Dasgupta's Detonation[*]

Theodore Sider

Abstract

Shamik Dasgupta has argued that realists about natural properties (and laws, grounding, etc.) cannot account for their epistemic value. For "properties are cheap": in addition to natural properties and any value the realist might attach to them, there are also "shmatural" properties (standing to natural properties as Goodman's grue and bleen stand to green and blue) and a corresponding "shmvalue" of theorizing in terms of them. Dasgupta's challenge is one of objectivity: the existence of the "shmamiked" network of concepts threatens the objectivity of facts stated using the unshmamiked network. But given a proper understanding of objectivity itself, the challenge can be answered.

In "Putnam's Paradox", David Lewis defended the "realist philosophy we know and love" against Hilary Putnam's "bomb", an argument that a realist must count practically any consistent theory as being true. Many of us thought that Lewis defused that bomb with his "reference magnetism" (and many more would have, had that doctrine been properly understood[1]). But Shamik Dasgupta (2018) has devised a new bomb. Not only would it demolish Lewis's response to Putnam, but worse, its blast radius would also include all realist metaphysics based on notions of natural property, fundamentality, ground, causation, lawhood, and the like. Dasgupta must be stopped![2]

1. Putnam versus Lewis

Natural properties played a central and pervasive role in Lewis's metaphysical thought from the early 80s onward. Natural properties "carve at the joints", he said; they "ground the objective resemblances and the causal powers of things"

---

[1]As Williams (2007) argues, it is not the bit of scholastic metaphysics that the name 'reference magnetism' suggests, but rather is a corollary of a widely accepted conception of theoretical virtue. See also Sider (2011, section 3.2).

[2]Joking aside, I regard Dasgupta's challenge as a profound one, the kind that deepens the understanding of everyone, opponents included.

(1983, p. 345). They are the fundamental properties, and as such are few in number: "there are only just enough of them to characterize things completely and without redundancy" (1986, p. 60). Most properties, such as familiar properties of common sense, and certainly properties like Nelson Goodman's (1955*b*) grue and bleen, are not natural. (Not *perfectly* natural, anyway; Lewis allowed naturalness to come in degrees.) Lewis used natural properties to define intrinsicality, materialism, and laws of nature, and in general appealed to them throughout his work. "As I bear [realism about natural properties] in mind considering various topics in philosophy", he said, "I notice time and again that it offers solutions to my problems" (1983, p. 343).

And they were the basis of his response to Putnam. Putnam's argument (as interpreted by Lewis[3]) presupposed a "pure descriptivist" view of reference. What determines what our names and predicates refer to? According to the pure descriptivist, *we* do, by putting forward a certain set of sentences, a "term-introducing theory", intending to constrain the meanings of the nonlogical constants therein. An *intended interpretation* of our language, according to this view, is nothing more than an assignment of worldly objects and sets of tuples of worldly objects to those nonlogical constants that makes every sentence of the term-introducing theory come out true.[4]

The descriptivist's constraints on reference are holistic: the referents of sub-sentential expressions are constrained only by the requirement that certain entire sentences containing those terms come out true. Thus intuitively bizarre assignments of reference are possible, since they can be offset by other bizarre assignments. For example, "All cows are mammals" can be true under an assignment in which 'cow' refers to the set of jelly beans, if 'mammal' is assigned a set that contains all jelly beans. If this perverse assignment of reference is carefully extended so that all sentences in the term-introducing theory come out true, it will count as an intended interpretation.

Truth is cheap, given this conception of reference: pretty much no matter what the world is like, any theory whatsoever is guaranteed to turn out true on some intended interpretation, provided only that it is consistent with the term-introducing theory. Suppose some theory, S, is consistent with the term-introducing theory T in the model-theoretic sense that $T + S$ has a model in set

---

[3]See Lewis (1984). Putnam's own presentations of the argument took a number of different forms (1978, part IV; 1980; 1981, chapter 2). See Sider (2011, section 3.2) for a fuller presentation and defense of reference magnetism.

[4]For discussions of how to extend the argument under less artificial assumptions, see Lewis (1984, p. 222–3) and Williams (2005, chapter 5).

theory. If the world contains sufficiently many entities (in a sense that can be made precise) then it will contain an isomorphic image of the model, which will be an assignment of worldly referents to the nonlogical constants under which every sentence of $T+S$ is true. Given pure descriptivism, this assignment counts as an intended interpretation. Thus given very weak assumptions (consistency with T, sufficiently many worldly objects), any theory S is bound to be true under some intended interpretation, no matter what it says and no matter what the world is like. No realist can accept this.

What appeared so powerful about Putnam's argument was its built-in resistance to counter-attack. Whenever an objector proposed some further constraint on reference, such as "a word must be appropriately causally related to its referent", Putnam could always reply: "that's just more theory!" That is, the proposed further constraint would consist of further sentences to add to the term-introducing theory. But that wouldn't threaten the argument at all: provided the enlarged term-introducing theory T^+ remains consistent with S, the argument could proceed as before.

Lewis's response was that an intended interpretation must do more than merely assign referents under which the term-introducing theory comes out true. An intended interpretation must, in addition, assign natural properties as referents of the predicates. To the objection that this is "just more theory" and hence does not solve the problem, Lewis's reply was that this misunderstands his proposal. His proposal is not to accept a pure descriptivist theory of reference and include the sentence 'intended interpretations must assign natural properties' in the term-introducing theory (which would indeed be just more theory). It is rather to deny the pure descriptivist view of reference. Putnam simply assumes that a view of reference must take that form; and the assumption is unjustified. Lewis's alternative is a mixed descriptivist view of reference: an intended interpretation must, in addition to rendering the sentences of the term-introducing theory true, also assign natural properties as referents.[5]

2. Dasgupta versus the realists

We might ask Lewis: *why* must referents be natural properties? Now, it is clear that Lewis's approach to reference is intended as a constitutive account. So Lewis might reply that it is just part of the nature of reference that reference

---

[5]Better: it must assign referents that are as natural as possible. I'll ignore various subtleties, but see Lewis (1983, 1984) for details.

is to natural properties. This is what reference *is*. But that simply pushes the question back. For we can introduce a notion of *shmatural* properties, which are "gruified" versions of natural properties, and a notion of *shmeference*, which stands to shmatural properties in the way that reference stands, according to Lewis, to natural properties. Just as it is part of the nature of reference that we refer to natural properties, it is also part of the nature of shmeference that we shmefer to shmatural properties, properties such as grue and bleen. Lewis's claim that reference is to natural properties might now begin to seem thin. For it is also true that shmeference is to shmatural properties. What is so special about reference?

Dasgupta's new bomb is based on a similar line of thought. I will consider it as deployed against realism about natural properties, although it is just as effective against related targets such as realism about ground, fundamentality, causation, or laws of nature.

Realism about natural properties, Dasgupta argues, must be paired with certain *value* judgments about naturalness. We do a *better* job of representing the world if we think and speak of natural properties rather than shmatural properties, even holding fixed the extent to which we think and speak the truth; it is more *rational* to project natural properties than shmatural ones when doing induction; science *ought* to aim for generalizations involving natural rather than shmatural properties; reference is more *important* than shmeference; and so on. For short: our theorizing should be centered on naturalness. Otherwise why all the fuss about naturalness?

Further, the realist must take these value judgments to be *objective*. It perhaps goes without saying that Lewis took his division between natural and unnatural properties to be an objective one, rather than deriving from some fact about human interests, culture, biology, or history. But according to Dasgupta, the realist is committed to thinking additionally that the value of naturalness, and not just naturalness itself, is objective. For if, as Goodman (1955*a*, chapter IV) thought, we ought to project green rather than grue simply because only the former is entrenched in our usage, the intuitive core of realism has been lost.

But, Dasgupta asks, what could *explain* this epistemic value of naturalness? It does need an explanation: since naturalness is a purely metaphysical status, some substantive connection between it and epistemic value must be forged. Dasgupta himself is happy with anthropocentric explanations (for instance, Goodman's), but the realist cannot accept any such explanation since that would compromise the objectivity of the value of naturalness. And, Dasgupta says, no other acceptable explanation is available.

This argument does not directly attack the metaphysics of natural properties itself, only the claim that theorizing ought to be centered on natural properties. But I agree with Dasgupta that realism about natural properties needs realism about their value.[6]

3. Schafferians versus Dasgupta

Jonathan Schaffer has pressed a certain line of response to Dasgupta, which is roughly that introducing what we might call "shmamiked" versions of concepts such as shmaturalness and shmeference is changing the subject.

This line can be taken at various places in the dialectic. I am going to consider one such place, and a particularly simple form of the line. But Schaffer himself would not take the line at this place, or in this form, so I will speak of what a "Schafferian", rather than Schaffer himself, might say.[7]

Which generalizations should scientists aim for? Let us suppose this realist answer: generalizations that are simple when phrased in terms of natural properties. For short: science should aim for *laws*.[8] (Rather than *shmlaws*— simple generalizations in terms of shmatural properties.)

Dasgupta now demands an explanation for the proposed fact about epistemic value. Here is the Schafferian reply: *it's part of what I mean by 'should' that science should aim for laws*.[9]

To this, Dasgupta will respond with his signature dialectical move. (It is the broad applicability of this move, like Putnam's "just more theory", that makes his argument so challenging.) *Relations are cheap*, Dasgupta says again and again. In the present case he will say:

---

[6]I *would* agree: I myself have defended the value claim (2011, section 4.5), and am Dasgupta's most self-identified target.

[7]Schaffer himself is a Schafferian about reference and truth (as opposed to shmeference and shmruth) and about how we should "go on" (in Wittgenstein's (1958) sense), and may not accept the more flat-footed Schafferian defense of the obligation to aim for laws that I am about to consider. (Also, Schaffer denies that scientists should aim for generalizations in the perfectly natural properties (Hicks and Schaffer, 2017).) Thanks to Schaffer for permission to discuss his response to Dasgupta. His remarks were offered in informal discussion, and I may not be fully doing justice to them.

[8]Although intentionally provocative, this is just a stipulative meaning of 'law'—my argument does not assume reductionism about laws in the ordinary sense. A believer in robust laws might somehow incorporate robust lawhood into the realist answer.

[9]Perhaps this is directly built into the meaning, or perhaps instead it follows from something more general that is directly built into the meaning.

> You are free to make this stipulation; you are master of your words. But relations are cheap. There is another relation between scientists and propositions, the *shmould-aim-for* relation, which scientists bear to shmlaws. Someone else could stipulate that 'should aim for' means that relation instead.

But a Schafferian is ready with the following reply:

> Who cares what scientists shmould aim for? The question we were asking is what they *should* aim for, and why; and I have answered that question. Your response, bringing in what scientists shmould aim for, simply changes the subject. It is no more pertinent than the response: "Oh yeah? Well, six out of every ten scientists prefer bubble gum to lollipops".

"Relations are cheap" is an indirect dialectical challenge. It never meets a realist's claim of the form "X has value Y because Z" head-on. Rather, it introduces some further sort of value, Y'—a shmamiked form of Y—which is had, not by X, but by the shmamiked X'; and Y' is had by X' because of some shmamiked Z'. The shmamiked fact that X' (and not X) has value Y' because Z', is not incompatible with the realist's claim that X (and not X') has value Y because Z—not straightforwardly so, anyway. The Schafferian response consists of emphasis of this, together with indifference to the shmamiked fact.

(Although I have given the Schafferian response a linguistic spin, a more robustly metaphysical version could be given: it is part of the essence or nature of the relation *should-aim-for* that scientists should aim for laws. This would not change the dialectical situation. Provided that there is a sufficiently abundant range of relations, individuated by their essences, Dasgupta will respond that in addition to the relation *should-aim-for*, there is also a relation of *shmould-aim-for* with a different essential profile: it is part of its essence that we shmould aim for shmlaws. And the Schafferian will claim that the existence of this other relation is irrelevant.[10])

The Schafferian response is important because, in my view, any responder to Dasgupta is going to need to adopt its strategy at *some* point in the dialectic, and insist that the shmamiked fact is irrelevant. But I don't think we're at that point yet, since a case can be made that the shmamiked fact *is* relevant here. It is relevant because it appears to undermine the objectivity of the value claim that scientists ought to aim for laws.

---

[10]Thanks to Erica Shumener here.

Dasgupta himself, remember, does not deny that theorizing ought to be centered on naturalness. He grants this value claim, but his explanation of it is an anthropocentric one. The realist, he says, cannot accept this explanation, but rather must find some explanation of the value of naturalness that secures its objectivity. And objectivity does indeed seemed to be threatened by the shmamiked counterpart to the Schafferian explanation. For the truth of the sentence 'Scientists ought to aim for laws' now appears to turn on an arbitrary stipulation, an arbitrary choice to mean a relation defined in terms of naturalness (or: with naturalness built into its essence) rather than one defined in terms of shmaturalness. (Of course, since meaning is conventional, there is *some* arbitrariness in every choice of what to mean. We will return to this.)

Compare Strawson's (1952, chapter 9, section 2) solution to the problem of induction: the reasonableness of induction is part of what we mean by 'reasonable'. This strikes many as unsatisfying; and underlying this suspicion is, I think, a concern about objectivity.[11] For consider a society of "counter-inductivists" who, upon observing more and more black ravens become increasingly convinced that the next raven will *not* be black. (Their past history of inductive failures does not dampen their enthusiasm: the more they fail, the more convinced they become that they will succeed the next time.) These counter-inductivists might say something parallel to Strawson: it is part of what *they* mean by 'reasonable' that *counter*-induction is reasonable. In light of the counter-inductivists, it is difficult to maintain one's belief in the objectivity of the reasonableness of induction if we can say nothing more than Strawson did in its favor.

4. Objectivity

But what notion of objectivity is at work here? Answering will not only explain why "relations are cheap" works when it does, but will also show that it does not always work.

On some conceptions of objectivity, the objectivity of the Schafferian's value

---

[11]Similarly for other versions of Strawson's solution, such as, on behalf of a Bayesian, that it is built into the meaning of 'rational' that rational prior probability distributions have certain pro-induction biases.

One might raise other concerns about Strawson's view. Enoch's (2006) "shmagency" point, adapted to the present context, would be that Strawson has not shown us why we should care about being reasonable as opposed to "shmreasonable". To be sure, the concerns seem related: nonobjectivity of reasonableness would seem to undermine the motive to care about it.

claim is *not* threatened by the shmamiked alternate meaning for 'should'. For instance, the proposition that the Schafferian in fact expresses with the sentence 'Scientists should aim for laws' is not *mind-dependent*, in any relevant sense, alternate meanings nonwithstanding. Even if scientific practice had been very different—even if, for example, some "Schmafferian" and her cabal had taken over the centers of scientific power and encouraged the pursuit of shmlaws, imposing in Orwellian fashion shmould as the meaning of 'should'—it would still have been the case that scientists should have pursued laws. For when evaluating what scientists in counterfactual scenarios should have done, we employ *our actual* meaning of 'should'. On the Schafferian proposal under discussion, that meaning is the relation holding between scientists and propositions iff the proposition is a simple generalization about natural properties. That relation makes no reference to scientific practice; it holds between the cowed scientists and laws (not shmlaws) in the imagined scenario. Of course, that relation would not then have been signified by 'should', but that is irrelevant: if we had meant *ostrich* by 'cat', cats would still have had four legs.

But in my view, conceptions of objectivity in terms of mind-independence are mistaken.[12] Consider, for example, Karen Bennett's example of a dispute over what counts as a martini. A certain sort of bar (distressingly prevalent in New Jersey) will boast of serving many sorts of martinis, including, say, "some nonsense made of sour green apple liqueur" served in a V-shaped glass (Bennett, 2009, p. 50). Purists, on the other hand, will not regard this "appletini" as really being a martini. There is a clear sense in which it is not an objective matter whether appletinis are martinis. Whether to count appletinis as martinis feels like an arbitrary decision rather than a matter for discovery. However, there might well be a fact of the matter whether appletinis are martinis. Perhaps exhaustive linguistic research would establish that, as a descriptive matter, under the correct semantics for English, 'martini' means *alcoholic drink served in a V-shaped glass*. If so, then (we can truly say) the appletini *is* a martini. Moreover, it would still have been a martini even if we had all spoken as purists, using the term more restrictedly, just as cats would still have had four legs if we had meant ostrich by 'cat'. Thus the fact that the appletini is a martini is mind-independent in the relevant sense. (The *sentence* 'Appletinis are martinis' would have been false, but again, that is irrelevant to mind-independence, as it is

---

[12]Or anyway incomplete. Perhaps there are multiple legitimate conceptions of objectivity. In my view there is *a* notion of objectivity that is not a matter of mind-independence, which the realist should ascribe to the value of centering theorizing on natural properties.

usually understood.)

We should not conclude from this that it is objective after all whether appletinis are martinis. We should, rather, seek a more nuanced conception of objectivity. In my view, this more nuanced conception must be *metasemantic*. To judge whether my assertion that S is objective, we must not consider (solely) the proposition that S—that is, the proposition that I actually express with 'S'—and whether it would have been true in various counterfactual circumstances. We should instead (or additionally) look to the *sentence* 'S', and certain alternate meanings it could have had. If the truth value of the sentence under one of those meanings differs from its actual truth value, the sentence fails to be objective. The failure of objectivity in the question about martinis is not, in the first instance, about the proposition that appletinis are martinis; it inheres, rather, in the sentence 'appletinis are martinis' and the range of meanings we could have assigned to it. Although we assigned a true proposition to that sentence, we could easily have assigned it a false one.

This crude formulation needs to be refined in a number of ways. I do this elsewhere (Sider, 2011, chapter 4); here are the two most crucial points. First, since all language is conventional, *any* sentence could have been used to express a proposition with a different truth value; this does not mean that no sentences are objective. In my account, not all propositions count as *candidate meanings* for a given sentence; and in determining the objectivity of a sentence, we do not consider all the alternate meanings the sentence could have had, only the candidate meanings. In order for a meaning to count as a candidate meaning for some term, it must be that a linguistic community that assigned that meaning to the term would not be "semantically alien"; the term must still be used to do the "same semantic job" as it actually does. Excluding appletinis would not have disrupted the core semantic role of 'martini'; assigning the meaning *cow* to that term would have.[13]

Second, imagine a debate over whether there is any lithium on Mars; imagine further that there is indeed lithium there, but only one single atom of it; and consider an alternate meaning *lithium-minus* for 'lithium' that is just like *lithium* except that the sole atom of lithium on Mars is excluded from its extension in the actual world. Now, despite the fact that the sentence 'There is lithium

---

[13]A meaning can be *determinately not* what we in fact mean by an expression, and nevertheless count as a candidate meaning for that expression. (Thus candidate meanings are distinct from supervaluationists' "precisifications".) Even if appletinis determinately do not count as martinis; we are supposing that it would not have disrupted the core semantic function of 'martini' to have included appletinis in its extension; thus it has candidate meanings that do so.

on Mars' is false under this alternate meaning, that sentence is nevertheless objectively true. Thus the meaning lithium-minus must somehow be disqualified from consideration under the metasemantic account of objectivity. But its disqualification is different in kind from the disqualification of cowhood as a candidate meaning for 'martini'. The properties lithium-minus and lithium differ only slightly in extension in the actual world (and not at all in other worlds), and so a society that meant lithium-minus (if such a society is even possible) would not differ dramatically from our own in the way that a society that meant cowhood by 'martini' would; lithium-minus *does* count as a candidate meaning for 'lithium'. Lithium-minus is disqualified, not by failing to be a candidate meaning, but rather, because it is such an unnatural property—because it fails so badly to carve nature at its joints. Failure of objectivity results, according to the metasemantic account, when a sentence would have had a different truth value under some candidate meaning that is as natural as its actual meaning.

The intuitive source of the second restriction is simply that reality's structure—its rails to infinity—can supply objectivity. When we language users have done enough to latch onto some facet of reality's structure, we can then ask questions about that facet and expect objective answers. Objectivity fails only when do not latch onto some such facet (or do not latch uniquely onto some such facet), for in that case, whatever we do end up referring to may reflect our interests, values, or arbitrary choices, rather than the structure of reality.

This "metasemantic" conception of objectivity is, I believe, an important one. In many central cases in which objectivity is missing, the lack of objectivity is otherwise hard to diagnose: its lack is not a matter of the expressed proposition at all, but is rather due to the failure of our linguistic practice to single out a unique distinguished meaning for some crucial term.

Let us return to Strawson's solution to the problem of induction. Our concern about objectivity can now be sharpened: the existence of the counterinductivist meaning for 'reasonable' is, given the metasemantic conception, a genuine threat to the objectivity of "Induction is reasonable", understood in Strawson's way. To dispel that threat, a deeper response than Strawson's is called for. We need an account of the semantic role of 'reasonable' that shows that the counterinductivist meaning would not satisfy that role, or else a reason to think that it carves at the joints significantly worse than the inductivist meaning.[14] That meaning must be excluded on grounds deeper than: it isn't *ours*.

Return, next, to the Schafferian. Here too we need further grounds for

---

[14]In this case, in my view, we'll need both.

excluding the alternate meaning shmought beyond the mere fact that it isn't ours. For if that relation could have been signified by 'ought' in our discourse about the proper aims of science without disrupting the core function of that discourse, and if it carves at the joints as well as our meaning, then the sentence 'Scientists ought to aim for laws' will fail to be objective, despite the mind-independence of the proposition we in fact express with that sentence.[15]

5. Me versus Dasgupta

The stage is set; I can now answer Dasgupta's demand for an objectivity-preserving explanation of the value of naturalness. Let us continue our narrow focus on one particular facet of this value: that scientists ought to aim for laws.

Ideally, I would produce a fleshed-out, plausible account of the relation expressed by (the relevant use of) 'ought to aim for'—an account of what it is for a person to be obligated to aim for a proposition—and derive from it the obligation to aim for laws. In fact I am not in a position to do that, since I do not have a sufficiently worked out metaphysics of epistemic value to offer. Nevertheless I can proceed. I will make a certain assumption about whatever the correct account of this relation turns out to be, and show how Dasgupta can be answered under that assumption. The assumption is that the account of the relation makes reference to natural properties or relations.

To illustrate, consider the following sketch of an account that satisfies the assumption. According to this sketch, the source of the obligation to aim for laws is an "externalist" one: the fact that we are embedded in an appropriate environment, an environment in which this aim tends to succeed, an environment in which there are, in fact, many true laws—that is, many true simple generalizations cast in terms of natural properties. This is a variant on the following answer to the question of why it's reasonable to believe the future will resemble the past: because we in fact live in a world in which the future does, by and large, resemble the past. It would, of course, need to be argued that such an externalist account is adequate to the core conceptual function of

---

[15]The shift to the alternate meaning would disrupt the function of 'ought' if it broke connections to other terms to which 'ought' is analytically or essentially connected. But we could consider corresponding shifts in the meanings of those further terms. We could, that is, consider a shift from one web of interconnected meanings, all understood in terms of naturalness, to an isomorphic web in which all the meanings are understood in terms of shmaturalness.

talk of epistemic value; and also, many details would need to be filled in.[16]

I myself favor an externalist approach to epistemic value along the lines of this sketch, but the response to Dasgupta that I am giving in this section does not depend on its correctness. All the response needs is that the correct account of the relation ought-to-aim-for makes reference to natural properties and relations—it must take the form "for x to be obligated to aim for p is for it to be the case that $\phi(x, p, N)$", where 'N' is a list of one or more names of natural properties and relations. (Thus unlike 'x' and 'p', 'N' is not a variable; "$\phi(x, p, N)$" expresses a two-place relation.) The properties and relations named in N needn't be *perfectly* natural, just more natural than shmamiked versions, as we'll see.

Here, then, is my proposed form of the explanation of the obligation to aim for laws. We are obligated to aim for laws because what it is to be obligated to aim for a proposition is to bear the relation (expressed by) $\phi(x, p, N)$ to that proposition; and we do in fact bear that relation to laws.[17]

It is easy to predict Dasgupta's reaction to this proposal. It will be another iteration of "relations are cheap". Even if $\phi(x, p, N)$ holds between scientists and laws, he will say, a shmamiked relation, namely $\phi(x, p, N')$, where N' are shmamiked versions of the natural properties and relations N, holds between scientists and shmlaws. In the case of the externalist sketch, this Dasguptan reaction amounts to the following:

> Your explanation of the value of aiming for simple generalizations

---

[16]The phrase "simple generalizations in terms of natural properties" can and should be refined, for instance, along the lines of Lewis's (1994) best-system account of laws. Something about humans—about their limitations and aims (whether in the present or in our evolutionary past)—should presumably enter into the account (Gómez Sánchez (2020) emphasizes the importance of these issues in theorizing about laws). The core epistemic value should come in degrees, and should apply to all believers and propositions. Thus a refined account might have the following skeleton. The core notion is that of a rational prior probability function. Rational prior probability functions have various biases in favor of simple and strong systems, where the measures of simplicity and strength involve naturalness. The ground of the rationality of such prior probability functions involves both i) some naturalness-involving fact about the actual world—that it has many true systems of this sort, or that the truth of such systems played a key role in our evolving the inductive biases that we in fact have—and ii) some fact about us, for instance that the biases in question are implementable by evolution in creatures like us.

A further direction to explore is how to integrate this account with reference magnetism. Intuitively, the biases ought to involve the simple words the organism uses, which will be guaranteed to mean reasonably natural properties, given reference magnetism.

[17]This "what it is" talk can be given a linguistic or more robustly metaphysical spin; recall section 3.

in terms of natural properties is, in essence, that many such general-izations are true. For short, we live in a world that is *congenial*. But relations are cheap. We can define up a notion of *shmongeniality*, that of a world in which there are many simple regularities in terms of shmatural properties; and we can define up a corresponding notion of shmought under which we shmought to aim for gener-alities of a sort that tend to be true in shmongenial worlds. Since our world is shmongenial, we schmought to aim for shmlaws. The proposal fails to secure the requisite objectivity.

This response is correct until its final step. We can indeed define up the notions of shmaturalness, shmongeniality, and shmought. But the existence of these notions do not threaten the objectivity of claims involving their counterparts, because they are far less natural than their counterparts.[18]

More generally, and more carefully: the sentence whose objectivity is under threat is: 'Scientists ought to aim for laws'. The threat is that although this sentence is true when 'ought' has its actual meaning, namely, the relation $\phi(x, p, N)$, it is false when 'ought' has a certain alternate meaning, namely, the relation $\phi(x, p, N')$. But given the metasemantic account, objectivity is undermined only if this second relation is both a candidate meaning for 'ought' and also is as natural as the actual meaning. And clearly the latter requirement is not met: since the shmamiked properties and relations N' are so much less natural than the properties and relations N, $\phi(x, p, N')$ is much less natural than $\phi(x, p, N)$. Thus the existence of the alternate meaning does not undermine the objectivity of the value of aiming for the laws, just as the existence of lithium-minus does not undermine the objectivity of the existence of lithium on Mars.

We can now see why Dasgupta's argument was so initially frightening. Before it was properly understood, Dasgupta's "relations are cheap" maneuver felt like an all-purpose weapon, just as Putnam's "just more theory" did. To any proposed explanation of the value of naturalness, Dasgupta can always produce

---

[18]The claim that congeniality is much more natural than shmongeniality depends on the assumption that naturalness is much more natural than shmaturalness (since congeniality is defined in terms of naturalness). This assumption is plausible. (Indeed, on my own view, perfect naturalness is perfectly natural (Sider, 2011, 7.13).) But the more general form of my reply to Dasgupta does not depend on the assumption since the properties and relations N in $\phi(x, p, N)$ can be natural properties and relations other than naturalness itself (such as causal, nomic, or physical properties and relations).

a shmamiked counterpart; and the existence of the counterpart is disquieting because it seems to threaten the objectivity of the value.

"Just more theory" lost its menace once Lewis pointed out its limits: it works only if pure descriptivism is presupposed. "Relations are cheap" also has limits, which become apparent once we properly understand the operative notion of objectivity. For according to the metasemantic account, not just any variation in truth value over alternate semantic values undermines objectivity. The variation must be over candidate and equinatural semantic values.

We can also now appreciate why we still need Schaffer's strategy for responding to Dasgupta. If I claim that some property or relation P (such as *ought*) has a certain feature, and you point out that some *other* property or relation P' (such as *shmought*) does not have the feature, this is, strictly speaking, a change in subject. To be sure, you might try to argue that P' is indirectly relevant to our dispute, for instance that it is equally natural and a candidate and thus threatens the objectivity of my claim that P has the feature. But if you can give no such argument (for instance because P' is far less natural than P) then I should, with Schaffer, complain that you have changed the subject; I should simply ignore P'. Who cares if we shmought to aim for shmlaws rather than laws? The question is what we ought to aim for, and whether this is objective.

Suppose Dasgupta conceded all of what I have said: that we ought to aim for laws, and that this value is objective. He might argue that the realist is not yet out of the woods. For after all, this obligation to aim for laws is not *shmobjective* (where shmobjectivity is understood as in the metasemantic account, except with shmaturalness in place of naturalness). It is rather the shmobligation to aim for shmlaws that is shmobjective. The realist still needs some asymmetry between her network of interrelated concepts (obligation, law, naturalness, objectivity) and the shmamiked network (shmobligation, shmlaw, shmaturalness, shmobjectivity).

But the realist *does* have *an* asymmetry between the two networks: only the concepts in the former network are natural. Of course, there is also a symmetry between the two networks, since the latter derives from the former by "replacing" naturalness everywhere with shmaturalness. But the realist should not be saddled with the absurd claim that there is no symmetry whatsoever between the networks. Any two sets of claims can be regarded as symmetric in some sense—symmetries are cheap! The only sort of asymmetry the realist needs is one that vindicates her core commitment: that the value of naturalness is objective. Given the metasemantic account of objectivity, the former asymmetry delivers this. Absent an argument for its relevance, pointing out the

latter asymmetry is just (to repeat the Schafferian point) a change of subject. (A drastic change of subject—paradigmatically objective questions, such as ones about physics, are not shmobjective ones.) Note also that the existence of the property of shmobjectivity does not undermine the objectivity of statements about objectivity, since shmobjectivity is far less natural than objectivity.[19]

I have defended realism with the metasemantic account of objectivity. This defense is dialectically strong since Dasgupta's argument itself appears implicitly committed to some sort of metasemantic account. For he takes the objectivity of the realist's claim "X has value Y" to be undermined by its variation in truth value under an assignment of an alternate meaning—the assignment of the shmamiked Y' to 'Y'. But it wouldn't be convincing at all to claim that just *any* variation in truth value amongst alternate meanings undermines objectivity, for that would immediately imply that no sentence is objective; 'there are electrons' would fail to be objective simply because 'electron' could have meant *flying pig*. So even Dasgupta needs some sort of restriction on the relevant kind of variation. The metasemantic account provides a restriction of this sort, which is anchored in intuitive judgments about cases and is phrased in terms congenial to realism.

My response to Dasgupta assumes that (epistemically) normative properties and relations are more natural than their shmamiked alternatives. $\phi(x, p, N)$ is more natural than $\phi(x, p, N')$; aiming at propositions of a sort that tend to be true in congenial worlds is more natural than aiming at propositions of a sort that tend to be true in shmongenial worlds. But it does *not* assume that normative properties are especially natural. For all I have said, normative properties might be much less natural than, say, economic properties. In fact, my response is consistent with there being alternate and equally natural candidate meanings for 'ought' (perhaps corresponding to competing theories of epistemic obligation), so long as 'we ought to aim for laws' comes out true under each one.[20]

---

[19]Assuming that naturalness is much more natural than shmaturalness—see note 18.

[20]Horgan and Timmons's (1991) "Moral Twin Earth" contains a linguistic community much like our own, in which the use of moral terms is connected to, e.g., praise and blame, as in our own linguistic community, but whose speakers call very different kinds of conduct "right". Suppose our word 'right' denotes the property of maximizing utility, whereas the actions that Twin-Earthians call 'right' (whether correctly or incorrectly) are those that comply with the categorical imperative. (I) Does this example create problems for the metasemantic account of objectivity? (II) Does it create problems for my defense of realism?

(I) What the metasemantic account predicts depends on whether the property of complying with the categorical imperative is as natural as the property of maximizing utility, and on whether

it is semantically alien (relative to our term 'right'). (A) If complying with the categorical imperative is semantically alien then there is no threat to objectivity. Horgan and Timmons's argument that Twin-Earthians mean the same thing by 'right' as we do, and thus do *not* mean complying with the categorial imperative, might be taken to show that that property is semantically alien. (This would be based on an expansive conception of meaning the same thing as we do, while closely associating alienness with being different from what we mean.) Alternatively, if Horgan and Timmons are wrong and Twin-Earthians *do* mean compliance with the categorical imperative (and thus don't mean the same thing as we do), one might still hold that that property is semantically alien. (This would be based on a restrictive conception of meaning the same thing as we do, while decoupling alienness from what we might have meant.) Either way we'd like a substantive account of the alienness, based on a rich conception of what normative vocabulary is for. (B) If compliance with the categorial imperative is much less natural than maximizing utility, there is again no threat to objectivity. Dunaway and McPherson (2016) propose something like this (in a discussion of the impact of Moral Twin Earth on moral naturalism). Williams (2018, 56–8) makes a powerful objection, though relativizing the naturalness requirement is a promising line of response (compare van Roojen (2006); Sider (2011, pp. 48–9)). (C) If (as I think likely) complying with the categorical imperative is no less (relevantly) natural than the property of maximizing utility, and if (as I think much less likely) no substantive reason exists for saying that complying with the categorical imperative is semantically alien, then the metasemantic account's prediction here, namely that some statements we make using the term 'right' turn out nonobjective, seems exactly right.

(II) Suppose an epistemic analog of case (C) obtains: in some Epistemic-Value Twin Earth scenario, terms for epistemic value have nonalien and no less natural meanings different from the actual ones, thus undermining the objectivity of some actual statements of epistemic value. This need not be fatal to the realist. (1) There may be no such case in which Twin Earthian candidate meanings disagree with our meanings over whether we ought to theorize in terms of natural properties (just as there may not be any nonalien and equinatural Moral Twin Earthian candidate meaning for 'right' under which it is right to torture vast numbers of innocents simply for our own pleasure). This is the situation envisaged in the text. (2) Even if there is such a candidate meaning, whether the resulting nonobjectivity would undermine realism depends on the nature of the candidate. (See Sider (2011, pp. 52–3) on "dimensions" of failure of substantivity.) If it is just like ours except for a shift from naturalness to shmaturalness, so to speak, I think this would indeed undermine realism. But suppose instead that it is a much more drastically different candidate meaning. Suppose, for example, that the epistemology under discussion is Bayesian, and the candidate meaning is a radically subjectivist one, according to which all prior probability distributions are allowable. The failure of objectivity of, e.g., "Scientists should seek laws" would ultimately be due to a very general failure of epistemic value to be objective—there would be no objective constraints at all on degrees of belief beyond probabilistic consistency and updating by conditionalization. But suppose further that each equinatural candidate other than the subjectivist one mandates scientists seeking laws, so that it is objective that, if there are any epistemic norms at all (beyond those of probabilistic consistency and conditionalization), they require scientists to seek laws. Here is the picture: really, you can think pretty much whatever you like about the future; but if you're going to buy into any substantive epistemic norms at all, they objectively must be ones that are guided by the natural properties. It's not clear that this scenario is in tension with realism.

6. The stronger form of war

It is a cliché that convincing an external-world skeptic is very different from, and far more difficult than, remaining unconvinced by such a skeptic.[21] Dasgupta himself might not find the metasemantic account of objectivity—which appealed to naturalness—compelling. But this is beside the point if our aim is merely to remain unconvinced, and not also to convince.

Dasgupta compares his demand for an explanation of the value of naturalness to one of Lewis's signature moves, his "mighty biceps" point (Lewis, 1983, p. 366). Just as being named "Armstrong" does not give one mighty biceps, so bestowing a loaded name on something, a name such as 'chance' or 'necessity' or 'value', does not make its bearer "deserve the name", as Lewis liked to say. Similarly, Dasgupta says, simply calling a property of properties 'naturalness' does not make it deserve the name; it remains a mystery how any property of properties could have the value that naturalness is supposed to have.

Really, this concern has already been addressed, by the sketch of an externalist account of the value of naturalness. But it is easy to think it hasn't been. For Dasgupta will presumably complain that since he can't see why the realist's notion of naturalness—a "primitive whatnot"—is more important than shmaturalness, he can't see why *any* of the other things I said in terms of naturalness are more reasonable objects of attention than their shmamiked versions. In short, he will continue to regard none of the interconnected conceptual nodes in the preceding—naturalness, law, objectivity, value—as deserving their names.

One must resist being drawn into an offensive war here, into trying to convince Dasgupta of these things and despairing if one fails. The realist should instead adopt a stronger, defensive posture. The realist's mission should be to find an outlook that is plausible by realist lights, from which Dasgupta's argument can reasonably be resisted. Such an outlook can deploy assets that Dasgupta would reject, such as realism about natural properties and naturalness-based accounts of epistemic value and objectivity. For it is no part of the mission to convince Dasgupta, or even a fence-sitter, that the outlook is correct.

Mission accomplished.

---

[21]Although see Rinard (2019).

References

Bennett, Karen (2009). "Composition, Colocation, and Metaontology." In David J. Chalmers, David Manley and Ryan Wasserman (eds.), *Metametaphysics*, 38–76. Oxford: Oxford University Press.

Dasgupta, Shamik (2018). "Realism and the Absence of Value." *Philosophical Review* 127: 279–322.

Dunaway, Billy and Tristram McPherson (2016). "Reference Magnetism as a Solution to the Moral Twin Earth Problem." *Ergo* 3: 639–79.

Enoch, David (2006). "Agency, Shmagency: Why Normativity Won't Come From What is Constitutive of Action." *Philosophical Review* 115: 169–98.

Gómez Sánchez, Verónica (2020). "Crystallized Regularities." *Journal of Philosophy* 117: 434–66.

Goodman, Nelson (1955*a*). *Fact, Fiction, and Forecast*. Cambridge, MA: Harvard University Press.

— (1955*b*). "The New Riddle of Induction." In Goodman (1955*a*), 59–83.

Hicks, Michael Townsen and Jonathan Schaffer (2017). "Derivative Properties in Fundamental Laws." *British Journal for the Philosophy of Science* 68(2): 411–50.

Horgan, Terence and Mark Timmons (1991). "New Wave Moral Realism Meets Moral Twin Earth." *Journal of Philosophical Research* 16: 447–65.

Lewis, David (1983). "New Work for a Theory of Universals." *Australasian Journal of Philosophy* 61(4): 343–77. Reprinted in Lewis 1999: 8–55.

— (1984). "Putnam's Paradox." *Australasian Journal of Philosophy* 62: 221–36. Reprinted in Lewis 1999: 56–77.

— (1986). *On the Plurality of Worlds*. Oxford: Blackwell.

— (1994). "Humean Supervenience Debugged." *Mind* 103: 473–90. Reprinted in Lewis 1999: 224–47.

— (1999). *Papers in Metaphysics and Epistemology*. Cambridge: Cambridge University Press.

Putnam, Hilary (1978). *Meaning and the Moral Sciences*. Boston: Routledge and Kegan Paul.

— (1980). "Models and Reality." *Journal of Symbolic Logic* 45(3): 464–82. Reprinted in Putnam 1983: 1–25.

— (1981). *Reason, Truth and History*. Cambridge: Cambridge University Press.

— (1983). *Realism and Reason: Philosophical Papers, volume 3*. Cambridge: Cambridge University Press.

Rinard, Susanna (2019). "Reasoning One's Way Out of Skepticism." In Kevin McCain and Ted Poston (eds.), *The Mystery of Skepticism*, 240–64. Leiden, Netherlands: Brill.

Sider, Theodore (2011). *Writing the Book of the World*. Oxford: Clarendon Press.

Strawson, Peter F. (1952). *Introduction to Logical Theory*. London: Methuen.

van Roojen, Mark (2006). "Knowing Enough to Disagree: A New Response to the Moral Twin Earth Argument." In Russ Shafer-Landau (ed.), *Oxford Studies in Metaethics, Volume 1*, 161–94. Clarendon Press.

Williams, J. Robert G. (2005). *The Inscrutability of Reference*. Ph.D. thesis, University of St Andrews. Available at `https://philpapers.org/archive/WILTIO-74.pdf`.

— (2007). "Eligibility and Inscrutability." *Philosophical Review* 116(3): 361–99.

— (2018). "Normative Reference Magnets." *Philosophical Review* 127(1): 41–71.

Wittgenstein, Ludwig (1958). *Philosophical Investigations*. 3rd edition. Oxford: Blackwell & Mott. Translated by G. E. M. Anscombe.