The Skeptic and the Climate Change Skeptic

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0. Introduction

The problem of skepticism, it hardly needs to be said, is widely regarded as one of the deepest and most important problems in philosophy. Skepticism is often personified in the shadowy figure of "the skeptic," who denies, of some large swathe of what we take to be our ordinary knowledge, that we know it after all. The philosophical challenge – as it's sometimes framed, though this way of setting the problem up has its critics – is to say whether there's anything we can say to the skeptic that rationally ought to change her mind.

Outside the philosophy classroom, global skeptics – skeptics about all purported knowledge, or at least all purported empirical knowledge about the external world – are rare. But there are people who describe themselves as "skeptics" about various more specific domains. Among these are self-professed "climate change skeptics" – skeptics about the reality of anthropogenic climate change.

There is little philosophical literature that juxtaposes the climate change skeptic with the external world skeptic, or that explores the parallels between the problems that these two figures pose.[1] Of the philosophical literature that there is on climate change *skepticism* specifically, most of it focuses on the quasi-sociological project of explaining why climate change skepticism abounds, despite the strong expert consensus that anthropogenic climate change is real.[2]

Part of the explanation of this is that, while both the external world skeptic and the climate change skeptic are typically cast as nefarious figures, many "traditional" epistemologists likely take it for granted that the former poses a serious philosophical challenge in a way that the latter doesn't. Addressing the external world skeptic is taken to be a highly ambitious philosophical project, one that has stalked millennia of philosophical tradition. The climate change skeptic, by contrast, seems to just be obviously and demonstrably failing to respond correctly to her evidence.[3] Put in a picturesque way, the thought is that philosophical analysis of the climate change skeptic must operate in the space of causes rather than the space of reasons – for the reasons are clearly settled.

At the same time, many of those who are interested in applied epistemology and climate change may think that there is not much to be learned from debates about the external world skeptic. They may find the external skeptic's challenge to *all* our knowledge to be distant from both common sense and real-world concerns,[4] and the attention to it symptomatic of what's wrong with "traditional" or "individual" epistemology. And they may not see much of a parallel between the climate change skeptic's arguments and those of the external world skeptic.

Here, I'll try to show that both of these views are mistaken. I think that the external world skeptic raises deep questions that *are* important for our everyday deliberation about what to believe. And I also think that there are significant parallels between the arguments for external world skepticism and those for at least a form of climate change skepticism that is idealized – but not *too*

idealized! – from the views of real-world, flesh-and-blood climate change skeptics. As such, the idealized climate change skeptic poses a challenge quite analogous to that of the external world skeptic.

In drawing this parallel, I do not intend to honor the climate change skeptic. I agree with the mainstream consensus that the climate change skeptic is irrational. That said, as I'll try to show, some of the same difficulties with creating a persuasive reply to the external world skeptic carry over to the case of the climate change skeptic.

1. The external world skeptic

Obviously, it's beyond the scope of this chapter to provide a comprehensive survey of different arguments for external world skepticism. I'll make do with a brief review of one common, famous skeptical strategy.

This strategy begins by describing some *skeptical scenario*. A skeptical scenario is a situation in which one is radically deceived about how the external world is: where there is a giant difference between appearances and reality. One of the most famous skeptical scenarios is the brain-in-a-vat scenario. In this scenario, you have no human body as we would ordinarily think of it; you are just a brain in a vat of jelly. Scientists have hooked wires up to the brain, and stimulate it to make things appear a certain way. But none of the appearances match reality. So, when it seems to you as if you are seated in a room, reading a philosophy book, really the scientists are just making things appear that way: in fact, you are just a brain-in-a-vat being made to think that you are seated in a room, reading a philosophy book. And similarly for all your other empirical beliefs about how the external world is.

The skeptic does not, of course, affirmatively claim that you *are* a brain-in-a-vat, or the victim of a skeptical scenario more generally. Rather, the skeptic's claim is that you don't know that you aren't a brain-in-a-vat. This claim, together with an application of the "closure" principle for knowledge, forms the basis for what Keith DeRose (1995) calls the Argument from Ignorance:

(1) You don't know that you're not a brain-in-a-vat.
(2) If you don't know that you're not a brain-in-a-vat, then you don't know that you're seated in a room, reading a philosophy book.

Therefore,

(C) You don't know that you're seated in a room, reading a philosophy book.

If successful, the argument generalizes to show that you don't know *any* ordinary proposition about how the external world is – provided it is something the scientists could be deceiving you about, just substitute the relevant proposition into the consequent of premise (2), and the conclusion.

Some have said that the Argument from Ignorance is not a particularly compelling skeptical argument as it stands, because its first premise can't just be taken for granted.[5] But there are ancillary arguments to be made for the first premise. Here is one. You could only know that you're not a brain-in-a-vat by possessing some evidence that you're not a brain-in-a-vat. But it's unclear what this evidence could be. You might try saying that it doesn't *look* like you're a brain-in-a-vat. But it's built into the brain-in-a-vat scenario that if you were in this scenario, it wouldn't look to you like you are, since it's part of the scenario that the scientists are making it appear that you have an ordinary human

body. Since it would appear that you're not a brain-in-a-vat whether you were a brain-in-a-vat or not, this appearance isn't evidence that you aren't a brain-in-a-vat. The brain-in-a-vat scenario is capable of explaining away any apparent evidence against itself, so that nothing can count as evidence against it. (Indeed, this is what makes it such an effective skeptical scenario.[6]) Thus, the skeptic claims, you cannot know that it doesn't obtain.

Additionally, some have thought that the Argument from Ignorance should not worry us because it only targets our *knowledge* of ordinary propositions, and not the claim that we *justifiably believe* such propositions.[7] Perhaps we shouldn't be too worried about whether we have knowledge; (highly) justified belief may be all we need. However, the ancillary argument for the first premise of the argument points the way to an answer to this objection too. For, if that ancillary argument is right, then we have *no* evidence that we are not brains in vats – nothing that favors the hypothesis that we aren't brains-in-vats over the hypothesis that we are. If this is so, it seems we're not even justified in believing that we're not brains-in-vats. And then – assuming a closure principle for justification – it seems that we're not justified in holding ordinary beliefs, like your belief that you're seated in a room, reading a philosophy book.

2. The idealized climate change skeptic

Different people who call themselves "climate change skeptics" hold different views, and some of these views are more analogous to the external world skeptic than others. To make the climate change skeptic somewhat analogous to the external world skeptic, we'll have to stipulate a number of things about him. This is, of course, to idealize somewhat from the messy and indeterminate states of mind that many real world "climate change skeptics" have. So let me sketch an "idealized" climate change skeptic. By calling this skeptic "idealized", I don't mean to say that he meets some important normative ideal, but simply that he has been imagined so as to be as analogous to the external world skeptic as possible.

First, and most importantly, the idealized climate change skeptic will genuinely be a climate change *skeptic*. Some self-described climate change "skeptics" positively affirm that anthropogenic climate change is not occurring – that it is a "hoax". Such people aren't really skeptics in the sense that is operative in epistemology. A skeptic about some domain is someone who affirms that knowledge about that domain is not possible. Thus, a climate change skeptic is someone who affirms that we cannot know whether anthropogenic climate change is occurring. By contrast, someone who positively asserts that anthropogenic climate change is *not* occurring is better called a climate change *denier*. The analogue of the climate change denier is not the external world skeptic, but the idealist, who affirms that there is no (material) external world.

It's very hard to see what could possibly justify an ordinary person in engaging in outright climate change denial. Since an ordinary person lacks the competence to responsibly evaluate the first-order scientific evidence about climate change for himself, it does not seem that he could be justified on the basis of a direct examination of that evidence. Nor does it seem that he could be justified on the basis of the testimony from the very small percentage of experts who deny the existence of anthropogenic climate change – at least not if he is aware of the many experts who hold the opposite view. One can't (justifiably) just arbitrarily pick and choose the experts one heeds in this way.[8] If denial

can't be justified either on the basis of direct examination of the first-order evidence, or on the basis of testimony, then plausibly, it cannot be justified at all.

But although no doubt many professed climate change "skeptics" are in fact deniers rather than skeptics, this is not true of all such people. In their book *Merchants of Doubt*, which details the attempts of corporately-funded renegade scientists to sow confusion about the reality of (among other things) anthropogenic climate change, Naomi Oreskes & Erik Conway stress that the narratives advanced in this cause are often ones of doubt, uncertainty, and a multiplicity of competing explanations of the data, rather than of certainty that anthropogenic climate change is *not* occurring.[9] The aim, essentially, is to get people to be skeptics about climate change.

A second feature of the idealized climate change skeptic is that his skepticism is not due to straightforwardly false factual beliefs about what the expert consensus about climate change is. According to survey data from the PEW Research Center as of 2016, 35% of Americans say that the percentage of climate scientists who say that human behavior is mostly responsible for climate change is "about half", "fewer than half", or "almost none".[10] Since these answers are straightforwardly factually inaccurate – surveys of climate scientists show that the vast majority say that human behavior is mostly responsible for climate change[11] – skepticism that is founded on them is not especially philosophically interesting. Rather, the more philosophically interesting climate change skeptic is one who is aware of the expert consensus on climate change, but distrusts or is uncertain of the reliability of these experts. This too is common: the same PEW survey shows that only 32% of Americans think that the research findings of climate scientists are influenced by "the best available evidence" most of the time, and that respondents are about as likely to attribute scientists' findings to "scientists' own political leanings" (27%) or their "desire to advance their careers" (36%).[12]

This leads directly into the third feature of the idealized climate change skeptic: he has a skeptical scenario that, if it obtained, would explain away the apparent evidence for climate change (namely, the expert consensus). The skeptical scenario is likely to be something like this:

> **Conspiracy.** There is no anthropogenic climate change, but there is an elaborate scientific conspiracy to suggest that there is, motivated by factors like scientists' political leanings and desire to advance their careers. Some scientists knowingly lie to sustain the conspiracy, while others are more unwitting participants, genuinely convincing themselves of the reality of anthropogenic climate change through wishful thinking, motivated reasoning, selective or biased processing of the evidence, or groupthink. Scientists are consciously and subconsciously disincentivized from uncovering the conspiracy or revealing the truth that it hides, since if they do so, they will be denied publications, grants and jobs. Those who do speak out against the conspiracy are marginalized, forced out of the profession, or hushed up.

Conspiracy-type scenarios play the same sort of role for the idealized climate change skeptic that brain-in-a-vat-type scenarios play for the external world skeptic. (Indeed, both scenarios involve nefarious scientists deceiving us!) To maintain the parallel between the cases, our idealized climate change skeptic won't positively affirm that the conspiracy scenario obtains. Rather, he will hold only that we don't have evidence that enables us to rule the conspiracy scenario out. The expert consensus on

climate change, he'll concede, *could* be explained by the reality of anthropogenic climate change (much as the appearance as of sitting in a room could be explained by actually sitting in a room). But it also could be explained by a conspiracy (much as the appearance as of sitting in a room could be explained by being a brain-in-a-vat deceived to think you're sitting in a room). The existence of the consensus, he claims, doesn't tell between these two hypotheses (just as the appearance of sitting in a room doesn't tell between the actually-sitting-in-a-room hypothesis and the brain-in-a-vat hypothesis).

As with the external world skeptic, this position is made harder to argue against by the fact that the conspiracy scenario, suitably developed, conveniently explains away any potential piece of (apparent) evidence against itself. All the appearances of non-conspiracy – like the lack of scientific results uncovering the conspiracy – can themselves be hypothesized to be a part of, or explained by, the conspiracy.

An objection may be raised here.[13] The "conspiracy" scenario as I imagined it involves some elements that are not in themselves conspiratorial in a narrow sense, such as motivated reasoning, bias and groupthink.[14] But to the extent that the climate change skeptic stresses these factors more than he stresses deliberate, conscious conspiracy, perhaps this opens up an important disanalogy between him and the external world skeptic. In particular, these charges of motivated reasoning, bias and groupthink seem open to empirical refutation in a way that both brain-in-a-vat and (narrowly) conspiracy-theoretic hypotheses are not. In my view, however, there is not as big a difference here as the objector makes out. From the point of view of a layperson it seems close to impossible – in practice if not in principle – to definitively determine whether the scientific consensus is due to a convergence on the truth or whether it is due to motivated reasoning or groupthink. The best way of determining this would be to directly evaluate whether the scientific data actually supports the consensus, but the layperson lacks the scientific competence to do this. Moreover, responses to the charge that a particular conclusion is due to bias, motivated reasoning and groupthink are hard to definitively rule out can themselves be charged with being a product of bias or groupthink. So I don't think that whether the climate change skeptic stresses conscious conspiracy or these more subconscious elements makes a huge difference to the structure of the dialectic between the skeptic and the non-skeptic.[15]

To make the parallel with external world skepticism crisper and clearer, we can imagine our idealized climate change skeptic advancing an adapted version of the argument from ignorance:

(1) You don't know that the conspiracy scenario doesn't obtain.
(2) If you don't know that the conspiracy scenario doesn't obtain, then you don't know that anthropogenic climate change is occurring.

Therefore,

(C) You don't know that anthropogenic climate change is occurring.

As with the original argument for ignorance, the argument can be generalized from knowledge to justification. If the conspiracy scenario explains away any potential piece of (apparent) evidence against itself – such that you would have this (apparent) evidence even if the conspiracy scenario obtained – then it seems that none of this evidence really is evidence against the conspiracy scenario. But if you don't have any evidence against the conspiracy scenario, you can't be justified in believing that the

conspiracy scenario doesn't obtain. And if that's so, then (it seems), you can't be justified in believing that anthropogenic climate change is occurring.

Lest it seem fanciful to imagine a real-world climate change skeptic developing a conspiracy scenario of the sort that this argument employs, it is worth summarizing a real-world instance detailed by Oreskes & Conway (2010: 207-8). In 1996, the Intergovernmental Panel on Climate Change (IPCC) published a working group report on climate change, which included a chapter on "Detection of Climate Change and Attribution of Causes". The chapter, prepared by thirty-six of the world's leading climate scientists before being reviewed by representatives of governments participated in the IPCC, was a landmark in making the claim that "the balance of evidence suggests that there is a discernible human influence on global climate." In response, two prominent representatives of the oil industry accused two of the lead scientists behind the chapter of "secretly altering the IPCC report, suppressing dissent by other scientists, and eliminating references to scientific uncertainties." And the physicist and climate change skeptic Fred Seitz proclaimed that he had "never witnessed a more disturbing corruption of the peer-review process than the events that led to the IPCC report" and that "nearly all [of the revisions] worked to remove hints of the skepticism with which many scientists regard claims that human activities are having a major impact on climate."

These are positive allegations of conspiracy and cover-up, rather than merely floatings of such a possibility. But we can imagine some non-expert who hears the IPCC report on one hand, and the accusations of conspiracy on the other, and does not know which to believe. For such an individual, the Conspiracy-type scenario is salient, and even if she does not affirmatively believe that the conspiracy obtains, she may find herself unsure how to rule it out. Her position may be made even harder by the fact that there are accusations of conspiracy on *both* sides of the debate.[16] Seitz and others accused the IPCC authors of being engaged in a politically motivated conspiracy to distort the scientific consensus on climate change to make it seem more weighted in *favor* of anthropogenic hypotheses than it was. The IPCC authors and their allies responded by emphatically denying this, and by in turn alleging that it was in fact Seitz who was engaged in a politically (and financially) motivated conspiracy to distort the scientific consensus on climate change to make it seem more weighted *against* anthropogenic hypotheses than it was. Each side thus strongly denied being engaged in a conspiracy, and accused the other side of being engaged in one. To the non-expert, these allegations of conspiracy might seem on a par with one another, especially if she doesn't antecedently trust one side more than the other. And this might leave her tempted by the adapted argument from ignorance.

3. Summing up the idealized climate change skeptic's challenge

The idealized climate change skeptic, I think, poses two problems to the defender of beliefs based on mainstream climate science. The first is a practical problem: the idealized climate change skeptic is dialectically very hard to convince. The problem is that anything that we can try to marshal to support our beliefs in anthropogenic climate change is itself called into question by the skeptic's conspiracy scenario. This is an instance of a more general problem emphasized by Michael Lynch (2012, forthcoming): it is very hard to mount a defense of our views about which sources to trust from first principles, without relying on (some of) the very sources under dispute. Thus, we often won't be able to say anything persuasive in defense of these sources to someone who doubts them.[17]

In addition to this practical problem, the idealized climate change skeptic also poses us a more philosophical challenge, very similar to that of the external world skeptic. The challenge is to explain on what grounds we can justifiably dismiss the conspiracy scenario – or to explain how, even though we can't dismiss it, we're still justified in continuing to believe in anthropogenic climate change, rather than suspending judgment. Though I am not a climate change skeptic, I am bothered by the question of how to respond to the climate change skeptic's challenge (just as I am bothered by the question of how to respond to the external world skeptic's challenge). Though I can't settle this definitively here, the next and final section surveys some possible answers.

4. Responding to the idealized climate change skeptic

One strategy is to try to give some specific response to the idealized climate change skeptic that isn't intended to generalize to address the external world skeptic. We might try to directly examine the scientific data to confirm that it *does* support belief in anthropogenic climate change, and thus that the scientific consensus is not merely a result of conspiracy. But a layperson, who lacks scientific competence, can't responsibly or accurately evaluate the scientific data and its implications without deferring to experts – so I take it this option is unavailable for her.

Somewhat more promisingly, we might say that our evidence against the conspiracy scenario is that scientific conspiracies are rare, and there haven't been many in the past. However, if the idealized climate change skeptic is deft enough, she can explain away these facts as part of her skeptical hypotheses, alleging a broader conspiracy. Moreover, while deliberate scientific conspiracies may be rare, the literature on pessimistic (meta-)induction arguments in philosophy of science reminds us that scientific views that were once orthodox and enjoyed great consensus have very often turned out to be false.[18]

So I think we should look at responses to the idealized climate change skeptic that draw on the parallel with the external world skeptic. One prominent anti-skeptical idea is that we enjoy a "default justification" or "unearned entitlement", without evidence, to accept certain propositions that play a role as "cornerstones" or "foundational assumptions" in our thought.[19] However, while the proposition that we're not brains-in-vats – or, at least the proposition that the world is roughly as it appears to be – plausibly occupies this kind of role in our thought, the proposition that there is no elaborate scientific conspiracy to fake anthropogenic global warming does not seem to be such a cornerstone. It's easy to imagine us going on with our cognitive lives without it, without a fundamental restructuring of our cognitive architecture or any change in our way of using appearances as a guide to reality. It's thus hard to see what would give us an "unearned" entitlement to it without evidence.

A different prominent anti-skeptical view is "dogmatism" of the sort defended by Pryor (2000). According to the dogmatist, perceptual experiences as of p (defeasibly) justify you in believing p, in a way that doesn't not presuppose or rest on any antecedent justification for believing anything else. So, for example, a perceptual experience as of being seated in a room, reading a philosophy book defeasibly justifies you in believing that you are seated in a room, reading a philosophy book – regardless of whether you have any antecedent justification for believing that you are not a brain in a vat. In itself, this picture does not say anything about what, if anything, does ultimately justify you in believing that you are not a brain in a vat. But it's commonly assumed that the dogmatist will go on

to say that your experience (e.g.) as of being seated in a room, reading a philosophy book justifies you not only in believing that you are seated in a room, reading a philosophy book, but also in believing that you are not a brain in a vat being deceived to think that you're seated in a room reading a philosophy book.

Again, however, it's not clear how this dogmatist position generalizes to deal with the idealized climate change skeptic. The evidence that ordinary people have in favor of anthropogenic climate change – namely the testimony of scientists to that effect – is not perceptual in the standard sense. One might try to extend the dogmatist position to testimony. But an analogous principle for testimony would say that when someone tells you that *p*, this (defeasibly) justifies you in believing *p*, regardless of whether you have any antecedent justification for believing the testifier to be reliable, or for believing that he is not trying to deceive you. This does not seem all that plausible.

But even if the dogmatist position cannot be worked out to give a reply to the climate change skeptic, there may be an insight to be mined from it. The core insight is this: just because two hypotheses are equally consistent with, or well-predicted by, your evidence, it need not be that they are both equally credible. Indeed, if this were so, it wouldn't just be that you'd need to give equal credence to the hypothesis that things are roughly as they appear to be and the hypothesis that you're a brain-in-a-vat being fed misleading appearances. There are a vast multitude, perhaps an infinitude, of *other* imaginable skeptical scenarios that are also equally well-predicted by the evidence (ones involving dreaming, or evil demons, etc). The principle under consideration would thus say that you'd need to divide your credence equally across *all* of these hypotheses, where the hypothesis that things are roughly as they seem to be is just one of them, such that your credence that things are roughly as they seem to be becomes extremely, perhaps infinitesimally, small. This seems a lot to stomach even for the external world skeptic.

This still leaves us with the question of why we should positively think the hypothesis that things are roughly as they appear to be is more credible than the hypothesis that you're a brain-in-a-vat being fed misleading appearances. One view here is that, all other things equal, the *simpler* hypothesis is more credible.[20] The hypothesis that things are roughly as they appear to be is simpler than the hypothesis that there's an elaborate plot involving scientists and vats to make them seem as they appear to be. And the hypothesis that anthropogenic climate change is really occurring is simpler than the hypothesis that there's an elaborate scientific plot to make it seem like it's occurring.

Relatedly, one might wonder whether there is something non-credible about hypotheses that have been designed specifically to explain away all of the potential counterevidence against them. As we saw earlier, whenever there's some putative piece of evidence that seems to indicate that you're not a brain-in-a-vat, the external world skeptic just explains it away by building it into the story about the vatmasters' deception. Similarly, whenever there's some putative piece of evidence that seems to indicate that anthropogenic climate change is occurring, the climate change skeptic just explains it away by building it into the story about the climate scientists' conspiracy. These moves made the skeptic frustratingly hard to refute, but they also may be vulnerable to a charge of *ad hockery*. The skeptic's whole strategy is to make their own hypothesis impossible to falsify by building whatever complications into her hypothesis she needs to in order to refute the counterevidence, on an *ad hoc* basis as and when that counterevidence needs refuting. Perhaps the fact that a hypothesis has been

developed in this fashion diminishes its credibility. Or perhaps a hypothesis is more credible when we know what evidence *would* count against it, and we haven't received that evidence.[21] That is so with the hypothesis that you're currently sitting in a room reading a philosophy book, but not with the hypothesis that you're a brain-in-a-vat. And it is so with the hypothesis that anthropogenic climate change is occurring, but not with the hypothesis that there's an elaborate scientific plot to make it seem like it's occurring.

The comparison between the two kinds of skepticism also creates a problem for the climate change skeptic that is independent of any particular response to it. The problem is this: the climate change skeptic, presumably, does *not* want to be an external world skeptic. She wants to bring down our beliefs about anthropogenic climate change, not our beliefs about everything! But if the climate change skeptic's argument trades on the same skeptical strategy that the external world skeptic employs – if, for example, it relies on the principle that two hypotheses that predict the evidence equally well must be equally credible – then it is very hard to see how the climate change skeptic avoids a slide into a more general skepticism. Thus, the challenge for the climate change skeptic is to explain how her reasoning doesn't generalize. Without a response to this challenge, her *local* climate change skepticism looks unprincipled, and likely, politically motivated.

5. Conclusion

Thus, if the most philosophically respectable version of climate change skepticism relies on reasoning that leads us into such wholesale external world skepticism, the climate change skeptic is in trouble. But equally, this parallel may also cast the external world skeptic in a negative light. The skeptical hypothesis that she employs seems to have the same *ad hoc*, deliberately unfalsifiable nature as the conspiracy hypothesis that the climate change skeptic employs, and her style of argument works in the same way as the idealized climate change skeptic's. Perhaps, then, the external world skeptic herself is just another conspiracy theorist.

If the external world skeptic's challenge and the (idealized) climate change skeptic's challenge are effectively instances of the same central problem – namely, how we are to justifiably dismiss seemingly far-fetched hypotheses that are designed to explain away all of our apparent evidence against them – then a good response to the external world skeptic will be able to generalize to the climate change skeptic. But as we have seen, some of the most prominent responses to the external world skeptic seem not to happily generalize in this way. This is a mark against these responses.

To some, the debate about skepticism is philosophy at its silliest: the project of asking ourselves whether the really know that there are chairs and trees and hands and so on is supposed to be an amusing example of philosophy's excesses and deviation from common sense. But the way in which the external world skeptic's reasoning shows up so analogously in the real-life case of the climate change skeptic illustrates why the debate about skepticism matters. It matters because it raises deep and fundamental questions about what evidential support is, and about how to choose between competing hypotheses that purport to explain the evidence. These questions are imminent in real-world deliberation about what to believe. When we are facing the climate change skeptic down, we need some account of why it is OK to dismiss her skeptical conspiracy hypothesis. And without such

an account, we cannot legitimately expect her to change her mind. Thus, developing such an account is a task of immense importance.

Endnotes

[1] An exception is an op-ed in the *New York Times* by the philosopher N. Ángel Pinillos (2018).

[2] See, e.g., Anderson (2011), Gelfert (2013), Almassi (2017), Levy (2019), Kovaka (forthcoming), and Greco (forthcoming).

[3] John Broome (2017), for example, writes that someone who believes that climate change is a hoax must "not [have] taken even a moment to consider the evidence."

[4] See, for example, Coady and Corry (2013: 12).

[5] See e.g. Pryor (2000: 522); Conee & Feldman (2004: 300).

[6] Cf. Cross (2010).

[7] See e.g. Pryor (2000: 523).

[8] Though no doubt many climate change deniers do pick and choose their experts in this way. Such biased handling of evidence is a classic hallmark of motivated reasoning (Kunda 1990), where one (perhaps subconsciously) has a conclusion one wants to reach in advance, and then sets up one's reasoning and inquiry to reach that conclusion, albeit through what *seems* or *feels* like a rational procedure. For further discussion of motivated reasoning in the context of beliefs about climate change see e.g. Kahan *et al.* (2011), Gerken (2020), and Greco (forthcoming).

[9] Oreskes & Conway (2010: see esp. 178, 186-90, 192, 213).

[10] Funk & Kennedy (2016: 26).

[11] *Ibid.*

[12] *Ibid.*: 29.

[13] Thanks to an anonymous referee for pressing it.

[14] See Miller 2013 for more on these as explanations of consensus.

[15] Another possibility is that the skeptic proceeds by advancing a less "global" skeptical hypothesis, focusing instead on "local" skeptical hypotheses that attempt to explain various pieces of climate data without appeal to anthropogenic factors. (Thanks to Mikkel Gerken for pressing this possibility on me.) However, in making the judgment that these explanations are as good as the explanations that do invoke anthropogenic factors, the skeptic is straying into making her own first-order assessments of scientific data and its upshots. As I've already said, an ordinary non-scientist is not justified in doing this. The global hypothesis offers the skeptic her best shot of making a skeptical argument without having to stray into fist-order assessments of the scientific data. Moreover, if the scientific consensus *were* mistaken in the way that the local skeptical hypotheses suggest, it's not clear what would explain the widespread mistake if not *something* in the ballpark of the factors I've collected under the "conspiracy" hypothesis.

[16] Indeed, if a conspiracy theory is just a theory that explains something in terms of the presence of a conspiracy, there are surely true and justified conspiracy theories, since some things *are* down to conspiracies (cf. Pigden 1995, 2007; Coady 2012: ch. 5).

[17] Consider Oreskes & Conway's responses to the conspiracy theories detailed at the end of the previous section (Oreskes & Conway 2010: 208-9). Their response is essentially to quote the emphatic denials of the subjects of the conspiracy theory (i.e. the IPCC authors). But for obvious reasons, this won't move someone in the grips of the conspiracy theory.

[18] See, e.g., Laudan (1981).

[19] Cf., e.g., Wright (2004) and Coliva (2015).

[20] Cf. Vogel (1990).

[21] Cf. Popper (1959).

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