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# Veritism, Naturalness, and Epistemic Significance

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**Abstract:** A particularly influential thesis about epistemic axiology is veritism: that true belief is the only basic, or fully non-derivative, epistemic value. One recent argument against veritism claims that the naturalness or joint-carvingness of beliefs is also a basic epistemic value. The basic epistemic value of naturalness is held to explain intuitions that true, natural beliefs have greater epistemic value than similar but unnatural beliefs. I argue that epistemic significance, rather than naturalness, can best explain any variations in the value of natural versus unnatural beliefs. Against claims that significance itself undermines veritism, I defend an account of significance that explains why the epistemic value of significance derives entirely from the value of truth. The account also shows how significance can be grounded in multiple features, while still deriving all its value from that of truth. As a result, the epistemic value of natural beliefs offers little reason to abandon veritism, in the absence of stronger arguments favoring the basic epistemic value of naturalness.

## 1. Veritism and Epistemic Value

**1.1** It's typical to distinguish *epistemic* value from other kinds of value. On a common heuristic, epistemic value is the value belief has in virtue of corresponding to the world, or accurately representing it (Pritchard 2014; Sylvan 2018; Finocchiaro 2022). It's this correspondence that is often taken as the "mark" of epistemic value, setting apart epistemic value from other kinds of value. So my belief that the table is made of molecules has epistemic value in virtue of corresponding to the world, or accurately representing how things are. For the table is in fact made of molecules.

The nature of this correspondence may sometimes be left open-ended. But it's intuitive to think that this correspondence is about truth, insofar as true belief is what correctly represents the world. For if epistemic value is concerned with a correspondence between world and belief, and truth is sufficient to capture this correspondence, then epistemic value may (just) be about truth. Such reasoning may suggest that true belief is the only *basic* epistemic value.<sup>1</sup>

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<sup>1</sup> For defenses of this view, see Goldman (1999, 2001, 2015); Pritchard (2014, 2016a,b); and Sylvan (2018, 2020).

Sources of value are basic just insofar as they ground value but don't derive their own value from any other source of value.<sup>2</sup>

If true belief were the *only* basic epistemic value, it would thus be the value from which all other epistemic values derive their value. The value of true belief would thereby explain the value of all other epistemically valuable features. Call this view *veritism* (Goldman 1999, 2015; Pritchard 2016b). If veritism were true, then knowledge, for example, would be epistemically valuable in virtue of bearing some relation to the truth. (Maybe knowledge would be partly constituted by truth). Accordingly, veritism doesn't mean there are no epistemic values other than true belief. Knowledge, understanding, and compliance with evidence all may be epistemic values, even if veritism is true. Indeed they may all be epistemically valuable *because* veritism is true. For they may derive their value from the value of truth. Many of us may intuit that truth is really "at the bottom of it all," as Sylvan (2018, 381) puts it.

Veritism has a variety of advantages, in addition to its intuitiveness. For one thing, it offers greater parsimony, insofar as it posits fewer basic epistemic values. Indeed, basic values may function as unexplained explainers, and unexplained explainers may be especially costly. There may also be an attractive theoretical unity to veritism. One might think a theory (like veritism) that explains everything in a domain in terms of a single thing is, *ceteris paribus*, to be preferred over one that does not (Sider 2011; Kriegel 2013).

Of course, there have been many challenges to veritism. Some argue for alternative or additional basic epistemic values, such as: understanding (Ahlstrom-Vij and Grimm 2013), knowledge (e.g. Williamson 2000; Littlejohn 2018), and even epistemic significance (DePaul 2001). There's also the classic swamping problem, according to which veritism ostensibly undermines our intuitions about the special value of knowledge.<sup>3</sup> Of course, veritists have re-

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<sup>2</sup> See, for example, Anderson (1993); Hurka (1998, 2001); and Sylvan (2018, 2020), for further discussion of basic value and its distinction from other types of value, including *final* value. Roughly speaking, final value is the value that something has independently of any further value it may *cause* or *promote*; so a feature could be finally valuable but not basically valuable, if that feature derived its value from a non-causal or constitutive relation to a basic source of value.

<sup>3</sup> Very roughly, the idea is that if true belief were the only basic epistemic value, then knowledge and other epistemic goods would not add any value independently of any further true belief they promote, so knowledge is not

sponded to all these objections, often by showing how features that ostensibly threaten veritism—e.g. knowledge, or significance—owe their value to their relation to the truth.<sup>4</sup>

**1.2** Nevertheless, there's a challenge to the hegemony of truth that has gone largely unanswered by veritists. That may be because the challenge comes from recent metaphysics rather than epistemology. The challenge is based on the intuition that being natural or joint-carving is necessary, in addition to truth, for beliefs to correctly represent the world. While *naturalness* is difficult to precisify, for Lewis (1983, 1984) any property can be ranked according to its naturalness. The highly or perfectly natural properties are those which play a privileged role in grounding objective similarities, providing the semantic values of terms, and determining the content of laws of nature. To use Sider's (2011) locution, natural features are those which get at the objective *structure* of reality.

Compare, for example, the property of *being helium* with that of *being hydrium*. (Say that something is hydrium iff it's either hydrogen on or before 1 January 2016 or helium after 1 January 2016 (Hazlett 2017, 175)). It may seem that it's better to *believe* that a helium atom is helium than that it's hydrium, even though both beliefs are (now) true. And an intuitive explanation of this is that *being helium* is more natural than *being hydrium*.

Sider (2011, 61-63), in particular, makes a number of strong claims about the epistemic value of naturalness or structure. Assuming the world has joints, or an objective structure, Sider wants to say that accurate belief involves capturing this structure. And so insofar as belief aims to accurately represent the world, belief should aim to capture nature's joints, in addition to being true.

Accordingly, it's "better to think and speak in joint-carving terms...[and] worse to employ non-joint-carving concepts" (Sider 2011, 61; Hawthorne and Dorr 2013). Indeed, Sider says that naturalness is a basic epistemic value, "not derivable from other values" (Sider 2011, 62; Finocchiaro 2022). And veritism claims that truth is the only basic epistemic value. So if

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intrinsically any better than true belief (Zagzebski 1996; Pritchard 2011). Yet it may seem as if knowledge is intrinsically better than true belief; so, assuming the swamping problem can't be dissolved, veritism would be false.  
<sup>4</sup> See, for example, Treanor (2013, 2014); Pritchard et al (2010); Pritchard (2011, 2014); Sylvan (2018, 2020); Hu (2017).

Sider were right, veritism would be false. There would then be two basic epistemic values: truth and naturalness. Truth and naturalness would be on a kind of par, insofar as neither would derive its value from the other.

I'll argue, however, that we should reject the basic epistemic value of naturalness, and remain veritists. §2 explains the motivations for taking naturalness to be a basic epistemic value. §3 discusses why the ostensible disvalue of false but natural belief fails to show that naturalness isn't a basic epistemic value. §4 presents the argument *against* the basic value of naturalness. Namely, epistemic significance does better than naturalness in explaining variations in the epistemic value of belief (including natural vs unnatural belief), while also preserving the parsimony and unity of veritism. §5 develops a model of significance that explains the relation between significance and truth, while explaining why significance can derive its value from the value of truth even if significance has multiple grounds. §6 explains in detail why significance isn't itself a basic epistemic value. §7 then extends the account of significance to cases of grue-like and disjunctive beliefs, which were part of the motivation for taking naturalness to be basically epistemically valuable.

## 2. Naturalness and Basic Epistemic Value

**2.1** My goal here is to argue for veritism and against the basic epistemic value of naturalness. But we should first consider the case *in favor of* taking naturalness to have basic epistemic value, so that we know what we're measuring our counterarguments against.

The obvious approach here is to start with intuitions about epistemic value in cases of natural versus unnatural beliefs. Such intuitions can then be enlisted as part of an abductive argument for the basic epistemic value of naturalness. Consider:

- (1) That emerald is green
- (2) That emerald is green OR a penguin

(1) is natural and (2) is not. Belief in (1) also seems to me to be more epistemically valuable than belief in (2). This intuition may be explainable through our heuristic for epistemic value—that epistemic value is about accurate representation, or getting things right. For (2)

may seem to get things right in a way that (1) does not, independently of any further true beliefs that might follow more easily from (1) than from (2).

Say that one belief or proposition is the *unnatural counterpart* of another if the former is the same as the latter except for referring to an additional unnatural feature, or to a feature that reduces the naturalness of the resulting proposition. For example, even if *being an atom* is natural, the claim that something is green or is an atom is less natural than the claim that something is green—assuming that disjunctiveness reduces naturalness. (This assumption isn't wholly uncontroversial, but it is accepted by Lewis (1984), and we needn't dispute it here).

Consider also:

(3) Those atoms are helium

(4) Those atoms are hydrium

I think the difference in epistemic value between (3) versus (4) is analogous to that in (1) versus (2). In any case, those who share Sider's (2011) intuitions would claim that a natural belief is more epistemically valuable than its unnatural counterpart. And both (1) versus (2) and (3) versus (4) involve comparison of a belief with an unnatural counterpart.

One might object, however, that these intuitions aren't even about epistemic value, or the value related to belief. Perhaps they're instead about *zetetic* value, or the value related to inquiry (Friedman 2020; Thorstad 2021). Perhaps, that is, (1) and (3) are more valuable than (2) and (4), but only insofar as they lead to more successful inquiry—and not insofar as they're more accurate bases for belief.

While the epistemic and zetetic might sometimes conflict, however, it's not clear why they should do so here. Sider (2011), for one, endorses both epistemic and zetetic value claims. On a Sider-style explanation, (1) and (3) would be more epistemically valuable than (2) and (4) insofar as (1) and (3) are more natural than (2) and (4), and insofar as both naturalness and truth are important for accurately representing the world's structure (Sider 2011, 65). But (1) and (3) would also be more zetetically valuable, insofar as they might better fulfill a rational

theorizer's goals (such as adding to scientific knowledge). In any case, I'll focus here on epistemic value, since I'm concerned primarily with the accuracy of belief rather than fulfilling goals of inquiry.

**2.2** To assess whether naturalness has basic epistemic value, however, we first need to distinguish two kinds of claims. Indeed, Sider's claim about the basic value of naturalness is *explanatory*. It seeks to explain the value of natural beliefs by saying that their value comes not only from being true, but also from being natural. But that claim is distinct from the claim that natural beliefs are more valuable than similar but unnatural beliefs. The latter claim is *extensional*: it doesn't say that natural beliefs are more valuable because they are natural. It doesn't in fact provide any explanation for why natural beliefs may have additional value. To be more precise, we can say:

**Extensional Value of Natural Belief (EVN):** In *typical* cases, a true, natural belief is more epistemically valuable than its true, unnatural counterpart

The *explanatory* claim, by contrast, would be something like:

**Basic Value of Naturalness (BVN):** EVN is true *in virtue of* naturalness being a *basic* epistemic value

Of course, EVN requires some unpacking. First, EVN is framed more weakly than Sider might prefer. Sider would want to say that true, natural beliefs are necessarily—not just typically—more epistemically valuable than their unnatural counterparts. But the clearest way to get to this claim of necessity would be to endorse BVN. I'd like to examine the argument for BVN, rather than assuming it. So I think EVN is best framed for now in a weak form.

Secondly, there's the question of what a "single unnatural feature" means. Unnatural features are often distinguished from natural features by being bizarrely gerrymandered, or by having some arbitrary disjunct. The property of *being green OR a penguin* and the property of *being hydrium* are variations on stock examples of unnatural features. But exactly what counts as gerrymandering or arbitrariness may in turn depend on how one understands natural properties. And there is substantial disagreement on how best to construe naturalness. On one

view, natural properties are part of our “best scientific conception” of the world (Schaffer 2004). Some, however, may object that this excludes normative properties, which should also count as joint-carving (e.g. McPherson 2015; McDaniel 2017). In any case, we might hazard a few weaker claims, consistent with most extant accounts of naturalness: that (1) properties of artifacts and socially constructed entities are often less natural than those that are discovered by natural sciences such as physics, chemistry, and biology; that (2) more fundamental properties, like *being an electron*, are natural (even if some less fundamental properties are also natural);<sup>5</sup> and that (3) features that may seem redundant or unnecessary for representing the world, especially from the standpoint of science, would likely count as less natural. Of course, even these claims may not be uncontroversial. (1) in particular may be controversial; some might want to say that the properties posited by psychology and economics are no less natural or fundamental than those posited by physics and chemistry. Nonetheless, proponents of naturalness such as Lewis (1983) and especially Sider (2011) do tend to accept something like (1). In any case, (1) isn’t essential to the argument here.

This may still seem rather vague. But uncertainty or imprecision about what counts as an unnatural feature may be yet another reason to frame EVN more weakly, as a claim about what’s typical rather than what’s universal or necessary. If we don’t know all the criteria for naturalness, examples of natural versus unnatural beliefs may be insufficient to show that *every* natural belief is necessarily more epistemically valuable than its unnatural counterpart. For we might be missing some type of unnatural belief in our examples. As I explain in §3.1, however, the weaker framing of EVN may not undermine the argument for BVN, given the nature of basic value.

So how then do we get from EVN to BVN? The most obvious approach is abductive—that the *best* explanation for EVN is that naturalness is a basic epistemic value. That would explain why a natural belief is more valuable than its unnatural counterpart. For the (natural)

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<sup>5</sup> Lewis (1986, 60) and Sider (2011) understand naturalness (roughly) along the lines of fundamentality, where the most fundamental properties are the most natural. Still, one might think being a biological kind isn’t necessarily less natural than being a chemical or physical kind, even if physical kinds are more fundamental.

belief would derive value from an additional source of value that the unnatural one does not—namely, naturalness!

### 3. False Belief and the Value of Naturalness

**3.1** Nonetheless, there's one obvious class of putative counterexamples to BVN: cases of false but natural belief (see e.g. Dorr and Hawthorne 2013, 36). I want to examine such cases in detail. Whether cases of false but natural belief really do constitute counterexamples depends on the plausibility of certain principles of value aggregation—and given such principles, I'll argue that such cases *aren't* counterexamples to BVN. At least, an additional argument is needed to reject BVN—an argument that requires an extended defense, which in turn motivates my discussion of a positive alternative to BVN in §4.

So let's first examine why cases of false but natural belief might be thought to pose a problem for BVN. Consider:

(5) That emerald is red

(6) That emerald is red OR a penguin

(5) is natural and (6) is not, or at least (5) is more natural than (6). Nevertheless, both (5) and (6) are inaccurate, or get things wrong. The emerald isn't red; it's green! And recall that our heuristic for epistemic value is that of accuracy, or getting things right, or correspondence to the world. Beliefs that get things wrong may thus have epistemic *disvalue*, or negative epistemic value—and a false belief necessarily gets things wrong.

Of course, some false beliefs could have positive *instrumental* epistemic value, insofar as they might promote or cause true beliefs. But one might still think the *final* epistemic value of false belief—the value that a belief has independently of what further beliefs it promotes—would be negative, given that false beliefs necessarily fail to correspond correctly to the world. And it's final value I'm concerned with here.<sup>6</sup>

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<sup>6</sup> What then is the relation between basic and final value? At least in my discussion, the sources of basic value tend to be properties such as *being true* or *being happy*, whereas things like beliefs or lives tend to be finally valuable to the extent they instantiate such properties. To be precise, a feature that is basically valuable does not derive its value from any other source, whereas a feature that's finally valuable *could* derive its value from



If that's so, false but *natural* beliefs may also have epistemic disvalue, just as false but unnatural beliefs do. After all, false beliefs would still fail to correspond to reality even if they were natural. (As I discuss in §3.2, however, naturalness might still reduce the disvalue of false belief). This may seem like a problem for one who claims that naturalness itself is a non-derivative source of epistemic value. Indeed, sources of value typically add value to their bearers. A life is more valuable in virtue of being happy; a belief is more valuable in virtue of being true. Accordingly, if naturalness were a source of epistemic value, one might think a natural belief would also have some value in virtue of being natural.

Accordingly, one might argue the following against BVN:

- (i) For any basic value *V*, if any *x* has *V*, then *V* *always* adds value to *x*
- (ii) If naturalness were a basic epistemic value, naturalness would always add epistemic value to false but natural beliefs
- (iii) *Not*: Naturalness always adds epistemic value to false but natural beliefs
- (iv) Therefore naturalness isn't a basic epistemic value

In this case, however, it's not clear that (i) is true. That is, there may be some basic sources of value that fail to add value under certain conditions, or may only add value when co-instantiated with other sources of value. Consider, for example, the case of taking pleasure in pain. Pleasure is plausibly a source of value; indeed it may be a basic value. But taking pleasure in pain may not only fail to be non-derivatively valuable, but may even be non-derivatively *disvaluable*, or plain bad—at least on one not-implausible view of value aggregation (Korsgaard 1983; Kagan 1998; Hurka 1998). And no amount of pleasure at pain may be sufficient for there to be positive value—indeed, it may only create further disvalue. Yet pleasure may still be a basic value, insofar as pleasure plausibly can, under most conditions, add value even independently of its further consequences.

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a non-causal, constitutive or instantiation relation to a basic source of value. (Of course, basic values like truth are also finally valuable). A feature that's instrumentally valuable, by contrast, derives its value from a causal or promotional relation to another source of value.

Moreover, with respect to epistemic value in particular, one might consider examples of trivial truths. It's not unusual—though not uncontroversial—to think that trivial truths may not have any (non-instrumental) epistemic value at all (Pritchard 2014). Take, for example, claims like:

(7) These two pebbles are 3 cm apart (see Treanor 2013, 2014)

(8) The underside of my chair has a microscopic speck of dirt

One might think that trivial truths like (7) and (8) have very little, rather than zero, epistemic value. But then there would be some amount of trivial truths that might, taken together, carry greater value than a much more interesting truth. (At least, this would be the case on standard summative views of value aggregation). That might seem implausible. And in any case, for premise (i) to be true, there couldn't be a single case in which a trivial truth failed to add value to a belief. It seems like a tall order to argue there isn't some such case.

**3.2** So basic sources of value may not always add value to things. But one might try to weaken the claim by replacing the *always* with *sometimes*. Namely:

(i) For any basic value  $V$ , if any  $x$  has  $V$ ,  $V$  *sometimes* adds value to  $x$

(ii) If naturalness were a basic epistemic value, it would sometimes add (epistemic) value to false but natural beliefs

(iii) *Not*: Naturalness sometimes adds epistemic value to false but natural beliefs

(iv) Therefore naturalness isn't a basic value

Premise (ii) of this argument follows from (i), and (i) seems very plausible to me, given the weakness of its claim. So we might focus on (iii). (iii) may seem true, insofar as one might think that false beliefs *necessarily* have *negative* epistemic value, or are disvaluable. But (iii) doesn't follow from the latter claim.

Indeed, even if both natural and unnatural false beliefs necessarily had negative basic value, that wouldn't mean naturalness couldn't sometimes add value. For one might concede, *arguendo*, that false natural beliefs would have negative epistemic value, while holding that the naturalness of a belief could *reduce disvalue* (and thus add value below a certain threshold).

Thus a false natural belief might sometimes be less disvaluable, or carry less negative value, than its false unnatural counterpart. And that may be because false but natural beliefs get things less seriously wrong than their unnatural counterparts, even if they still get them wrong.

Perhaps, then, it's not implausible that premise (iii) is false—and that the argument is therefore unsound. If that were so, then BVN might be defensible after all. Indeed, the proponent of BVN might draw on examples such as:

(9) Atoms are the most basic physical particles

(10) Atoms OR phlogistons are the most basic physical particles

(11) Corpuscles are the most basic physical particles

(9)-(11) are all false, assuming the truth of contemporary physics. But one might still think that (9)—which is more natural than either (10) or (11)—gets things less wrong than either (10) or (11). At least, this may seem plausible for those who have more of a scientific realist worldview, or related intuitions. In that case, belief in (9) might plausibly have less epistemic disvalue than belief in either (10) or in (11)—even if belief in (9) is epistemically disvaluable (or equivalently, has negative epistemic value). The proponent of BVN could take such intuitions to provide support for the idea that naturalness can sometimes add epistemic value to false beliefs.

Still, it's not clear that any difference in value between belief in (9) versus (11) *must* be explained by taking naturalness to be a basic epistemic value. There are other explanations for why belief in (9) could be less disvaluable than belief in (11). Perhaps, for example, (9) is *closer* to the truth than (11), on some measure of closeness to the truth or truthlikeness (Oddie 2008; Niiniluoto 2011). And perhaps closeness or likeness to the truth adds epistemic value in virtue of being a non-instrumental or non-causal relation to the truth (see 2.2).

But why think that closeness to the truth, rather than naturalness, explains these differences in the value of beliefs? That is, what principled reason do we have to choose one explanans rather than the other? Well, we might prefer to take closeness to the truth as the

explanans—in lieu of taking naturalness to have basic epistemic value—in order to preserve veritism. But this would require that we be able to defend veritism, which would in turn require that if EVN is true (as I assume it is), we’d need to find an explanation for EVN that would be consistent with veritism. We’d also need to explain why BVN would be inconsistent with veritism, and why veritism is so important in the first place.

#### 4. Naturalness Versus Significance

**4.1** Accordingly, to undermine BVN, I suggest we provide a positive alternative to BVN, one that’s consistent with veritism. The strategy would be to show that naturalness is explanatorily redundant vis-à-vis epistemic value, because there are other, better explanations of differences in epistemic value. Perhaps, that is, it’s some other feature, distinct from but often coextensive with naturalness, that typically explains the greater value of natural beliefs over unnatural ones. (As I explain in §4.2, I take this other feature to be epistemic significance).<sup>7</sup>

We can then argue that such an alternative is better than BVN because the alternative not only offers more plausible responses to cases, but is consistent with veritism. And veritism gives us the most theoretically advantageous epistemic axiology. Indeed, recall the motivations for veritism (see §1). Epistemic value is typically understood to be about accuracy or “correspondence” to reality. Intuitively, at least, truth seems like the obvious candidate to capture this correspondence. And there’s also a more theoretical point: that parsimony and explanatory unity are virtues of our theorizing. Truth, if it were the *sole* basic epistemic value, would be the one value from which all other epistemic values derive. But if naturalness were also a basic epistemic value, then some sources of epistemic value would derive their value from naturalness, and others from truth, and others from both. This would provide a more fractured and disunified axiology.

And there’s also the question of parsimony. Even if one thinks parsimony is sometimes overemphasized, there may be an especially high cost to positing additional basic sources of

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<sup>7</sup> See Treanor (2013, 2018); Joyce (2009); Finocchiaro (2022).

value, because there may be an especially high cost to making unexplained posits in an ontology. And the value of basic sources of value may be unexplained or ungrounded. (After all, basic sources of value don't derive their value from any other source of value). We may be warranted in positing such basic sources of value, then, just insofar as it's necessary to explain the value of *other* sources of value. Accordingly, one might think that veritistic explanations of differences in epistemic value would, *ceteris paribus*, have an advantage over BVN.

Let's say, then, that *natural-value* cases are cases in which a natural belief is contrasted with an unnatural belief, *and* in which it's intuitively plausible that the natural belief has greater epistemic value than the unnatural one. Natural-value cases include the cases falling under EVN, but have a wider scope, since EVN only applies to differences in value between very similar natural and unnatural beliefs. Accordingly, the opponent of BVN can argue:

- (i) There's no class of natural-value cases that BVN is necessary to explain
- (ii) BVN carries more theoretical costs than alternative explanations, consistent with veritism, of natural-value cases, with little if any corresponding theoretical benefit.

If (i) and (ii) or correct, then it's plausible that:

- (iii) Taking naturalness to be a basic epistemic value isn't the best explanation of natural-value cases
- (iv) If taking naturalness to be a basic epistemic value isn't the best explanation of natural-value cases, then we shouldn't take naturalness to be a basic epistemic value, so:
- (v) We shouldn't take naturalness to be a basic epistemic value

Now the proponent of BVN may point out that she's not committed to BVN being the *only* way of explaining differences in the epistemic value of true beliefs. The BVN-ist would just be committed to BVN being necessary to explain differences in epistemic value in *some* natural-value cases, particularly in cases falling directly under EVN. Nevertheless, it's this latter claim that the opponent of BVN wants to undermine, by claiming there are *no* natural-value cases that require, or could only be explained, by taking naturalness to be a basic epistemic value.

**4.2** So how, then, might we explain natural-value cases consistently with veritism? I suggest we turn here to epistemic *significance*.<sup>8</sup> Contrast cases may help provide an intuitive grip on the concept of significance, and illustrate its appeal. Consider the difference between:

(12) The electron is a basic particle.

(13) These dust motes are 30 mm apart.

It seems like there's (far) more epistemic value to belief in (12) than in (13). (12) is, of course, more natural than (13), insofar as *being an electron* is more natural or joint-carving than *being a dust mote*. Still, to say that naturalness is the interesting difference between (12) and (13) seems to miss the point. Indeed, if one were asked why belief in (12) is more valuable than belief in (13), it might seem odd—even for a philosopher—to point to naturalness as the explanans. It would seem more intuitive to say that belief in (12) is more valuable because (12) is more significant than (13). Or consider the differences between:

(14) There is an office chair in my room

(15) There is an exoplanet 1060 light years away from Earth

I think it's plausible that belief in (15) is more epistemically valuable than belief in (14). And it may seem uncontroversial that (15) is more natural than (14). But again, it also seems like the most interesting and obvious difference between belief in (15) and in (14) has to do with relative significance, rather than naturalness. Belief in (15) just seems more significant than belief in (14).

Moreover, significance might cover a broader range of cases than naturalness, including cases where a *less* natural belief may be *more* epistemically valuable than a more natural one. Significance could then explain differences in epistemic value in which naturalness yields the wrong answer—if we took naturalness alone to track degrees of epistemic value.

Consider, for example, the difference between:

(16) There are two oxygen atoms in the air .01 m apart

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<sup>8</sup> Finocchiaro (2022) raises but dismisses the possibility that significance might account for the greater epistemic value of true, natural beliefs. But Finocchiaro (2022) doesn't work with the heuristic for significance that I adopt from Treanor (2013) and Pritchard (2014).

(17) There are two skyscrapers 50 m apart on Fourth Avenue

(18) New York is 306 km from Boston

I think that belief in (17) and especially (18) is more significant (and epistemically valuable) than belief in (16). And yet *being a skyscraper* and *being a city* are less natural than *being an oxygen atom*. At least, that's so on Lewis's (1983) and Sider's (2011) views of naturalness—which take there to be a connection between degrees of naturalness and fundamentality—and even perhaps on Schaffer's (2004) view, which takes natural properties to be those posited by our best natural science.

Of course, something needs to be said about what significance is, if the argument isn't going to be too ad hoc. Here I suggest we turn to a heuristic suggested by Treanor (2013, 2014, 2018) and Pritchard (2014). Namely, we can talk of significance as a matter of *more truth*, where how much truth some beliefs  $B_1...B_n$  have isn't measured by the cardinality of the belief set  $\{B_1...B_n\}$ . Nonetheless, it may seem puzzling what it means to have more truth, if not to increase the cardinality of a set of true beliefs.

It's plausible that the norm for belief is to accurately represent the world. But this needn't mean that accuracy is improved *just* by having more true beliefs (Treanor 2013, 595-596). Accuracy may also have to do with *sets* of beliefs, and how completely and correctly these represent the world. Indeed, we can think of a belief set as providing a kind of picture of the world (or a part of it). To say that truth is belief's success condition or norm, then, may be to say that we should bring this world-picture more closely into alignment with the actual world (Treanor 2018).

## 5. Explaining Epistemic Significance

**5.1** The foregoing is quite impressionistic. Of course, I don't want to offer an analysis of significance here; significance may even be a primitive. Nonetheless, significance is crucial to my argument. The claim is that taking significance as a basic epistemic value gets better results than naturalness in natural-value cases, and indeed that it's redundant to take naturalness as a basic epistemic value given significance. But our intuitions about such cases may seem opaque

in the absence of a better understanding of significance. So we can try to offer a toy model of significance, even if a proper theory would require much more space.

Start with a simple and familiar story. (Its simplicity and familiarity may hide a multitude of sins, but for now I'll accept it). Truth, on this story, is a correspondence between a proposition and concrete state of affairs in the world. This correspondence is often considered a kind of mapping or isomorphism. Very roughly, a proposition  $p$  is true insofar as there's some state of affairs  $S$  such that the structure of  $p$  maps onto the structure of  $S$ . Take, for example, the proposition that there's a red cup on the table. This proposition would be true if each of the elements of the proposition—'red' and 'cup' and 'is on a table'—map onto some concrete correlates (e.g. the property of redness, the objects of the cup and the table, the property of being on the table). These concrete correlates—particularly, the union of an object and a property—constitute a concrete "state of affairs."

Typically, this correspondence between proposition and state of affairs is considered non-gradable. Either each of the elements of a proposition correspond to a state of affairs, in which case the proposition is true, or they don't, in which case it's not true.

This view of correspondence considers states of affairs in isolation from each other. But the world, or a world, may be a conjunction of states of affairs. (That's not of course to define a world; there are many conjunctions of states of affairs that don't constitute a world of their own). Consider, then, a representation  $\mathcal{R}$  of a world  $w$ . For simplicity, let  $\mathcal{R}$  be a conjunction of propositions (or sentences expressing such propositions, if one prefers), each of whose elements (predicates, names, etc.) corresponds to, or has some concrete correlates, in  $w$ . Say that a *global correspondence score* is a gradable metric indicating, intuitively, the extent to which  $\mathcal{R}$  represents  $w$ . For example, with a global correspondence score of 1 on a scale of 0 to 1, all the states of affairs in  $w$  would be represented by some propositions in  $\mathcal{R}$ . Thus global correspondence would be correspondence not between a proposition and a state of affairs but between  $\mathcal{R}$  and a world  $w$ .



How, then, does global correspondence translate into significance? Significance is a feature of a proposition  $p$ , or a belief that  $p$ . I want to say that for some given proposition  $p$  in  $\mathcal{B}$ ,  $p$ 's significance depends on the extent to which adding  $p$  to  $\mathcal{B}$  increases  $\mathcal{B}$ 's global correspondence score. That is, a proposition whose inclusion in  $\mathcal{B}$  increased  $\mathcal{B}$ 's global correspondence by, say, .1 would count as more significant than one which increased global correspondence by .01. (These values are, of course, arbitrarily chosen).

The intuitive idea is that not all states of affairs count equally in the representation of the world. Propositions corresponding to certain states of affairs make more difference to correctly and completely representing the world than do propositions representing others. (To take an extreme case, the proposition that hydrogen has an atomic number of 1 would, when added to  $\mathcal{B}$ , increase global correspondence much more than the proposition that my office chair is mesh). Recall Treanor (2013, 2014) and Pritchard's (2018) heuristic for significance as a matter of *more truth*. The puzzle was to explain how there could be more truth (or more correspondence) without there being a greater *number* of true beliefs, or an increase in the cardinality of a belief set. The model of significance as global correspondence, given above, aims to address this question.

**5.2** But the toy model may seem to raise more questions than it answers. One would want to know: *why* do certain propositions increase global correspondence more than others? It might seem unilluminating if it were just a brute fact that certain propositions increased global correspondence more than others.

The most plausible approach may be to take significance, like value, to be a theoretically important feature with multiple grounds. Prudential or moral value, for example, may be grounded in both utility and freedom. But value isn't identical to either of these features. Similarly, significance may have multiple grounds without being identical to any of these grounds, nor even to their disjunction. That is, the grounds of significance may help *explain* why certain propositions increase global correspondence more or less than others. But significance itself is a measure of how much some proposition increases global correspondence score. This last

goes to the nature of significance, or what significance itself is. By contrast, the grounds of significance may explain why significance obtains, but wouldn't explain what it is.

But which features are the grounds of significance? I wouldn't claim to provide an exhaustive list; nor could I provide a formula about how much each feature contributes to significance relative to each other feature. (In the same way, I don't think an ethicist would be obliged to *quantify* how much each of the grounds of value contributes to value, e.g. whether freedom contributes more value than utility). But among the grounds of significance might be the physical size of the represented states of affairs or their constituents, the fundamentality of the represented states of affairs, the generality of the representing propositions, or the informativeness of a proposition vis-a-vis the state of affairs to which it corresponds (see §6.1).

The most significant propositions, in particular, may need to have several of these features. E.g. a proposition that concerns fundamental entities and is highly general may be likely to be more significant than one that concerns fundamental entities but isn't highly general. (Consider the difference between a fact about the velocity of an individual particle, versus a fact about the charge of a *kind* of particle. The former is likely to be far less significant than the latter). Moreover, as I've suggested, certain propositions about less fundamental entities may *sometimes* be more significant than propositions about more fundamental ones (see §4.2). In any case, my goal has just been to provide a toy model of significance, and explain why significance having multiple grounds needn't mean that significance isn't a unitary feature. More work would obviously need to be done for a proper theory of significance.

## 6. The Derivative Value of Significance

The ultimate goal is to vindicate veritism, by showing that truth is the only basic epistemic value. To do this, we need to show that significance isn't itself a basic epistemic value, but rather derives its value from the value of truth. This plausibly involves showing two things: (1) that significance derives its value solely from that of truth, and (2) that significance having multiple grounds (e.g. fundamentality, generality) needn't mean we should take these grounds as being basic values of their own.

Start with (2). We need to distinguish between promoting or grounding a feature F and being valuable in the way that F is valuable. For example, there are many things that might either cause or ground happiness. Eating chocolate or being in a certain kind of brain state may promote or even (in the latter case) ground happiness, but it would be implausible to take these as basic prudential values.<sup>9</sup> To do the latter would get things the wrong way around. Rather, being in a certain kind of brain state would at best have *instrumental* value insofar as it contributed to happiness—happiness itself would be the ultimate goal. In the same way, we can concede that significance may have grounds such as fundamentality and generality, without saying that the latter are themselves basic epistemic values.

But does that mean we must take significance itself (in contrast with its grounds) as a basic epistemic value, in addition to truth? To defend veritism, after all, we need to explain why significance *isn't* a basic epistemic value. My claim, in particular, is that significance is a better candidate for being a derivative final value than a basic value. As the name suggests, derivative final value derives its value from some basic value (Sylvan 2018; Finocchiaro 2022). But derivative final value is distinct from instrumental value. Roughly, a feature is instrumentally valuable insofar as it bears a causal or promotional relation to another value. Eating chocolate, for example, may be instrumentally prudentially valuable insofar as it promotes or causes happiness. But being a chocolate eater is a very different kind of property than being happy. The connection between the two is highly contingent, being dependent on certain genes, for example.

In contrast to instrumental value, derivative final value doesn't derive its value from merely causing or promoting some valuable feature (Hurka 1993; Sylvan 2018; Finocchiaro 2019). Rather, derivative final value derives its value from some constitutive or non-causal connection to a basic value—a connection that may even have to do with the nature or essence

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<sup>9</sup> At least, this is the case assuming we *don't* say that happiness is nothing but being in a certain brain state. And we needn't say this, even if we invoke grounding explanations, since grounding claims typically imply only necessary conditionals rather than biconditionals. (For example, being scarlet may ground being red, but there are many red things that aren't scarlet) (Sider 2013). Of course, if a strong reductivism were true and happiness were nothing but being in a certain brain state, then being in that brain state could be basically prudentially valuable. (And it would be the *causes* of being in that brain state that would be instrumentally valuable).

of the relevant feature. Thus the connection between derivative final value and basic value isn't contingent in the way that the connection between instrumental value and basic value often is. Consider, for example, believing on the basis of evidence, or compliance with evidence. Compliance with evidence might have instrumental value insofar as it causes one to have more true beliefs. But there are many things that could cause one to have more true beliefs; indeed, as Berker (2013) notes, even certain false beliefs may sometimes end up promoting more true belief. By contrast, compliance with evidence may be such that it's essentially, or in virtue of its nature, a way of showing respect for the value of truth (Sylvan 2020). It wouldn't be merely a contingent means of promoting true belief under certain conditions. This might explain why compliance with evidence has derivative final value, over and above any instrumental value, while still not being a basic value of its own.

It's because of the close connection between basic value and derivative final value that the value of the latter may be fully explained by the former. Indeed, I want to say that the (epistemic) value of significance is fully explained by that of truth. The epistemic value of truth consists in ensuring a correspondence between our representations of the world and the world itself. Epistemically significant belief—by definition (or at least my definition of it)—increases global correspondence between the world and our representations of it (see §5.2). And the value of truth depends on ensuring a correspondence between the world and our representations of it. The connection between significance and the value of truth would thus be an essential or non-instrumental one. Given the closeness of that connection, it's not clear what the basis would be for taking significance to be a basic value of its own. It seems more plausible that it would be a derivative final (epistemic) value, in the sense I've discussed.

## **7. Defending the Value of Significance**

**7.1** On the toy model, significance has multiple grounds. Many of the examples of significance I've given are grounded in features such as generality and fundamentality (see §4.2). But I think significance may have other grounds as well, such as the informativeness of beliefs and whether their propositional content has concrete correlates such as properties. These last two features, I'll suggest, could also contribute towards a more complete and precise representa-

tion of the world. (And this is, intuitively, how one might understand global correspondence). In particular, I'll suggest that these features account for how significance can accommodate beliefs with disjunctive and grue-like predicates. I've taken such beliefs to provide motivation for BVN (see §2), so we should explain how significance can do justice to the intuitions we have about such beliefs.

Consider, then:

(19) The emerald is green

(20) The emerald is green or is a cow

Both (19) and (20) are true, given a typical emerald. But belief in (19) may seem more epistemically valuable than belief in (20), even though both (19) and (20) are about the same object. Belief in (19), that is, may seem to get things right in a way that belief in (20) does not—and accuracy, or getting things right, is our heuristic for epistemic value (see section 1).

Wouldn't it be plausible to say that the difference in epistemic value between beliefs in (19) versus (20) is attributable to naturalness? It doesn't seem like there's a big difference in epistemic significance between beliefs in (19) versus (20). The most obvious difference between belief in (19) and (20) may be that the former is more natural than the latter. So it may seem that naturalness is the simplest way to explain the apparent difference in epistemic value between the two.

Nevertheless, while there may not be a *big* difference in epistemic significance between (19) and (20), there may be a *little* difference. And the heuristic for significance helps us see this. (19) does tell us something more about the world than (20). For one thing, (19) entails (20), but the reverse is not true, and so (19) sets a stricter condition than (20) on what the world is like.

Indeed, suppose you see some distant object and are told: "Well, it's green or a cow." You might respond: "Which is it?" If all the information one has is that something is green or a cow, it's possible that it is either: green and not a cow, green and a cow, or a cow and not green. (We're using the standard non-exclusive "or" here). What one wants is to narrow down these

possibilities. By narrowing down the possibilities, one would get a more determinate picture of the world. And this might seem to be a better explanation than naturalness of the difference in value between belief in (19) and belief in (20).

Or suppose you're told: "That painting is green or red." Here again it would be typical to respond with a question: "Well, is it green or red?" What's at issue seems not to be the disjunctive property's *unnaturalness*, but its being insufficiently informative. We want to know more, and that requires narrowing down the possibilities about what a small part of the world—the painting—is like.

**7.2** What then about cases of false but natural beliefs? Recall the following (from §3.2):

(21) Atoms are the most basic physical particles

(22) Atoms OR phlogistons are the most basic physical particles

(23) Corpuscles are the most basic physical particles

All these statements are false. But one might intuit that belief in (21) is more epistemically valuable, or at least less epistemically disvaluable, than belief in (23) and perhaps also (22). The proponent of BVN would—insofar as they shared the intuition—seek to explain this by noting that (21) is more natural than either (22) or (23). (After all, (22) is a disjunctive claim, and the properties of *being a corpuscle* and *being a phlogiston* are less natural than the property of *being an atom*).

But how might the proponent of significance explain the same intuitions? Well, for one thing, on a stricter existence criterion for properties (see §7.3 below), *being a corpuscle* and *being a phlogiston* might not even exist, whereas *being an atom* likely would. Moreover, the most basic particles (according to current theory) are indeed "part of" the atom, or at least our model of the atom, whereas such particles aren't in any sense associated with corpuscles or phlogistons. So (21) is perhaps closer to the truth than (22) and (23). (21) is also more informative than (22), given the latter's disjunctiveness. Informativeness, reference to existing properties and closeness to the truth are all plausible grounds of significance, insofar as they bring our representations of the world into closer alignment with the actual world (see §5).

Accordingly, there are multiple reasons why belief in (21) might be more significant than belief in either (22) or (23).

**7.3** Finally, consider the case of *grue*-like predicates. To say that something is *grue* is to say, roughly, that it's either green and observed before some time  $t$  or blue and observed after  $t$  (Goodman 1955). Finocchiaro (2022) argues that *grue*-like predicates needn't be less informative than non-disjunctive color predicates, once we take into account the time of observation. This is supposed to undermine the claim that epistemic significance explains the purported disvalue of *grue*-like beliefs. But I'll argue (here and in §5.3) that we don't need naturalness to explain the greater disvalue of *grue*-like beliefs.

Consider, first, a green bracelet. Finocchiaro (2022, 15) explains:

There are four possible states for the bracelet to be in: (1) green and observed before 3000AD, (2) green and not observed before 3000AD, (3) blue and observed before 3000AD, and (4) blue and not observed before 3000AD. All of the beliefs under consideration rule out exactly two of these possibilities. The belief that the bracelet is green rules out (3) and (4); the belief that the bracelet is not green rules out (1) and (2). The belief that the bracelet is *grue* rules out (2) and (3); the belief that the bracelet is not *grue* rules out (1) and (4). Thus, on further examination it seems that the beliefs contain the same amount of information, and therefore would contain the same amount of truth or falsehood.

Our heuristic for significance, however, isn't about informativeness per se. It's about the degree to which a given belief adds to the correspondence between the world and our representation of it (§4.2). It seems to me that the belief that the bracelet is green does more to increase such correspondence than does the belief that it's *grue*.<sup>10</sup> But why should this be?

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<sup>10</sup> What about Finocchiaro's (2022) claim that significance increases the *disvalue* of false beliefs, while also increasing the *value* of true beliefs? For example, the false belief that the bracelet is not green would have more disvalue than the belief that it's not *grue*, because the former belief is more significant. On significance-as-similarity, however, I don't think this holds. On the contrary, it seems to me that even the false belief that the bracelet isn't green is less disvaluable than the false belief that it isn't *grue*, insofar as the former belief seems more representationally similar to the world than the latter (especially if one thinks, as I suggest, that there may not be any real property of *being grue*).

By way of explanation, one might say that the property of *being green* exists and the property of *being grue* does not. Likewise, for example, one might say that chemical properties exist, but shmemical properties don't, or that *being hydrogen* exists but that *being hydrium* doesn't. Indeed, properties, unlike predicates, are worldly entities rather than linguistic expressions. While one can stipulate any predicates one likes, it may seem that such stipulation is insufficient to bring a *property* into being. Lewis (1983) couldn't say this, for he held that properties are identified with sets of concrete possibilia, and such sets are abundant: any combination of things could be identified with a property. So Lewis needed naturalness to explain why *being a wavelength* was privileged, whereas *being a shmawavelength* wasn't. But if one isn't bound by the strictures of Lewisian metaphysics, one needn't take properties to be limitlessly abundant.

Perhaps, then, one of the grounds of significance is that beliefs attribute properties that exist, or that the propositional content of beliefs has concrete correlates (like properties) that exist. By this standard, the belief that the bracelet is green might also be more informative than the belief that it's grue. Indeed, the belief that the bracelet is green attributes a property, namely *being green*. But the belief that the bracelet is grue may—on this view—leave it uncertain which properties the bracelet has (in the absence of a further true belief about the time of observation). For one might think there's no property of *being grue* at all—only distinct properties of *being green*, *being blue*, *being observed before 3000 AD*, and *being observed after 3000 AD*.

**7.4** Suppose one rejects stricter existence conditions for properties. Perhaps one thinks such a claim adds unnecessary metaphysical baggage, or comes too close to reproducing a theory of natural properties. But if the lesser epistemic significance of grue-like beliefs weren't due to the fact that such beliefs posit non-existent properties, to what could it be due? I've suggested (in §5.2) that significance itself has multiple grounds. And there are other theoretically important distinctions between grue-like predicates and their non-gruelike counterparts. For example, gruelike predicates are often held not to be projectible—not to permit lawlike generalizations, or (more metaphysically) not to figure in the laws of nature.

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Of course, it might seem ad hoc to say that something like projectibility could be a ground of significance. Significance, however, is about how completely (and correctly) our representations correspond to the world. (Or so I've held). The significance of a belief B depends on the extent to which adding B to our representation  $\mathcal{R}$  of the world increases the completeness ("correspondence score") of  $\mathcal{R}$  (see §5.1). And it doesn't seem implausible to me that a projectible or lawlike claim might increase  $\mathcal{R}$ 's correspondence score more than a similar but non-projectible claim. (At least, projectible claims allow for lawlike generalizations, which seem to me to allow for more complete representation of the world).

But isn't this just smuggling in naturalness by the back door? I don't think so. For one thing, significance is an *epistemic* property that pertains to doxastic states; its theoretical role is about whether it enhances the completeness of our representation of the world. As a result, significance has a *single* well-delineated theoretical role—an epistemic one—that's independent of the roles of its individual grounds (e.g. generality, fundamentality, informativeness, perhaps lawlikeness, etc.). The individual grounds of significance may have their own interesting theoretical roles, but they don't play the epistemic role that significance does. And multiple grounds of significance (e.g. generality, informativeness) don't coincide with the characteristics typically attributed to naturalness. Naturalness, by contrast, is taken (at least by Lewis (1983, 1986)) to have a wide range of theoretical roles—including metaphysical and even semantic roles. And it remains controversial whether naturalness can fulfill all the roles attributed to it (Hawthorne and Dorr 2013). This problem doesn't arise for significance, however, given that significance only plays an epistemic role.

Nonetheless, there's one concession I think the veritist can make to the proponent of naturalness. Namely, they might require that beliefs be natural to a certain degree to have epistemic value. (So a belief with many bizarre disjuncts, even if true, might well be epistemically valueless). But this needn't require taking naturalness to be a basic epistemic value. Consider, by analogy, a hedonist who takes happiness to be the only basic prudential value. It might be that consciousness, or a certain degree of conscious awareness, is a necessary condition for happiness—that only conscious states can be states of happiness. Still, this wouldn't commit

the hedonist to saying that consciousness itself is a basic prudential value, over and above happiness.

**7.5** Recall our original aim—to explain why true, natural beliefs may be more epistemically valuable than their true, unnatural (or less natural) counterparts. (I’ve called this claim EVN, or the extensional value of naturalness). Though not everyone may find EVN intuitive, I’ve assumed it here, consistent with recent discussion in the literature (e.g. by Sider 2011; Hazlett 2017; Finocchiaro 2023). In any case, I’ve argued that EVN needn’t be explained by taking naturalness itself to be a basic epistemic value (BVN).

Rather, there’s an alternative explanation of EVN—namely, one that draws on epistemic significance rather than the basic value of naturalness. I’ve argued that significance yields more plausible verdicts in certain cases in which naturalness seems to get it wrong. Even in cases where significance and naturalness yield similar verdicts, significance seems to me more intuitive as an explanans (see §4.2). And explanations involving epistemic significance are consistent with veritism, given that significance needn’t be taken as a basic epistemic value, but only a derivative one (see §6). As a result, significance-based explanations yield greater theoretical parsimony than naturalness-based ones, insofar as the former but not the latter take there to be another basic epistemic value in addition to truth.

Of course, my argument may be insufficient to show that naturalness *can’t* have basic epistemic value. For there could still be some further motivation for the basic value of naturalness, one that outweighs the greater parsimony (and explanatory power) offered by significance-based explanations that preserve veritism. Nonetheless, it’s up to proponents of naturalness to provide this additional motivation—or at least to explain where significance-based explanations go wrong. Absent such motivation, I’ve argued that significance, rather than naturalness, can better explain variations in the value of natural versus unnatural beliefs. I’ve provided a new account of significance that explains the relation between significance and truth. I’ve further explained why significance can still derive all its value from that of truth, even if significance has multiple grounds. Veritists may thus have little reason to change their views, even if they intuit that natural beliefs tend to have greater epistemic value.

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