana. But many oncologists recommend treatment without taking the patient's own value ranking into account.

Again, this is a problem quite independently of the issue of disagreement. In the real world, some oncologists would consider Ana's own values and goals, which may lead to conflicting recommendations. However, we can easily imagine a case in which all oncologists—say, due to training that's made the threat of cancer recurrence so important in their eyes that they've become *unable* to seriously consider competing values related to well-being—are *unanimous* in their recommendation that Ana receive chemotherapy treatment. It is still not the case that these oncologists, unanimity notwithstanding, are in a position to hold an expert opinion on whether Ana should or should not receive chemotherapy treatment *all things considered*. They are expert on the issue of expected risks and benefits (and they may have something better than opinion on that part: they may have knowledge).

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aesthetic experts in his “Aesthetic Testimony: What Can We Learn from Others about Beauty and Art?” *Philosophy and Phenomenological Research* 69, no. 1 (2004): 65–91.

But how much *weight* the risks should have over the benefits depends on Ana's value ranking. Laypeople, therefore, ought to press experts to stick to nonnormative matters and to let only values intrinsic to a given field play a role in a judgment offered as an expert one.

I note, finally, that the extraneous elements influencing an expert's opinion need not be *values*. For instance, a so-called expert witness in a legal case may give testimony that is at least partially shaped by commitments to a particular metaphysical position on free will, and the witness in question, being a psychiatrist, not a metaphysician, may not be an expert on the issue of free will.<sup>21</sup> Similar considerations would apply with respect to those cases: laypeople ought to be on the lookout for experts who are venturing outside their domain of expertise, sneaking additional elements into their position and offering the whole package as their expert opinion.

### *B. Lessons for expert disagreement*

My account can help go some way toward solving the thorny problem of what a layperson is supposed to do in the face of expert disagreement. Some have suggested that laypeople should try to determine which rival position is correct, for instance, by looking at the track record of a given expert. Others have argued that expert opinion has a very weak evidentiary value, and that what we ought to do in the case of expert disagreement is rely on algorithms.

Take the latter suggestion, courtesy of Moti Mizrahi, first. Mizrahi contends that arguments of the form "Expert A says that *p*, therefore *p*," are weak arguments, and that we ought to use algorithms rather than expert opinion.<sup>22</sup> I do not disagree with this point in general, but I would note that using algorithms in lieu of experts may be unacceptable for ethical reasons, even when experts are less reliable; this is because algorithms, at least at the current stage, offer no insight into the reasons for their conclusions. Suppose, for instance, that an algorithm proves more reliable in determining which defendant is guilty. We cannot substitute its conclusions for expert judgment, since as a society we cannot punish people if we cannot offer adequate justification for punishment. The mere fact that the algorithm yielded the conclusion that the defendant is guilty may not count as adequate justification or as justification of the right sort.

What of the first type of view? It has been championed by Alvin Goldman.<sup>23</sup> Goldman suggests procedures for picking the right expert, such as looking at experts' track record. The proposal sounds reasonable but is unlikely to work. If it were possible to discern which rival position is likely

<sup>21</sup> If a philosopher's position on free will is ultimately grounded in intuition, which, in turn, is based on psychological facts, then it could be that the philosopher's take on free will contains nonexpert elements. I will return to this issue in Section VI and discuss the role of intuitions.

<sup>22</sup> See his "Why Arguments from Expert Opinion are Weak Arguments," *Informal Logic* 33, no. 1 (2013): 57–79.

<sup>23</sup> See Goldman's, "Experts: Which Ones Should You Trust?"

to be correct, then presumably, experts would switch to that position. Since they are not switching, it is probable that there is no good way of determining which position is correct. But it is unlikely that while experts themselves cannot tell which position is likely to be correct, laypeople can—even with help from philosophers.

Perhaps, though, one can argue that there are procedures for reliably determining which expert is right, but that experts themselves cannot use those procedures for the reason I gave earlier in specifying the conditions of expertise: experts have to make up their minds autonomously, that is, by an appeal to the actual reasons that support one position or another. This is what makes them *experts*. An expert should not just go along with the view of another expert on the ground that there is a reason to believe the other expert more reliable. This raises some complicated issues concerning the nature of the norms that prohibit experts from forming their beliefs on the basis of testimony, and how those norms—which appear pragmatic and role-related rather than epistemic—interact with epistemic norms; but we can set this issue aside.

Even if we suppose that track record is a good heuristic that experts cannot use on pain of violating role-related norms but that laypeople are free to use, the guidelines offered by Goldman are probably not actionable. For the most part, laypeople simply have no way of determining an expert's track record. But there is still good news: if the foregoing considerations are correct, when the scope of expert disagreement is properly delineated, it becomes evident that there is considerably less expert disagreement than it might, at first, appear, since disagreement among experts is often over elements extraneous to the given domain and so is not expert disagreement in the proper sense. The problem with expert disagreement is not fully resolved in this way, but it is significantly diminished.

Another important point must be noted here. Once we are sufficiently assured that the positions advocated by experts rise to the level of expert opinion, we have actionable information, because an expert—any expert—is more likely to be right than a nonexpert. There is an infinite number of things one can generally do in a given case. Consider: there may be disagreement among experts with respect to the benefits of a certain medical procedure, but there is wide agreement on the question of which medical procedures are legitimate. Similarly, different medical labs may set different standards for a normal TSH (thyroid-stimulating hormone) range and may have different recommendations for hormone therapy, but no qualified physician would recommend consulting an astrologist when it comes to the question of whether a patient with elevated TSH levels ought to receive hormone therapy. To follow the advice of some expert or other is generally much better than to simply decide for oneself what to do.

How, though, can a layperson decide which expert to go along with? I recently learned of a woman who would solicit additional physician

opinions until she found a physician whose conclusion she agreed with. This strategy may not be as problematic as it sounds. If we assume that every expert's opinion is about as weighty as that of any other expert, then the best one can do in the face of disagreement among the experts (barring the availability of a superior decision procedure such as an algorithm) is pick one of the positions favored by experts; that is, one has to make sure one is not going for a course of action that no expert would endorse, such as bloodletting or getting one's "chakras" aligned, and the like. This woman's strategy does have the marks of a wishful belief-formation in that the believer sets out to confirm a favored position rather than to look for the truth. However, in the case of expert disagreement, the best we might be able to do is to narrow down the options to those favored by some expert or other. Once we've done that, picking an option for non-epistemic reasons (for example, we favor it) may be perfectly rationally permissible. If there aren't any epistemic tiebreakers, we could use non-epistemic ones.

#### V. *PARS PRO TOTO*: THE PROBLEM OF ONE-SIDED EXPERTISE

As noted in the beginning, some complex issues such as the all-things-considered advisability of a lockdown may require expertise in multiple domains. I take it that this point is uncontroversial once it's made. Why, then, do we sometimes treat partial expertise as global expertise?

One reason is that we may not have fully considered the complexity of a given issue. The human mind has a tendency to simplify matters and stick to one or two salient aspects of a multi-faceted problem. Another reason may be that the conclusion partial experts draw might be one we find intuitively plausible or in line with our values. This, however, is a subpar strategy in general, for the reasons given by Schelling: if we do not sufficiently inform ourselves of the different kinds of expected costs and benefits, how could we know whether or not we actually support a policy? Listening to partial experts may be a little better but not very much better than listening to no experts.

Take the case of COVID-19 again. Perhaps Alex thinks that he doesn't need to hear anything about the economic effects of a lockdown, because he knows he values human life more than he values money. But this could not be quite right, not least because money and the absence of it can easily translate into lives gained or lost. This is one of the reasons why no one has ever proposed that we ban all motor vehicles and eliminate dangerous jobs such as logger and construction worker. It must be, then, that Alex is tacitly assuming that the economic costs would not be serious enough for him to change his judgments. But he can't know whether that's true without knowing what those costs are.



## VI. WHAT ABOUT A CLASH OF INTUITIONS?

I discussed several factors that introduce elements of ordinary opinion into expert positions. I now wish to turn to a trickier case: competing intuitions. Two philosophers of mind, for instance, may disagree about whether a purely functional account of consciousness succeeds or not. Since they disagree, we must abstain from ascribing knowledge. What, though, of expert opinion?

If the reason experts disagree is a matter of intuition, one may wonder whether the experts in question have expert opinion properly speaking. The problem is that intuitions fall outside the experts'—and anyone else's for that matter—domain of specialization. This question is particularly pressing if we consider that a nonexpert undergraduate student may, upon hearing about functionalism for the first time, have the same intuition as an expert, for instance, that a functionalist account of consciousness is bound to fail. Indeed, one can argue that many philosophical theories are *post hoc* rationalizations of unschooled intuitions.<sup>24</sup>

Note that this question is not the same as the question of whether there is such a thing as expert intuition in general. Clearly there is. For instance, an expert chess player may have the intuition that some piece must be moved to some position without knowing why. The problem is that other cases are not like this. Some intuitions an expert may have about her own domain of research are not, on that account, *expert* intuitions. This is often true with issues that invite competing intuitive responses, as it frequently happens in philosophy. It could be that the factors that incline a trained philosopher to accept or reject a functionalist account of consciousness are ultimately psychological, and so not part of the philosopher's expertise. If this is so, then, appearances to the contrary notwithstanding, the endorsement of functionalism, say, is not expert opinion. Rather, there is what the expert *knows* (an untrained person would have no idea what functionalism is, for instance), and then there are the psychological facts that incline the expert to hold one rival position over the other.

Might laypeople make use of these observations? Possibly. If laypeople observe debates in which positions are refined over the course of many years but are never abandoned, and trained specialists don't ever seem to converge on an answer, this may be good evidence that we are dealing with a clash of intuitions. In that case, a layperson should not regard the different positions as expert opinions one of which may turn out to be correct, but rather, as combinations of expert knowledge and intuitions falling outside anyone's scope of expertise.

<sup>24</sup> Jonathan Haidt, "The Emotional Dog and Its Rational Tale," *Psychological Review* 108, no. 4 (2001): 814–34, famously argues that something like this is true of moral positions: they are ultimately based, according to Haidt, on unschooled intuitions, but we adduce *post hoc* rationalizations ("rational tails") for our intuition-based judgments ("emotional dogs").

## VII. DON'T THROW THE BABY OUT WITH THE BATHWATER

So far, I focused on the ways in which experts may overstep and laypeople may over-ascribe expertise. But there is a serious and opposite danger.

### A. *When value-laden positions are the best you can get*

Note that there is a good reason for laypeople to be careful what conclusion they draw. As Schelling notes in the essay I quoted from earlier, we often have an impulse to apply our values *too quickly*, in a way not informed by the evidence. Schelling writes: "My undergraduate students often choose policies according to the values they attach to the outcomes they anticipate, and they often anticipate outcomes wrong."<sup>25</sup> Laypeople who want to form beliefs in an epistemically responsible way or make informed choices ought to sufficiently absorb the available information. There is also something to be said for the ability to absorb such information. If matters are too complex and a person is unable to process the available information and get to the point at which it is time to apply values, there may be good reason to go along with the opinion of an expert whose judgment is adequately informed, even if that opinion also contains values not intrinsic to the given domain or some other extraneous component.

### B. *When partial expertise is the best you can get*

In the case of certain complex issues, all available expertise may be partial at best. Ideally, laypeople ought to listen to all partial experts and attempt to make an all-things-considered judgment that is informed by the different types of considerations. If this proves very difficult, especially under severe time constraints, it may be reasonable to focus on what one class of partial experts say. Suppose, for instance, that a giant asteroid is about to hit the Earth. We know it would cost trillions of dollars to divert it, and we don't know what the negative impact would be if we do not divert it. We could have economists build models and try to come up with estimates of the costs and benefits associated with different possible outcomes and assign probabilities, but there is no time for that. It may, in that case, be reasonable to try to divert the asteroid even though we do not have even rough estimates of the costs of diverting the asteroid versus the costs should it hit the Earth.

## VIII. CONCLUSION

I argued that we often misattribute expertise. We may both over-attribute and under-attribute expertise, though here I focused on over-attribution that results from a failure to appreciate the role that extraneous elements, especially values, play in a given expert's judgment as well as the possibility

<sup>25</sup> Schelling, "Why Does Economics Only Help with Easy Problems?" 158.

of one-sided expertise in complex matters. I have largely focused on the responsibility of laypeople. What about the responsibility of experts?

If I am right, experts ought to be careful not to let extraneous considerations unduly influence their judgments, for instance, pick a scientific theory over another one that has better empirical support for aesthetic reasons or try to pass off theological verdicts as medical ones, as Forster's Dr. Barry does in *Maurice*. It is of course perfectly fine for experts to share opinions that contain a value component as well as opinions based on partial expertise, but when and where this is so, experts ought to acknowledge this rather than advancing the whole package as "expert opinion" (let alone as "expert knowledge"). In addition, a certain degree of humility may be required for expertise, and without it, a person may just be a glorified fool who doesn't understand that the world is bound to humble us again and again.<sup>26</sup>

There are three more points I wish to make before closing this essay. First, I focused on the role of expert knowledge and expert opinion as guides to truth, but expert opinion is often cognitively valuable in more ways than helping get us to the truth. Experts who are original thinkers may suggest serious possibilities that are worth considering, and there is great cognitive value in that. Progress is not just about deciding what is true but about generating hypotheses. Experts suggest hypotheses that are worth entertaining. In addition, experts' opinions may be valuable in other ways. For instance, Stephen Wolfram's *A New Kind of Science* is bold, interesting, and original and has, for many people, exquisite entertainment value, even if it is not likely to be true.

Second, there are problems in weighing costs and benefits here that have to do with the degree of uncertainty under which we are operating. Consider COVID-19 again. For one thing, we do not yet have a good handle on the death rate. Estimates vary significantly.<sup>27</sup> We do not know how quickly we could develop a cure either. That matters. If, for instance, we could develop a cure within a few weeks, a full lockdown would be well worth it. But that seems highly unlikely. For how long can we continue under lockdown? Say we wait for three months. Numbers may be going down at that point, but with neither cure nor a vaccine, they are bound to come back up. Consider the fact that on March 1, 2020, there were less than a hundred reported cases in the United States. At the time of this writing, five to six weeks later, the reported number of infected patients is close to half a million. This suggests that even if we wait until we've brought the numbers down to less than a hundred to lift restrictions—something we are probably unlikely to do—we can expect to see them come back up to where they are now several weeks later. The only difference would be that we would have, in the meantime, suffered a massive economic downturn. My point here

<sup>26</sup> I thank Dave Schmitz for this point.

<sup>27</sup> See Michael Le Page, "Why We Still Don't Know What the Death Rate is for COVID-19," *New Scientist*, April 3, 2020.

was that however much or little we may know about what the future may bring, we must try to factor the different types of expected costs and benefits into the equation. The people who could be considered expert on *some* of those costs and benefits only are partial experts.

Finally, when we operate under considerable uncertainty, we face additional problems that have to do with such phenomena as hindsight bias. If, for instance, we find a cure for COVID-19 within a few weeks, before the lockdown is lifted, we are likely to pat ourselves on the back for going into lockdown mode. If that doesn't happen, and we eventually restart the economy only to see numbers of infections skyrocket but with the added cost of negative GDP growth, we'd feel very differently. But our judgment of how reasonably or unreasonably we acted is likely in that case to be colored by consequences no one could have predicted. We may forget the epistemic position we find ourselves in right now. So we may praise or blame people who advocated one course of action over another without sufficient ground. That, however, is a topic for another discussion.

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