

Getting it right

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Abstract *Truth monism* is the idea that only true beliefs are of fundamental epistemic value. The present paper considers three objections to truth monism, and argues that, while the truth monist has plausible responses to the first two objections, the third objection suggests that truth monism should be reformulated. On this reformulation, which we refer to as *accuracy monism*, the fundamental epistemic goal is *accuracy*, where accuracy is a matter of “getting it right.” The idea then developed is that accuracy is a *genus* with several *species*. Believing truly is a prominent species, but it is not the only one. Finally, it is argued that accuracy monism is equally good or better than both traditional truth monism and its main dialectical rival, value pluralism, when it comes to satisfying three important axiological desiderata.

Keywords Epistemology · Value · Epistemic value · Epistemic goal

1 Introduction

Truth monism is the idea that only true beliefs are of fundamental epistemic value. Why believe that? Because it seems that our ultimate goal as epistemic agents is to have beliefs that are true, and that to the extent that we want our beliefs to have other features—to be rational, or justified, or based on good evidence, for example—this is only because we think these other features will make it more likely that our beliefs are true. According to the truth monist, these other features are

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therefore only valuable because (in some sense) they put us in a good position with respect to the truth; they are not epistemically valuable “in their own right.”

Although truth monism has several prominent supporters,¹ over the last several years it has also attracted a number of critics.² According to its detractors, truth monism should be rejected for a number of reasons: for one thing, because it is unable to make sense of the fact that some truths are more valuable than others; for another, because it seems like features such as “being based on good evidence” are epistemically valuable in their own right, or at least apart from their connection to the truth. In this paper we will argue that while several of these recent criticisms are off-target (Sects. 3–4), one challenge to truth monism is serious enough that it should cause us not to abandon the view altogether, but rather to revise it substantially (Sect. 5). The resulting view, *accuracy monism*, holds that the fundamental epistemic goal is not truth but *accuracy*, which is a matter of “getting it right.” Understood thus, accuracy is a *genus* with several *species*. Believing truly is a prominent species, but it is not the only one. Moreover, by honoring several of the misgivings critics have had about monism while nevertheless remaining firmly rooted in a monistic framework, accuracy monism is equally good or better than both traditional truth monism and value pluralism when it comes to satisfying three important axiological desiderata—or so it will be argued (Sect. 6).

2 Some preliminaries

Before considering the philosophical merits and limits of truth monism, let us first clarify the relevant notions. On our view, epistemic value is a function of the goals of inquiry, where ‘inquiry’ refers to the range of inquisitive practices concerned with posing and answering questions. In holding that the goals of inquiry determine which activities, states, processes, practices, and so on, are epistemically valuable thus, we will take a broadly *consequentialist* approach to epistemic evaluation.³ As noted above, many epistemologists take having true belief to be one such goal.⁴ If true belief is such a goal, every effective means to believing truly is of *instrumental* epistemic value, and of *mere instrumental* epistemic value if its epistemic value is exhausted by it being an effective means thus. By contrast, let us refer to something as being of *non-instrumental* epistemic value if and only if it is epistemically valuable, but not of mere instrumental epistemic value.⁵

¹ See, e.g., Olsson (2007), David (2005), and Goldman (1999).

² See, e.g., Whitcomb (2007), Kvanvig (2005), and DePaul (2001).

³ For prominent alternatives, see Zagzebski’s (1996) virtue-theoretic approach and Clifford’s (1866) deontological approach.

⁴ In addition to the references in footnote 1, see Lynch (2009, p. 76), Alston (2005, p. 30), BonJour (1985, pp. 7–8), and Moser (1985, p. 4). See also David (2001) for an overview, and Stich (1990), for a dissenting voice.

⁵ If the bearers of non-instrumental value are restricted to *states of affairs*, as is common in the Moorean tradition, this notion of non-instrumental value coincides with that of *intrinsic* value (see, e.g., Bradley 2006). However, given that axiological discussions in the Kantian tradition often ascribe such values to *objects* (see, e.g., Rabinowicz and Rønnow-Rasmussen 2000; Kagan 1998; Korsgaard 1983), rather than to states of affairs, we will henceforth talk in terms of non-instrumental rather than intrinsic value, to avoid confusion.

Why not simply frame truth monism in terms of true belief being the only non-instrumental epistemic value? Because truth monism allows for other things being of non-instrumental epistemic value besides mere true belief. By way of illustration, truth monism is compatible with knowing being of non-instrumental epistemic value in virtue of true belief being a component of knowing.⁶ This brings us to the idea of *fundamental* epistemic value. Something is of fundamental epistemic value if and only if its non-instrumental epistemic value does not derive in full from the value of any of its components. What the truth monist denies is simply that such a state—or, more generally, any state that involves true belief as a mere component—is of anything but derived non-instrumental value.

One final preliminary: non-instrumental value (epistemic or otherwise) should not be confused with *final* value, i.e., with the kind of value that pertains to that which is valuable *simpliciter*, or independently of any considerations about conduciveness whatsoever. Again, the goals of inquiry, i.e., the inquisitive posing and answering of questions, determine what is of epistemic value. But as we shall see below, inquirers may be posing and answering questions for a variety of reasons, including *practical* reasons. In cases where inquiry is practically motivated, the resulting true beliefs are not finally valuable, since their value depends on the practical utility of the relevant truths. But practically motivated inquiry is and remains *inquiry*, and may consequently also be evaluated as such. Moreover, if true belief is a goal of inquiry, the outputs of practically motivated inquiry may still be of non-instrumental *epistemic* value.⁷ In other words, while all final values are non-instrumental values (i.e., not mere instrumental values), some non-instrumental values are not final values.

Having clarified the relevant notions relevant to our characterization of truth monism—as the view that only true beliefs are of fundamental epistemic value—let us turn to the first objection against such monism.

3 The objection from significance

Some true beliefs are more epistemically valuable than others.⁸ For example, consider the following two true beliefs:

⁶ The components in question correspond to the conditions included in a correct analysis of the state in question. If a state has no analysis—as Williamson (2000) has argued is the case for knowledge—it has no components, but may still be of fundamental value.

⁷ Consequently, Goldman (1999, pp. 94–96)—a card-carrying truth monist—suggests that true beliefs are of non-instrumental epistemic value in so far as they pertain to matters deemed interesting by some relevant set of inquirers, even if the reasons that they find some particular matters interesting might be practical rather than purely intellectual.

⁸ That, at least, is the position of a great many epistemologists, including Whitcomb (2007, p. 18), Alston (2005, p. 30), Bishop and Trout (2005, Chap. 6), Audi (2004, p. 15), Kvanvig (2003, p. 203), Kitcher (2001, p. 65–82), Haack (1993, pp. 199–203), Nozick (1993, pp. 67–68). However, see Feldman (1988) for some reservations.

- (1) Someone's belief that the universe is expanding at an accelerating rate.
- (2) Someone's belief that (let us assume) the number of people ever to have visited the David Hume memorial up until now is even.

It seems plain that (1) is more epistemically valuable than (2). However, it is not clear that the truth monist has any explanation for why that is so. Both beliefs have the one property singled out by the truth monist as the provider of fundamental epistemic value, i.e., the property of being true. More than that, even if there is a difference in the *instrumental* values of (1) and (2), because one is more likely to yield a greater number of additional true beliefs, that does not get to the intuited difference between the two, which seems to pertain to some value that they have (or lack) in their own right. For this reason, it is tempting to suggest that we need to appeal to some *additional* epistemic value, besides truth, in virtue of which some true beliefs are more epistemically valuable than others.⁹ One popular story here is that some beliefs are not only true but also *significant*, and that it is in virtue of the value added by such significance—an additional value that the truth monist cannot accept, on pain of surrendering her monism—that (1) is of greater epistemic value than (2).¹⁰

The truth monist may respond as follows. Truth monism is *not* the view that *all* true beliefs are of fundamental epistemic value; it is the view that *only* true beliefs are of such value. As such, truth monism is compatible with some true beliefs being epistemically *worthless*.¹¹ In fact, the truth monist may even say that some true beliefs are epistemically worthless *because* they are void of significance, and that some true beliefs are of high epistemic value *because* they are highly significant. How does she get to say that without introducing a fundamental epistemic value in addition to that of truth? In short, by defining the epistemically valuable in terms of that which is valuable in the way of inquiry and identifying inquiry with the inquisitive practices concerned with posing and answering questions (as above), and then characterizing the significant as that which pertains to questions that we want answered. After all, as pointed out by Ernest Sosa, “our desire for truth is largely coordinate with our desire for answers to our various questions.”¹² Naturally, some of our questions stem from our engagement in practical pursuits. Other questions, however, are plausibly characterized as being pursued for their own sake, and thereby stem from what Carl Hempel referred to as “sheer intellectual curiosity”—a curiosity that seems every bit as compelling to many of us as our need for clothing and food, to paraphrase Larry Laudan.¹³

⁹ A analogous concern is raised by Mill (2001/1861) commitment to the ideas that only pleasure is of intrinsic value, even if some forms of pleasure are of greater such value than others.

¹⁰ See Whitcomb (2007) and DePaul (1993) for two arguments along these lines.

¹¹ For example, Goldman (1999, pp. 94–96) suggests that true beliefs only are valuable if they pertain to questions that the inquirer, or the society of inquirers that she is part of, wants answered, rendering all true belief that do not pertain to such questions epistemically worthless.

¹² Sosa (2003, p. 157).

¹³ See Hempel (1965, p. 333) and Laudan (1977, p. 225), respectively. To talk about *intellectual* curiosity is not to rule out that our curiosity might sometimes be motivated by our practical goals. Using a distinction from Grimm (2008, pp. 725–744), we may distinguish between *prudential* and *epistemic* curiosity, and identify intellectual curiosity with the latter.

In order to address the problem posed at the outset of this section, however, it is important to note that, irrespective of whether the relevant inquiry is motivated by practical concerns or by intellectual curiosity, what is pursued are not just *any* truths. This is fairly obvious in the practical case, where the truths we pursue are those, and only those, that throw light on the practical problems that face us. Moreover, if inquiry can be motivated by practical concerns, a great many kinds of inquiry may qualify as significant, of course. For example, imagine that you have a large bet with someone as to whether the number of people ever to have visited the David Hume memorial up until now is even. Whatever investigation you conduct when trying to decide on an answer may qualify as *significant* inquiry, given the practical stakes you have in getting the right answer. The important thing to note, however, is that not all significant inquiry pertains to true beliefs that we value for their own sake (as opposed to, say, for practical purposes). And as noted a moment ago, when we have the intuition that (1) is more valuable than (2) it is, most likely, value for its own sake that we have in mind. So, let us consider the role of intellectual curiosity in epistemic evaluation, and in particular the fact that even sheer intellectual curiosity is selective.

Much like love, intellectual curiosity is highly discriminative in that it consists in a desire for *something* for its own sake, without thereby consisting in a desire for just *anything*. But on the basis of *what* are such discriminations made in the case of intellectual curiosity? On one historically prominent suggestion, the facts that determine what counts as significant in the realm of intellectual curiosity are plain contingent facts about our psychology. Indeed, this view was defended already by David Hume, who suggested that our love for truth, as it relates to curiosity, should be understood in terms of the *satisfaction* we receive from “the exercise of genius” in the pursuit of difficult or otherwise intellectually challenging problems.¹⁴

Notice, however, that taking significance to be a psychological matter does not imply complete *laissez-faire*. On this point, consider how our judgments and intuitions about significance, particularly in contexts where the relevant investigations do not in any obvious way speak to our practical concerns, are influenced by an expectation that all of us will see the point of paradigmatically profound questions, and a connected desire to describe those who fail to do so as lacking in what Philip Kitcher has referred to as *natural* curiosity:

Partly as a result of our having the capacities that we do, partly because of the cultures in which we develop, some aspects of nature strike us as particularly salient or surprising. [...] Human beings vary, of course, with respect to the ways in which they express surprise and curiosity. [...] Typically, we respond to the diversity with tolerance, explaining some of the variation in terms of differences in cultural or educational context. But tolerance has its limits, and

¹⁴ See Hume (2003, /1740, bk. II, sect. X). The main historical challenger to this view is Plato, who in the *Republic* took it that facts about significance are extra-mental, transcendent facts about Forms. We will not consider this view presently, but see Whitcomb (2007). See also Kitcher (2001) for a critique of more recent, anti-psychologistic accounts of significance.

we do count some of our fellows as pathological, either because they obsess about trifles or because they are completely dull.¹⁵

In other words, it is not that (2) *could* not be deemed epistemically significant for its own sake. As Harry Frankfurt notes, normativity is in many instances “grounded only in what we cannot help caring about and cannot help considering important,” where what we care about thus “is relative in part to the common nature of human beings and in part to individual experience and character.”¹⁶ So, again, it is not that it is strictly speaking *impossible* to value highly unorthodox things for their own sake. Nor is it the case that people valuing things thus are in some substantive sense *mistaken*, as opposed to—in the extreme cases, at least—tremendously hard to make sense of. That, moreover, is why it is exceptionally hard to imagine that any sane and sensible person would actually consider the inquiry corresponding to (2) worthwhile for its own sake, let alone more worthwhile than that associated with (1). And when we feel the pull of the idea that (1) is of greater significance than (2), we are responding to this sense of a natural curiosity.

However, contrary to the objection with which we began this section, it does not follow from this that significance is an epistemic value *in addition* to that of true belief. Granted, significance *is* a property of (some) true beliefs. The relevant question is what *kind* of property it is. What we are suggesting (pace Plato, and following Hume) is that it is not a property that true beliefs have independently of our conceptions of what makes for worthwhile inquiry. More specifically, significance measures the *degree* of epistemic value as a function of the extent to which the relevant true beliefs speak to inquiries that we deem worthwhile, either on practical grounds or on account of intellectual curiosity. In other words, the mistake of the objection under consideration is the assumption that a significant true belief has *two* properties of epistemic value, i.e., truth and significance, as opposed to one property, i.e., epistemic value, *in great quantity*. Consequently, the monist’s claim that only true beliefs are of fundamental epistemic value remains.¹⁷

4 The objection from justification

A second objection to truth monism comes from the idea that justification is non-instrumentally valuable. Since justification is not factive, the most plausible way to account for the relevant value—if justification, indeed, can be shown to be valuable thus—would have to be in terms of it being fundamental, i.e., not derived from the non-instrumental value of any of its components.

¹⁵ Kitcher (2001, p. 81).

¹⁶ Frankfurt (2006, 190 and 199, respectively).

¹⁷ Notice that, since truths pursued through sheer intellectual curiosity are pursued independently of any considerations about conduciveness whatsoever, such truths may not only be of fundamental (non-instrumental) *epistemic* value, in so far as they are evaluated *qua* fruits of inquiry, but also of non-instrumental value *simpliciter*, or final value (see §2). That said, no part of the present investigation presupposes that any true beliefs are of final value. It suffices for the purposes of monism that some true beliefs are of fundamental (non-instrumental) epistemic value.

4.1 Justification as a non-instrumental value

Why think that justification is non-instrumentally valuable? Consider Michael DePaul's conception of the goal of cognition as the attainment of the "organic unity" of knowledge:

What we are after, epistemically and as cognitive beings, is not mere true belief, but knowledge. True belief is part of what we are after, sure enough. And false belief is inimical to our goal. But truth and the absence of falsehood are not all that we are after. For knowledge is not a matter of succeeding at something, i.e., believing the truth, and succeeding at it in a way that can be counted on to produce success. Rather, knowledge is a matter of simultaneously achieving two goals. It essentially involves two distinct goods coming together. One of the goods is truth; the other is warrant. There is no necessary connection between these goods, but as epistemic or cognitive beings we do want them both. [...] Or perhaps I should say that we want to attain one, i.e., truth, by way of attaining the other, i.e., warrant. [...] For I believe the interaction between truth and warrant that constitute knowledge may be more complex than mere conjunction, so that knowledge might best be thought of as a sort of organic unity, the good of which exceeds the sum of the goods of warranted belief and true belief.¹⁸

A quick clarification: DePaul talks about warrant here. However, since that notion is so closely tied to Alvin Plantinga's conception of that which turns true belief into knowledge,¹⁹ and DePaul's discussion, both here and in subsequent papers,²⁰ makes clear that DePaul is talking about (epistemic) *justification*, we will henceforth speak in terms of the latter.

Does the idea that what we are after as cognitive beings is the "organic unity" of true belief and justification, i.e., knowledge, imply that justification is non-instrumentally valuable? While DePaul seems to think so,²¹ it is not obvious that his theory supports such an implication. On DePaul's picture, justification is valuable as a component of an "organic unity." What does being valuable thus entail? It is somewhat hard to say, but consider two options. On the first option, we note that wholes may inherit the value of one of their components, as in case of the derived non-instrumental value that knowledge may have in virtue of its factivity. Then, we consider the possibility that the inheritance may also run the other way, i.e., from wholes to parts. More specifically, consider the following argument: If knowledge is a goal of inquiry, and justification is a necessary condition on knowledge, it follows that justification, too, is of non-instrumental epistemic value. Even setting aside the question whether the premises are true, it is easy to see that this is not a valid

¹⁸ DePaul (1993, pp. 77–78).

¹⁹ See Plantinga (1993).

²⁰ See, e.g., DePaul (2001, pp. 177–179).

²¹ For one thing, when Kvanvig reads DePaul as suggesting that justification is intrinsically valuable (see Kvanvig 2003, p. 53), DePaul does not protest—rather, he goes on to argue that Kvanvig's arguments against the idea that justification is valuable thus are no good (see DePaul and Grimm 2007, pp. 504–508).

argument: On the traditional account of knowledge, knowledge is justified true belief (Gettier problems aside). On the above argument, it would follow that mere belief—being another necessary condition on knowledge—is of non-instrumental epistemic value. That is clearly not right.

On the second option, we consider instead an analogy that DePaul himself uses to illustrate the idea of knowledge as an “organic unity”: The goal of bull riding is not simply to stay on the bull for 8 s, but to do so with style.²² Moreover, some of the things that will give you a higher score on style, such as spurring the bull, might actually decrease your chances of staying on the bull for 8 s. In other words, style is not valuable as a mere means to staying on the bull. According to DePaul, justification is like riding the bull with style, true belief like staying on the bull for 8 s, and knowledge like staying on the bull for 8 s *with* style, in the sense that, while justification clearly is valuable, it is not valuable as a mere means to true belief.

That, however, does not establish that justification is non-instrumentally valuable, and that its value is not exhausted by it being an effective means to *any* further good. In fact, on DePaul’s own analogy, it seems that staying on the bull and riding the bull with style, respectively, are merely valuable as means to winning, i.e., to staying on the bull with style, at least in the following sense: *ceteris paribus*, staying on the bull makes it more likely that you will win, and the same goes for riding the bull with style. If successful bull riding and knowing are analogous in the manner in which DePaul maintains, it would thereby also seem right to say that believing justifiably is valuable as a mere means to knowing, in the sense that believing with justification makes it more likely that you also know, *ceteris paribus*. In other words, if the analogy supports the rejection of anything it is of the idea that justification is valuable as a mere means to true belief, but not of the idea that justification is valuable independently of its conduciveness to any *other* epistemic good, such as knowledge. As such, DePaul’s line of reasoning does not go to show that justification is of non-instrumental epistemic value.

4.2 Justification as the goal of inquiry

At this point, a defender of the idea that justification is non-instrumentally valuable may push back by pointing out that we so far have been assuming that true belief is at least *a* fundamental epistemic value. On this point, consider Richard Feldman, who registers his skepticism of the idea that true belief is a goal of inquiry by way of the following hypothetical:

Imagine a person who makes an unreasonable and unreliable inference that happens to lead to a true belief on a particular occasion. It might be fortunate that he’s got this true belief, but I see nothing epistemologically meritorious about it.²³

²² DePaul and Grimm (2007, p. 504).

²³ Feldman (2002, p. 379).

And why is that? Because “epistemological success amounts to having justified cognitive attitudes,” which, in turn, “amounts to following one’s evidence.”²⁴ Consequently, “[t]o achieve epistemic value one must, *in each case*, follow one’s evidence.”²⁵

Clearly, the idea that there is *nothing* epistemically meritorious about (mere) true belief²⁶—that is, that believing truly is not even *a* goal of inquiry—runs contrary to any truth-monistic account of epistemic value.²⁷ Granted, few truth monists would deny that there is *something* epistemically lacking about the person in the scenario Feldman imagines. For example, reliabilists would deny that the person is justified. However, what is at issue here is whether there is anything of epistemic value about his epistemic situation, and that is where the truth monist parts company with Feldman.

What can be said in response to Feldman? First, notice what kind of argument he is *not* making: he is not making a pluralist argument to the effect that the truth monist cannot account for justified true belief being epistemically superior to unjustified true belief. If that were the argument, any of the replies suggested by truth monists to the so-called swamping problem would do.²⁸ Rather, Feldman is making an argument to the effect that both the truth monist *and* the value pluralist should give up on the idea that true belief is even *among* the epistemic goals. This despite the fact that denying that true belief is such a goal makes it hard to see what is epistemically valuable about justification, even on Feldman’s own theory—or so we intend to argue.

If true belief is not an epistemic goal, what makes justification epistemically valuable? As noted above, Feldman takes epistemic value to be a function of the extent to which we follow our evidence and, thereby, are justified in our beliefs. On one understanding of what it is to have evidence, something is evidence for something else if and only if the former is a reliable indicator of the latter.²⁹ That, however, is not how Feldman understands evidence. According to Feldman and his long-term partner in evidentialism, Earl Conee, evidence justifies in virtue of a certain *coherence* relation.³⁰ More specifically, a person’s (ultimate) evidence consists in a set of experiences, and sets of propositions are justified in so far as they

²⁴ Feldman (2002, p. 382).

²⁵ Feldman (2000, p. 685; emphasis added).

²⁶ What about (mere) *significant* true belief? Feldman is skeptical about significance being relevant to whether or not you have fulfilled your epistemic obligations (see Feldman 1988, p. 249). To Feldman, the question relevant to such obligations is the question of whether I should believe, disbelieve, or suspend judgment vis-à-vis *p*, given that I am pondering the question of whether *p*. As such, the question of significance does not factor into this picture.

²⁷ As such, there seems to have been a shift in Feldman’s views on epistemic value, from Feldman (1988, pp. 247–248), where he accepts that true belief is a goal of inquiry, and simply denies that true belief has anything to do with value, to Feldman (2002) where he denies that true belief has anything to do with epistemic value by denying that it is a goal of inquiry. See Ahlstrom-Vij (forthcoming) for further discussion.

²⁸ See, e.g., Goldman and Olsson (2009) for two proposed solutions. These responses would also apply to DePaul’s (1993, pp. 77–80) swamping objection to the idea of true belief as a goal of inquiry.

²⁹ See, e.g., Goldman (2011).

³⁰ See Conee and Feldman (2008).

are part of an explanation of those experiences that coheres with propositions asserting the presence of the experiences in question. Consequently, Feldman and Conee suggest that “it may be helpful to think of our view as a non-traditional version of coherentism.”³¹

Spelling out what it is to have evidence thus, however, significantly weakens Feldman’s case against the idea that true belief is a goal of inquiry. After all, we can imagine all kinds of coherent belief-sets that we hardly would want to characterize as justified, such as the belief-set of a paranoid yet perfectly coherent conspiracy theorist. Now, Feldman does not need to commit himself to the implausible idea that just *any* coherent belief-set is justified, of course. The problem is just that, if we divorce coherence from truth, it becomes really hard to see how to make the relevant discriminations between the kinds of coherence that make for justification and the kinds that do not. This very idea finds its expression, of course, in the widespread intuition that simply having your beliefs cohere with one another is valuable only to the extent that having your beliefs cohere thus is truth-conducive. Indeed, even one of the most prominent coherentists about justification, Laurence BonJour, holds that “any sort of justification which is not [...] truth-conducive would be simply irrelevant to the standpoint of cognition”³²—just like the truth monist would have it.

5 The objection from understanding

Perhaps we can identify another epistemic feature, aside from significance or justification, the epistemic value of which cannot so easily be reduced to that of true belief. Consider, for example, understanding. What is it to understand something? Needless to say, this question might not have one answer, since there might be many different senses of ‘understanding.’ However, all that is needed for truth monism to be in trouble is that there be at least one legitimate notion of understanding such that truth monism cannot account for its value. More specifically, consider the kind of understanding at issue when someone understands why the water in her teakettle started to boil. On one historically prominent answer, such understanding consists in knowledge of causes.³³ So, to understand why the water started to boil is to know something about the causal mechanisms underlying the transfer of kinetic energy from the stove to the water in the teakettle, the vaporization that occurs as a result, and so on.

Saying that the relevant kind of understanding is knowledge of the cause leaves it open what is the *object* of the relevant kind of knowledge. On what we may call *the propositional model*, the object of knowledge is a causal proposition.³⁴ In the case of the teakettle, for example, the proposition might be something to the effect *that kinetic energy transfers from the stove to the teakettle in such-and-such a way*,

³¹ Conee and Feldman (2008, p. 98).

³² BonJour (1985, p. 157). BonJour has since surrendered his coherentism, but not the idea that justification needs to be truth-conducive. See, e.g., BonJour and Sosa (2003, p. 6).

³³ See, e.g., Lipton (2004) and Lewis (1986).

³⁴ The term “the propositional model” is borrowed from Grimm (forthcoming).

giving rise to a process of vaporization in the water, etc. Given that this model, in effect, reduces understanding to something as familiar as propositional knowledge, it is perhaps no wonder that it also is the dominant model in the literature.³⁵ Moreover, if understanding just is a kind of (propositional) knowledge, and knowledge is (Gettier-proof) justified true belief, the value of understanding seems to fit neatly into the axiological framework of truth monism.

But the propositional model suffers from a problem. Consider an example from Duncan Pritchard: Suppose that your house burns down, and your son later asks the fire chief why it burned down. The chief tells him that the house burned down because of faulty wiring. In so far as your son accepts the testimony of the fire chief, and the fire chief is not only right in this particular case but also a reliable source on these kinds of matters, it seems reasonable to say that your son now *knows* the cause of the fire. But, Pritchard maintains, it seems wrong to say that your son *understands* why the house burned down: “He has no conception of how faulty wiring might cause a fire, so we could hardly imagine that knowing this much suffices to afford him understanding of why his house burned down.”³⁶ In other words, it seems that simply knowing the relevant causal propositions is not sufficient for understanding the cause.

What if we kept adding further causal propositions to the set of your son’s knowledge? Would there be a point at which we would say that your son not only *knows* this-or-that about the fire but actually *understands* why the house burned down? Say, for example, that your son keeps asking the fire-chief further questions and, thereby, learns a whole host of things about the mechanisms underlying the fire, as well as what outputs those mechanisms would have yielded, had the situation been different in a variety of ways. Would it then become reasonable to say that your son understands why your house burned down? Not necessarily. Someone who *merely* becomes justified in believing further true causal propositions may still lack something analogous to what Lewis Carroll suggested that the Tortoise lacked in his conversation with Achilles.³⁷ While the Tortoise failed to (as Carroll said) “see” that the conclusion of an instance of *modus ponens* followed from the premises, he was happy to “grant” a never-ending series of conditionals, to the effect that *if* the premises are true, the conclusion must be too. Similarly, someone who merely accepts this-or-that true proposition about the causal mechanisms responsible for the fire on the basis of testimony, fails to “see” something that is different in kind from such propositional knowledge, by failing to grasp how the causal elements underlying the fire are modally related.³⁸

In fact, we would like to take a step further and argue that grasping the relevant causal relationships may at least in some cases be *what gives rise to* propositional knowledge about such relationships. (The qualification “in at least some cases” is important, since we do not want to deny that the relevant propositions can be known

³⁵ Lewis (1986) is explicit about the object of the relevant kind of knowledge being a proposition, as is Kim (2010/1988).

³⁶ Pritchard (2010, p. 81).

³⁷ See Carroll (1895).

³⁸ This line of reasoning has been pursued independently by Georgi Gardiner.

independently of the relevant ability to grasp causal relations, e.g., in cases of testimonial knowledge about causes.) The argument for this claim has two steps. In the first step, it is argued that there *is* such a non-propositional grasp of causal relations. In the second step, it is argued that this grasp is at least in some cases what *explains* the possession of certain propositional knowledge.

As for the first step, consider a highly experienced fire investigator. On account of her long experience, she is able to walk through the scene of a fire after the fact, connect the causal dots, and make a reliably accurate judgment about the cause of the fire as a result. Moreover, in at least some fairly straightforward cases, she will also be able to explain her analysis to others. The same goes, of course, for her attentive apprentice, who has overheard her mentor give the relevant analysis at a previous occasion, and thereby knows the relevant propositions on the basis of testimony. What the apprentice will not be able to do (yet), however, but the experienced investigator will, is to read a complex fire scene, and generate an accurate judgment as to its cause. Moreover, the reason that the apprentice will not be able to do so is (among other things) that doing so requires something else entirely from belief (including *justified* belief) in a set of true propositions; it requires an ability to *grasp* certain causal dependencies between the variety of factors that went into the starting of the fire, even in cases where the relevant possibilities might be too complex to express propositionally.

Turn, now, to the second step of the argument. Imagine that the experienced fire investigator is trying to teach her apprentice how to identify the causes of fires. The investigator takes the apprentice to a couple of straightforward fire scenes, and starts to explain to the novice how certain features of the scene indicate that certain factors were present at the time of the fire, as well as how they contributed to the fire starting or spreading. Pretty soon, the novice will start to ask questions: “Why would this-or-that factor have this-or-that effect?” and so on. The investigator will do her best to answer the relevant questions with reference to the chemistry and physics of fires—radiation, conduction, proportioning, and so forth—but at some point the why-questions have to stop. Because when the why-questions have probed deep enough, the investigator is just going to have to resort to saying “Well, can’t you *see* that, if these factors are present, that’s what’s going to happen?”

It is at that point that the ability to grasp causal dependencies comes to the fore. This, however, is not to suggest that being able to diagnose the relevant fire scenes is necessary for understanding why the relevant house burned down. If anything, it is the other way around. More specifically, the ability to grasp the relevant dependencies can at least in some cases be expected to be what explains the possession of certain causal knowledge, such as the knowledge *that if these factors obtain, that’s what’s going to happen*—i.e., exactly the kind of knowledge that makes up the relevant diagnoses. And while it might sometimes be possible to know the relevant proposition without grasping the relevant relations (e.g., by knowing them on the basis of testimony, as in case of the apprentice), you need to grasp those relations in order to *understand* what will happen as a result of a variety of different factors obtaining. Moreover, it seems reasonable to assume that, in at least in some cases, the best explanation as for why you know certain causal proposition is that

you have grasped the relevant causal relations, and your propositional awareness derives from your ability to grasp those relations.

Someone might object that the phenomenon that we describe as “grasping” something might just as well be captured in terms of dispositional (propositional) belief.³⁹ “Sure,” the objection goes, “the fire investigator involved might not be able to express everything she is getting right in terms of a set of propositions, but it is still the case that, for every relevant proposition, she will be disposed to believe that proposition, if prompted by the relevant circumstances.” So, on this picture, what we refer to as “grasping” is really just to have a disposition to believe the relevant propositions in the appropriate circumstances. But it seems that there is something lacking in this picture. One way to pinpoint what is lacking is by noting that it turns understanding into something that looks too much like perception. In the case of perception, it does not seem particularly implausible to say that it is all a matter of being disposed to believe certain things on the basis of certain stimuli. However, in light of the above examples, it seems that understanding is more analogous to the way in which some rationalists think of a priori insight than to perception.⁴⁰ In the former case, but less obviously in the latter, it seems that there is some grasping involved prior to—or, at the very least, independently of—the formation of any (propositional) beliefs, and that the subject, in virtue of such grasping, can get things right in a manner that cannot in every instance be captured in propositional terms.

By way of recapitulation, to understand the cause of something, it is not sufficient to know a set of causal propositions. Indeed, knowing such a set of causal propositions might not even be *necessary* for understanding. What is needed is a grasp of the relevant dependency relations. Moreover, the kind of grasp involved in understanding causal relations in at least some cases appears to be non-propositional, as evidenced by the fact that there are situations in which it would be very hard, if not impossible, to cash out what is grasped in propositional terms. Consequently, it becomes untenable for the truth monist to hold that the value of understanding in all cases can be explained in terms of the value of true (propositional) belief, via the instrumental value of justification and knowledge. This is not to maintain that there is no notion of understanding that the truth monist cannot account for—again, the notion of understanding as concerned with causes is only one notion of understanding. It is, however, to suggest that there is a notion of understanding that the truth monist cannot account for, and a fairly important notion at that. Consequently, it seems the truth monist has finally encountered a genuine problem. In the next section, we suggest a way to solve this problem by revising truth monism.

6 Accuracy monism

It was suggested in the previous section that to understand the cause of something is to grasp the relevant dependency relations. At the same time, we also saw that there

³⁹ Thanks to Duncan Pritchard for raising this objection.

⁴⁰ See, e.g., BonJour (2005).

are scenarios wherein the relevant propositional knowledge and true beliefs are either absent or derivative of the relevant ability, as in the case of the experienced fire investigator that grasps a highly complicated causal web at the scene of a fire. However, we are still going to want to say that there is a sense in which the investigator is “getting it right” when grasping the relevant dependency relations; in such cases, her grasping is in an important sense *accurate*. Moreover, we submit that it is not only reasonable to say that she can get it right thus in cases when that which is grasped is so complex that it is not accompanied by any propositional beliefs, i.e., in the *absence* of propositional beliefs, but also in cases where the propositional beliefs are a result of the relevant grasp, i.e., *independently* of propositional beliefs.

The axiological picture that emerges from acknowledging such ways of “getting it right” is one where accuracy is the genus of a variety of species, including believing truly and grasping dependency relations. Moreover, by thinking about epistemic axiology as being concerned with accuracy more generally, as opposed to with any species in particular, we might formulate an axiological position that carries more combined promise on three desiderata, as compared to traditional truth monism and epistemic value pluralism. The three desiderata are as follows:

- (A) That the position be *axiologically parsimonious*.
- (B) That the position accounts for prevalent *pluralistic intuitions*.
- (C) That the position accounts for prevalent *monistic intuitions*.

A clarification to allay misunderstanding: When we talk about prevalent pluralistic or monistic intuitions, we do not so much mean to describe the *content* of the intuitions in question, as we mean to simply refer to intuitive judgments that tend to be invoked in support of either pluralistic or monistic axiological frameworks and, as such, have come to play a certain dialectical role in the relevant discussions.

6.1 Axiological parsimony

Let us start with (A). For a theory to be axiologically parsimonious is for it to postulate a small number of fundamental values. The idea that axiological parsimony is a desideratum can in turn be motivated with reference to the more general thesis that we should prefer ontologies with fewer rather than more existential commitments, *ceteris paribus*.⁴¹ Truth monism is, of course, axiologically parsimonious, in that it postulates only one fundamental epistemic value, namely true belief. As such, it fares well with respect to (A). The same goes for accuracy monism, which also postulates only one fundamental epistemic value, namely accuracy. Since epistemic value pluralism postulates several fundamental epistemic values, it is less axiologically parsimonious than both truth monism and accuracy monism.

It might be argued, however, that accuracy monism is just axiological pluralism in disguise. After all, accuracy monism holds that there are several *ways* of getting it

⁴¹ Invoking this principle does not commit us to taking simplicity to be of fundamental epistemic value, as opposed to of instrumental epistemic value, or non-epistemic value (e.g., simplicity brings tractability, which is practically valuable). However, see Sober (2001) for a skeptical take on the possibility of understanding the value of simplicity in terms of other values.

right. But keep in mind that all the ways in which we may get it right are mere *species* of accuracy, and that postulating a multitude of species of a genus does not necessarily give you pluralism. An analogy might be helpful here: If the functionalist about the mental is right, there is a plurality of ways in which a creature can instantiate the higher-level property of having a mind, despite there only being one substance, i.e., matter. However, acknowledging a plurality of instantiation thus would in no way generate anything resembling Cartesian dualism, i.e., a pluralism on which there are two separate *substances*: mind and matter. Consequently, if the functionalist's allowance for there being several ways to instantiate the property of having a mind at all can be referred to as "pluralist," it is *not* a kind of pluralism that the dualist would find at all tempting. After all, the functionalist's universe world still lack one of the two properties that the dualist set out to define in the first place, namely mind, as manifested in the relevant intellectual substance.

What we would like to suggest is that there is an analogous difference between the *plurality of species* generated by accuracy monism, and axiological *pluralism*. The accuracy monist takes the multitude of species of accuracy to merely consist in a multitude of ways of instantiating the higher-level property of getting it right, in much the same way that the functionalist about the mental takes there to be many ways to instantiate the property of having a mind. And in both cases, the relevant multitude does not generate any interesting form of pluralism, as understood by traditional opponents to the relevant kind of monism. In the domain of the mental, the relevant kind of pluralism is one that postulates a multitude of substance genera. In the domain of the epistemic, the relevant kind of pluralism is one that postulates a multitude of genera of epistemic success, as in the case of the axiological pluralist who holds that knowledge, wisdom, understanding, and so forth are all fundamental epistemic values, in virtue of each designating a different axiological genus.⁴²

6.2 Accounting for pluralistic intuitions

The pluralist may grant that axiological parsimony is a good thing, of course, while arguing that the monist is simply postulating *too few* fundamental epistemic values. This brings us to (B), i.e., the desideratum of doing justice to prevalent pluralistic intuitions. One relevant intuition is that not all epistemic values are reducible to that of true belief. The accuracy monist honors this intuition by holding that true belief only is a species of accuracy, and that the value of any other species cannot be reduced to that of true belief. To illustrate, return to the grasping involved in understanding, as discussed in Sect. 5. The very argument for postulating a separate species of accuracy, in addition to that of true belief, was exactly that the value of getting it right in matters of understanding cannot be reduced to that of true belief. By contrast, we saw in Sect. 4 that we can reduce the value of justification to that of true belief, suggesting that we in that particular case are not dealing with two

⁴² One nice implication of species pluralism being compatible with axiological monism in the manner outlined here is that it makes sense of a position like that of Michael Lynch, who is both attracted to (albeit not necessarily committed to) truth monism and a defender of a functionalist pluralism about truth. See, e.g., Lynch (forthcoming).

independent species, but rather with a single species (i.e., true belief) and a relation of conduciveness.

The accuracy monist also honors the pluralistic intuition that there are several epistemic goods, neither of which is reducible to any further, more fundamental good. To see why, note two things. First, species *themselves* are not reducible to (as opposed to subsumable under) their genera. By way of illustration, suppose that *being faithful to one's spouse* and *being supportive of one's spouse in his/her pursuits* are two ways—or species, if you will—of *being a good spouse*. Even so, what it is to (say) be faithful to one's spouse is not reducible to what it is to be a good spouse. One being reducible to the other would be for the two to be identical, which they are not since they do not share all their properties. Second, the *value* of a species of accuracy is not reducible to that of accuracy, for the simple reason that the genus itself has no value over and above the value of its species. For example, being a good spouse has no value over and above instantiating one or several *ways* in which one may be a good spouse, e.g., by being faithful or supportive. Maintaining otherwise would make for axiological double-counting.

6.3 Accounting for monistic intuitions

In all of these respects, accuracy monism acknowledges plurality where the truth monist does not. At the same time, accuracy monism also brings to the table *unification*, given that all epistemic values are subsumable under (again, without being reduced to) the genus of accuracy. This brings us to (C), i.e., the desideratum of doing justice to prevalent monistic intuitions. Here, we need to consider the fact that the pluralist also can say something unifying, to the effect that all epistemic values constitute *cognitive successes*, to borrow a term from Jonathan Kvanvig:

One's first inclination should be to maintain that each independent kind of cognitive success within the purview of epistemology identifies a cognitive goal in its own right. From this viewpoint, epistemic goals include knowledge, understanding, wisdom, rationality, justification, sense-making, and empirically adequate theories in addition to getting to the truth and avoiding error. Once we have seen the variety of cognitive successes, the proper answer would seem to be that the class of epistemic goods is manifold, as wide as the class of cognitive successes.⁴³

The problem for Kvanvig's picture is a problem facing any highly inclusive axiology, namely that it is ill equipped to answer the question why *these* particular things—e.g., knowledge, understanding, justification, etc.—belong on the list of goods, while other things do not. For example, why does psychological comfort not belong on the list? Clearly, it cannot be ruled out on account of being instrumentally disconnected from believing truly (as the truth monist would have it). Nor can it be ruled out on account of being instrumentally disconnected from any *other* item on the list of cognitive successes, since none of the other items are required to be connected thus. And it seems somewhat arbitrary to simply maintain that

⁴³ Kvanvig (2005, p. 287).

psychological comfort does not qualify as a form of cognitive success, given the vague and open-ended character of the latter.

It might be objected that our genus of accuracy is no less vague than Kvanvig's category of cognitive success. But notice that the two notions play very different theoretical roles in our respective axiological frameworks. Again, for Kvanvig, our first inclination should be "to maintain that each independent kind of cognitive success within the purview of epistemology identifies a cognitive goal in its own right."⁴⁴ Consequently, the only thing that stands in the way of including unorthodox cognitive goals is our intuitions about what constitutes cognitive success. This is why the open-ended character of the latter presents a problem. On our picture, however, our first inclination should *not* be to take each "cognitive success" to correspond to a cognitive goal in its own right. Rather, in accordance with (A), what we should do is postulate as few cognitive goals as possible, and then infer all other values from such a minimal set of goals. This is not to beg the question against the pluralist, who may still argue that a set of one is not enough. It is simply to honor the reasonable intuition that non-instrumental value is not something we bestow upon value-bearers for free; it is a title they have to earn from doing explanatory work (e.g., by explaining the value of all things conducive to or constituted by it).

In other words, on our picture, the role of the notion of accuracy is not to admit or dismiss candidates for epistemic goals. Whether a novel epistemic goal is admitted is a matter of whether the goals already postulated can account for all the relevant values. If not, the sufficiency of the goals already postulated may be re-evaluated. This might or might not lead to pluralism, however. For example, what we argued in §5 gives us reason to re-evaluate the sufficiency of the goals postulated by the truth monist. But rather than motivating pluralism, the objection from understanding—taken together with aforementioned desiderata—motivates what we have referred to as accuracy monism. After all, it is a benefit of the latter that it not only speaks to (A) and (B), but also is congenial to the monistic intuitions that all values can be referred back to one thing, and thereby also honors (C). The mistake of the truth monist was simply to account for this intuition exclusively in terms of instrumental connections, while ignoring the possibility that it in some very crucial cases is better understood as a matter of subsuming a multitude of species under a unifying genus. And that is where the notion of accuracy enters; not as an initial gate-keeper for epistemic goals, but as a concluding explanatory postulation of a more general phenomenon, providing a genus for all the epistemic values that we end up with when trying to account for the domain of epistemic value in terms of a limited number of goals.

To sum up, if what we have argued is on point, accuracy monism is equally good or better than truth monism and value pluralism on each of the three desiderata. With respect to axiological parsimony, accuracy monism is equally good as truth monism and better than pluralism. With respect to doing justice to prevalent pluralistic intuitions, accuracy monism is equally if not better than truth monism, and equally good as value pluralism. With respect to accounting for prevalent monistic intuitions, and in particular the intuition that all epistemic goods can be referred back to a single

⁴⁴ Kvanvig (2005, p. 287).

epistemic goal, accuracy monism is equally good as truth monism and better than value pluralism. In other words, accuracy monism *dominates* both truth monism and value pluralism with respect to the relevant desiderata.

7 Conclusion

In the above, we considered three objections to truth monism, in terms of significance, justification, and understanding, respectively. We then argued that, while the truth monist has plausible responses to the first two objections, the third objection suggests that truth monism should be reformulated. On this reformulation, which we referred to as *accuracy monism*, the fundamental epistemic goal is *accuracy*, where accuracy is a matter of “getting it right.” The idea then developed was that accuracy is a *genus* with several *species*. Believing truly is a prominent species, but it is not the only one. Finally, it was argued that accuracy monism is equally good or better than both traditional truth monism and its main dialectical rival, value pluralism, when it comes to satisfying three important axiological desiderata.

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