

Epistemic Friction

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1. Introduction

Epistemic friction, as Gila Sher conceives it, is one of the two principal requirements on knowledge, the other requirement being epistemic freedom.¹ Sher sees these requirements as universal: they apply to all areas of our knowledge, ordinary everyday knowledge as well as logical, scientific, and philosophical knowledge. Epistemic freedom, according to Sher, is freedom to “set up our epistemic goals, . . . , devise strategies, make practical and theoretical decisions” (3).² The study of *this* requirement Sher defers to a sequel volume (though she has a good bit to say about it in the present volume). Her concern in *Epistemic Friction* is with the requirement named in the title. A central friction requirement, according to Sher, is groundedness in the world, which she explains thus: “*Groundedness in the world is veridicality, i.e., compliance with substantial standards of truth, evidence, and justification*” (9). Sher is particularly focused on truth, for she holds that “one of the main instruments of epistemic friction is a standard of truth” (x). It is a principal thesis of her book that the standard for truth is a substantial one and, more specifically, that the standard requires correspondence to reality. Thus, epistemic friction, as Sher conceives of it, entails that every truth, whether it belongs to logic or science or philosophy, must bear a correspondence relation to reality. Before I turn to the details of Sher’s development of this idea, let me note the overall goal in the service of which she is offering her account of epistemic friction (and epistemic freedom). This is to address the following epistemological question:

¹Gila Sher, *Epistemic Friction: An Essay on Knowledge, Truth, and Logic*. Oxford University Press, 2016.

²All parenthetical numerals refer to the pages of Sher’s book. Sher introduces also an extended notion of epistemic freedom that includes involuntary factors that influence knowledge, such as “the structure of our mind, our cognitive capacities, social and environmental factors,” (13).

- (*) “whether and to what extent we are capable of acquiring theoretical knowledge of the world and how we can, do, and should go about it” (vii–viii).

2. *Truth as Correspondence to Reality*

Sher’s conception of truth as correspondence to reality is novel in a couple of respects. First, she has a liberal and flexible idea of “correspondence.” The correspondence that links truths to reality can take forms that can vary from subject matter to subject matter. The form the correspondence takes depends, Sher thinks, on the aspect of reality that a given subject matter targets as well on the cognitive resources available for reaching the target. The correspondence does not, for example, mimic syntactic form used to express a truth. A truth may be expressed by a sentence of the form “*a* is *F*,” where *a* is a name; yet the correspondence relation may fail to associate an object with *a*. Second, the correspondence can be indirect. A truth can be related to reality via intermediate *posits*—posits “created by us as tools for connecting theories to reality” (93). Sher calls this conception of correspondence *manifold correspondence* (186). We shall see an application of the idea in the next section.

Sher offers a general argument that purports to establish, on commonsense and conceptual grounds, the universality of the correspondence standard (188). The argument runs as follows. Suppose that someone, *X*, rejects the correspondence standard over some domain. Suppose, for example, *X* holds that arithmetical statements are true in virtue of meeting the coherence standard.³ Now, Sher points out that we can raise the critical question, “Do arithmetical truths in fact meet the coherence standard?” If *X* answers positively but attempts to avoid truth-as-correspondence, by saying “That arithmetical statements meet the coherence standard [= *A*, say] itself meets the coherence standard,” we can again ask the critical question concerning the new claim: “Does *A* in fact meet the coherence standard?” This back-and-forth

³I am using here a variant of Sher’s example. Furthermore, Sher frames the argument using the terminology of ‘immanence’ and ‘transcendence’. In my presentation, I am simplifying the terminology.

exchange can plainly be iterated. We can reflect on the claim made by X at any stage and ask the critical question about it, whether the claim is in fact true. There is a second, related exchange that can also be iterated. Here, the critical question we ask at each stage about X 's claim is whether the claim corresponds to reality. Sher thinks that the possibility of these iterations establishes the universality of correspondence, but I confess I fail to see that this is so. In her presentation, Sher seems to identify the two exchanges, for she writes as though the two questions “Is such and such in fact true?” and “Does such and such correspond to reality?” were equivalent. But this identification begs the question. On the other hand, if we keep the two questions separate, I do not see how the possibility of the two exchanges creates any difficulty for the coherence theorist. In all stages of the first exchange, the theorist answers in the affirmative and backs up the affirmation using the coherence standard. And in all the stages of the second exchange, the theorist either answers in the negative or withholds judgment. I fail to see that there is anything in these responses that should embarrass the coherence theorist. The theorist's responses are no worse than the responses a correspondence theorist might give in the parallel exchanges that arise for her.

Even if the general argument fails, Sher's thesis that truth is correspondence is not undermined. Indeed, Sher's idea of “manifold” correspondence suggests that we should not be looking for general arguments that establish in one fell swoop the correspondence character of truth across all subject matters. Because of its manifold character, the role correspondence plays in addressing (*) can be expected to vary from subject matter to subject matter. Consequently, the argument for correspondence, too, can be expected to vary from subject matter to subject matter. Universal correspondence, if it holds, is best established piecemeal, by showing separately for each subject matter that its distinctive kind of correspondence helps address (*) in its own distinctive way.

3. Correspondence in Logic and Mathematics

Let us look at two specific applications of the correspondence idea that are developed in Sher's book—one of these pertains to logic and the other to mathematics. According to Sher, both logic and mathematics are concerned with a special aspect of reality—its *formal* aspect—but they are

concerned with it in different ways. Mathematics studies the formal aspect, while logic develops an account of inference on its basis (xiii). The formal aspect of reality includes *formal properties*. These are properties that are invariant under one-one substitutions of individuals (276). So, for example, self-identity is a formal property of objects, but “being human” is not. The former property is preserved, but the latter is not, by (e.g.) a substitution that is identity everywhere but intersubstitutes Obama for the Sun. Cardinal number properties (e.g. “being a property with two instances”) are examples of higher-level formal properties: they are properties of properties, and they are preserved by one-one substitutions. Formal properties and other formal aspects of reality, Sher holds, are governed by laws. These laws are studied in mathematics, and they provide the bases for the inferences that concern logic.

Sher provides a specific account of the correspondence between arithmetical statements and reality. She holds that a numeral such as ‘2’ refers to the cardinal number property “being a property with two instances.” More generally, a numeral for n refers to the property “being a property with n instances” ($= n^*$, say). Numerals, though they fall in the category “name,” do not refer to real objects. (This illustrates the liberal kind of correspondence Sher allows.) Furthermore, the reference of a numeral for n to the higher-level property n^* is not simple. It is composite, and it is mediated by *posits*. Since we humans do not work so effectively at the higher level of properties of properties, Sher says, we “exercise *epistemic freedom* and create a first-level setting for studying the formal” (200). We postulate *individual* cardinal numbers and connect them systematically to the higher-level cardinal number properties. Thus the reference of a numeral for n to the property n^* is a composite of two relations, one of which links the numeral to the postulated individual (n^\dagger , say) and the other that links n^\dagger to n^* . (This illustrates the indirect kind of correspondence Sher allows.) An arithmetical statement such as “ $2 + 7 = 9$ ” is true iff it corresponds to a real formal fact, namely, $2^* +^* 7^* = 9^*$, where $+^*$ is the operation in the realm of cardinal number properties that corresponds to addition. This correspondence is mediated at the postulational level by the truth that $2^\dagger +^\dagger 7^\dagger = 9^\dagger$.⁴

Sher offers a rich account of logic and mathematics, and her account has many virtues, which she brings out nicely in parts III and IV of her book. The account also raises many

⁴The star and dagger terminology is mine; Sher should not be blamed for it.

questions. One set of questions pertains to posits: What is their status, and whence do we derive the right to bring them into being, and what is the scope of this right? Another set pertains to the character of the connection, invoked by Sher, between arithmetical statements and reality: What if reality consists of only finitely many individuals and what if these individuals possess only finitely many properties? Such a world seems possible, but would such a world sustain the truth that for every prime number there is one greater? An adequate discussion of these questions requires greater space than allotted to me. I shall, therefore, bracket the issues these questions raise and keep my focus on the question of truth as correspondence.

4. The Significance of Correspondence

In the empirical domain, it is plain that reference relations play a vital role in helping us understand our knowledge of things. The fact that ‘Obama’, in our use of the name, refers to a particular person living in Washington, D. C., and not the one living in Nairobi, Kenya, tells us something about “how we can, do, and should go about” acquiring certain bits of empirical knowledge, and how we might resolve certain disagreements that might arise among us (e.g., about the place of Obama’s birth). Correspondence relations do and should help us address questions such as (*). Now, how does the particular reference relation for arithmetical terms that Sher spells out help us in addressing questions such as (*)? What is the significance of this relation for the way we acquire arithmetical knowledge? And how might this relation help us resolve disagreements that arise among us about arithmetic (e.g., over intuitionist claims concerning it)? Let me sharpen the point. Consider an alternative theory that is like Sher’s but that takes the reference of numeral ‘2’ to be the property of being a “double” relation, where a relation counts as “double” iff every element in its domain bears the relation to exactly two elements. This new property is very different from the property 2^* that Sher takes to be the reference of ‘2’—more different than the two Obama candidates, for the two properties belong to different logical categories. But would this difference in reference entail any difference in our arithmetical practices? Would it have any effect on “how we can, do, and should go about” acquiring arithmetical knowledge? It seems that the difference makes no difference. The

question how arithmetical reference bears on arithmetical practice is crucial for determining the validity of truth-as-correspondence in the arithmetical domain, but Sher says little about it.

Sher would have been well served, I think, had she paid more attention to the empirical cases. The bearing of correspondence relations on epistemic practices is much clearer here. Furthermore, it is a plausible principle that reality bears on our practices through experience.⁵ This principle provides a good lens, it seems to me, for examining the mathematical and logical cases. Even if the principle fails to apply to mathematics and logic, it would be instructive to know how and why it fails. The failure may provide us with a clue on how (and even whether) to put correspondence relations in play in these domains. More strongly, it seems to me that no study of epistemic friction can be satisfactory that does not account for the friction generated by experience. It is a major lacuna in Sher's book that it contains little systematic discussion of experience and of its role in cognition.⁶

5. *A Comparison with Deflationism*

Deflationists argue on general conceptual grounds that truth does not consist in correspondence to reality, that truth-as-correspondence cannot help us address questions such as (*). They go on to limit the role of truth to a purely logical function. Sher rightly resists deflationist claims and attitudes. However, she follows the deflationist *method* of drawing conclusions about the role of truth simply on the basis of general conceptual ideas. As we saw above, she attempts to establish on such bases that truth *does* consist of correspondence to reality. However, neither the deflationists' nor Sher's argument works. It seems to me that we need to go beyond general conceptual ideas to settle substantive questions about truth. Just as we cannot determine whether water quenches fire merely through an examination of the concept "water," similarly we cannot

⁵Note that this principle is perfectly compatible with a rejection of traditional forms of empiricism.

⁶Sher's model of knowledge is a modification of Quine's. Sher changes Quine's model in significant respects but leaves untouched his account of experience. In my judgment, the poverty of Quine's account of experience is the principal cause of the shortcomings of Quine's philosophy.

determine whether truth is correspondence merely through an examination of the concept “true.” To determine whether truth is correspondence we need to see whether this idea can help us address questions such as (*). And it is possible that the idea helps with some subject matters and not with others. That is, it is possible that truth is correspondence on some domains (e.g., the physical domain) and something different on other domains (e.g., the mathematical domain). As I indicated above, the argument for truth-as-correspondence needs to proceed piecemeal. The argument may go through for some areas of our knowledge but fail for others. Sher insists on a uniform answer across all domains because she is committed to the idea that general conceptual arguments establish truth as correspondence. This is the reason why she regards truth-as-correspondence as a general requirement on *all* knowledge. I am suggesting that truth-as-correspondence may hold for some areas of knowledge—and it may even accidentally hold for all areas of a community’s knowledge—but it is *not* a general requirement on knowledge.

6. Epistemic Freedom

So, epistemic friction, as Sher characterizes it, is not a general requirement on knowledge. I want to argue that the same holds of epistemic freedom. Epistemic freedom is vitally important to us, but it, too, is not a general requirement on knowledge.

Let us begin by noting that Sher understands the freedom requirement in a strong way: “Active freedom is required in every act of rationality, groundbreaking or quotidian” (15). Let us recall next that Sher characterizes epistemic freedom as freedom to “set up our epistemic goals, . . . , devise strategies, make practical and theoretical decisions.” Now consider a subject X who is not free in Sher’s sense. Imagine that X is attempting to figure out whether a mathematical proposition Q is true, but a demon radically restricts his choices. The demon does not permit X to devise any strategies or to explore any alternative ways of working up a proof of Q . Instead, by subtle psychological interventions, the demon guides X to go through the steps of a proof of Q . Imagine that as a consequence of these interventions, X gains a proof of Q and comes to accept Q . Now, X ’s act of accepting Q is not epistemically free in Sher’s sense. But should we say that X ’s acceptance of Q fails to be rational? Should we reject X ’s claim to know Q on the grounds

that the lack of epistemic freedom undermines the knowledge claim? The answer to both questions is plainly “no.” X ’s claim, Q , is true, and X possesses a perfect justification for affirming Q . So, we should grant that X ’s act of accepting Q is perfectly rational. We should grant also that X knows Q , that the lack of epistemic freedom does not undermine his knowledge claim.

The example can be generalized. We can imagine that the demon’s influence extends to X ’s other cognitive acts, including acts in which X comes to accept empirical claims. We can imagine, furthermore, that the demon’s influence extends to all members of X ’s community. The demon deprives community members of epistemic freedom. Still, the absence of epistemic freedom, individual as well as communal, would not necessarily undermine knowledge. Despite the demon’s interventions, X and other community members may well possess knowledge of various mathematical and empirical matters. For their beliefs may well be true and they may possess completely compelling justifications for their beliefs.

7. Conclusion

I am skeptical, then, of the universality Sher claims for the friction and freedom requirements. There can be no denying, however, that Sher is right that friction and freedom play a vital role in human cognition. In my judgment, she is right also in her contention against deflationists and quietists that the idea of truth-as-correspondence can help us understand our cognitive situation—at least with respect to some if not all subject matters.

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