ORIGINAL RESEARCH

Correspondence pluralism

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Abstract
In this paper I present a pluralist view of truth of a special kind: correspondence-pluralism. Correspondence-pluralism is the view that to fulfill its function in knowledge, truth requires correspondence principles rather than mere coherence, pragmatist, or deflationist principles. But these correspondence principles do not need to be the naive principles of traditional correspondence: copy, mirror image, direct isomorphism. Furthermore, these correspondence principles may vary, in certain disciplined ways, from one field of knowledge to another. This combination of correspondence and pluralism enables us to set high standards of truth for all fields of knowledge while allowing sufficient flexibility to adjust these principles to the special conditions of different fields. In so doing, it provides us with new tools for addressing old as well as new questions about truth: Is there correspondence-truth in mathematics? In ethics? Correspondence with what? What patterns of correspondence? The paper is divided into four parts: (I) Why correspondence? What kind of correspondence? (II) Why pluralism? What kind of pluralism? (III) Applications: mathematics and ethics. (IV) Avoidance of criticisms of other types of truth-pluralism.

In this paper I present a pluralist view of truth of a special kind: *correspondence-pluralism*. Correspondence-pluralism is the view that to fulfill its function in knowledge, truth requires correspondence principles rather than mere coherence, pragmatist, or deflationist principles. But these correspondence principles do not need to be the naive principles of traditional correspondence: copy, mirror image,

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direct-isomorphism. Furthermore, these correspondence principles may vary, in certain disciplined ways, from one field of knowledge to another.[1] This combination of correspondence and pluralism enables us to set high standards of truth for all fields of knowledge while allowing sufficient flexibility to adjust these principles to the special conditions of different fields. In so doing, it provides us with new tools for addressing old as well as new questions about truth: Is there correspondence-truth in mathematics? In ethics? Correspondence with what? What patterns of correspondence? The paper is divided into four parts: (I) Why correspondence? What kind of correspondence? (II) Why pluralism? What kind of pluralism? (III) Applications: mathematics and ethics. (IV) Avoidance of criticisms of other types of truth-pluralism.

1 Why correspondence? What kind of correspondence?

1.1 Why correspondence?

Philosophers are divided in their views on truth. Some say that truth is based on correspondence principles, others that it is based on coherence principles or pragmatist principles or deflationist principles and so on. Given a truth-bearer X, correspondence truth focuses on X's relation to the world, coherence-truth on X's relation to other truth-bearers, pragmatist-truth either on the utility of accepting X as true or on whether X will end up being accepted at the end of inquiry (depending on which version of pragmatist-truth we have in mind), and deflationist-truth on the disquotationality of the truth-predicate.

How do we decide whether truth is based on correspondence principles, coherence principles, pragmatist principles, deflationist principles, or principles of some other kind? One way of deciding this question is to examine the *use* of the truth-predicate in language. Is the truth-predicate used as a correspondence predicate, a coherence predicate, a predicate of some other kind? Another way is to examine the *function* of truth, either in human life in general, or in some central aspect of human life (moral life, pursuit of knowledge, communication, and so on). Furthermore, we can focus either on the property, concept, predicate, norms, or value of truth. And our conception of truth-bearer can also vary: sentence, statement, assertion, theory, thought, belief, cognition, unit of knowledge, proposition, and so on. Similarly, the range of truth-values can vary: truth and falsehood, additional truth-values, probabilistic truth-values. And so on.

In this paper I approach truth from a *functional-epistemic* perspective. My main question is: What is the role or function of truth in the human pursuit of knowledge? At this initial stage I leave open the relationships between the different units of truth (concept, norms, property, value), and I begin with the traditional truth–falsehood dichotomy. What about truth-bearers? For the most part I speak in terms of sentences,

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[1] The idea of correspondence-pluralism discussed in this paper was first raised in connection with the substantivist-deflationist debate (Sher, 1999, 2004). A different conception of correspondence-pluralism, which (due to limitations of space) will be only briefly discussed in this paper, was developed by Horgan (2001) and Barnard and Horgan (2006).

statements, and theories, but many of the things I say in this paper are transferable to other types of truth-bearers as well.[2]

To understand the function of truth in humans' epistemic life, we need to have a basic understanding of human knowledge. Here I start with a few simple, common-sensical observations on *the basic human cognitive-epistemic situation:*

A. For one reason or another, humans—and human civilization—developed in such a way as to *aim at*, value, and devote considerable attention and resources to *knowledge of the world*—knowledge of the world *as it is*, rather than as it is convenient, or advantageous, or pleasing for us to believe it is.[3]

B. Knowledge of the world, however, is not automatic or always easy for humans to obtain. Our *cognitive resources* are considerably *limited* (the world is highly complex relative to our cognitive abilities). We are prone to *error*.

C. At the same time, we do have *significant* cognitive resources, including both innate resources, such as sensory perception and intellect, and resources we acquire in a variety of ways. In addition, we have the ability to take an *active stand* toward the acquisition of knowledge, both on the level of discovery and on the level of justification: we raise questions, design research programs, build research tools, conduct experiments, make calculations, construct proofs, critically examine the results, provide explanations, change our perspective, solve problems, and so on.

The first two observations explain the need for a *concept* and *norms* of *truth.* We need a concept that distinguishes correctness from incorrectness (error) and norms that guide us in detecting and correcting errors as well as seeking further knowledge of the world.[4] *The function,* or one of the central functions, of truth in the human pursuit of knowledge is the *fulfillment* of this *need.* The third observation explains how we can take advantage of the fulfillment of this need: our cognitive resources enable us to *fruitfully use* the concept and norms of truth to advance our knowledge.

Some might ask: Why truth? Why not make do with *justification?* My answer to this question is: (a) Knowledge involves *discovery* in addition to justification, and while truth is an appropriate guide for discovery, justification is not. (b) Justification requires a *norm* or a goal to guide it, and truth plays this role (or an important part thereof) for epistemic justification. Let me explain. Had our main epistemic goal been simplicity or beauty, the norms guiding epistemic justification would have been pragmatic or aesthetic. But assuming the basic cognitive-epistemic situation delineated above, the main (or a very central) epistemic goal is knowledge of the world as it is, and the main (or a very serious) problem is error. This implies that the main norms we need to guide epistemic justification are norms of truth (correctness). Which norms of truth—correspondence norms, coherence norms, pragmatist norms, deflationist norms?

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[2] The discussion of how to deal with things that are not transferable will have to wait for another paper.

[3] (i) Here, "the world as it is" is not philosophical a term-of-art (denoting, e.g., a Kantian thing-in-itself). It is to be understood in its common-sensical meaning. More will be said about its scope as we proceed.

(ii) The observation is not that each and every human, or human community, values the pursuit of knowledge, but that human civilization as a whole values it (as reflected not only in its investment in this pursuit but also in the high regard in which it holds its leading practitioners: Aristotle, Newton, Darwin, Einstein, and others).

[4] In this paper I use "correctness" for the pre-theoretical notion, and "truth" for the theoretical notion. But my holistic approach (see below) denies the idea of absolute priorities.

To the extent that the goal is knowledge of the world *as it in fact is,* the norms of truth are *correspondence* norms, norms that focus on the relation between truth-bearers and their target in the world rather than on a relation among truth-bearers themselves (coherence), or on pragmatic features of truth-bearers, or on linguistic traits of the truth-predicate. This is not to say that unity, pragmatic utility, or certain features of language are not important. They are. But the norms of unity and pragmatic utility are different from the norms of truth, whose function is to guide the acquisition of *correct* knowledge of the world, knowledge of the world *as it is*. It is for this reason that the norms of truth are correspondence norms rather than coherence or pragmatic or merely deflationist norms.[5]

But what, exactly, is correspondence-truth, from the perspective of its function in knowledge? Before turning to this question, let me address a question that some readers may have at this point. I have been talking about the concept and norms of truth. But what about the property of truth? Do I not recognize a property of truth? And if I do recognize such a property, how is it related to the concept and norms of truth? Is the property of truth not prior to the concept and norms of truth?

I do recognize a property of truth. But I regard it as neither prior nor posterior to the concept and norms of truth. I regard the concept, norms, and property of truth as *interconnected.* A theory/sentence has the property of being true iff it satisfies the norms of truth; the concept of truth denotes the property of truth[6]; the norms of truth reflect the content of the concept of truth and vice versa. An analogy to *justice* may be helpful here. There are a concept of justice, norms of justice, and a property of justice. An act or a policy has the property of being just iff it satisfies the norms of justice; the property of justice is denoted by the concept of justice—the concept associated with the norms of justice. Concepts, norms, and properties are interconnected. There is no need to order them in an absolute relation of priority.

In approaching concepts, norms, and properties in this way, I employ a holistic methodology. Holism means different things to different philosophers. To some,

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[5] (i) Someone may ask whether correspondence is available to humans, suggesting it may not be. As we shall see below (remainder of Section I and Sections 2,3), the *non-naive* kind of correspondence intended here *is* available.

(ii) In this paper I understand correspondence in general as the view that a sentence is true iff (if and only if) what it says about the world holds in the world as it in fact is. It follows from the explanation of the function of truth based on the basic human epistemic situation that the concept and norms of truth we need are correspondence rather than coherence or pragmatist concept and norms. Other theories of truth may also view truth in this way but object to the correspondence theory of truth on other grounds. It is important to recognize, however, that these theories do not consider the "non-naive" version of the correspondence theory developed here, and their objections do not apply to this theory. In this connection, see the last paragraph of this paper.

(iii) Note that strictly speaking there is no such thing as incorrect knowledge of the world. However, coherentists and pragmatists understand correctness (truth), hence knowledge, in a weaker way than I understand it. It is in this context that I say that knowledge requires correctness in the strong sense of "knowledge of the world as it is".

[6] Terminology: In this paper I use "denotes" to indicate the relation between (i) concepts and linguistic expressions (of all kinds) and (ii) the objects, properties, ideas etc. they stand for, express, refer, etc.

holism means *wholism*, namely, the view that the smallest unit of knowledge or meaning is our body of knowledge/language as a *whole*.[7] This is not the kind of holism I have in mind here. The present kind of holism is *foundational* or *structural*.[8] This kind of holism is similar in certain respects to Quine's holism of *interconnectedness* (see last section of Quine, 1951), but it goes beyond it in certain respects.

First, the present kind of holism does not limit the interface of our body of knowledge with the world to sensory perception. It allows the possibility that *intellect*, too, plays a substantial role in both discovery and justification. By "intellect" I mean here, primarily, the activity of *figuring out* rather than *pure intuition.* Figuring out need not be immediate, and while it is primarily non-sensory, it may help itself to sensory resources. Figuring out is an activity that humans engage in at all ages and in all areas of life. Babies figure out things all the time, a technician figures out what is wrong with my computer and how to fix it, Gödel figured out that mathematics and full 2nd-order logic are incomplete, chemists figured out the structure of DNA, and so on.

Second, interconnections, in the present version of holism, occur on *multiple levels:* not just on the level of units of knowledge/language—theory-theory (sentence-sentence) connections—but on other levels as well. Two of these are the mind-world level and the world-world level. Here we have theory-world (sentence-world) connections and world-world connections. *Theory-world* connections stand at the *center* of present version of holism: There are multiple ways for theories to reach the world, that is, humans can reach the world through multiple cognitive routes. Theory-theory and world-world connections enter into the picture because they contribute to theory-world connections. To acquire knowledge of a facet F_1 of the world, a theory T_1 can utilize its connections with another theory, T_2, that also studies some aspects of F_1 or has ramifications for F_1. And it can also use connections between F_1 and another facet of the world, F_2, which we already know, either directly or indirectly, e.g., through connections with a theory T_3 which studies F_2.

Third, the present version of holism is *structural*. It does not say that *all* units of knowledge are interconnected, or that units of knowledge are *indiscriminately* connected (connected to the same degree and in the same way). Rather, it says that there are multiple significant connections between different units of knowledge, and these interconnections are selective, different in kind, and, when useful, structured.

But while structural holism differs from other types of holism in certain significant ways, it shares some of the typical features of holism, such as the Neurath boat metaphor. Neurath's boat, on the present construal, is a research boat, a Beagle or a Victoria, studying the sea and its environs, i.e., the world. The acquisition of knowledge is an active, dynamic process: asking questions, conjecturing, making decisions, testing, acting in a variety of ways. There is no Archimedean standpoint: The sailors are always at sea. There is no shore with absolutely reliable facilities to repair the boat before launching it back to sea. To fix a hole in the boat, the sailors move back and forth, using resources available here and now to temporarily patch the hole. Once they

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[7] Some philosophers, such as Dummett (1973, 1973/81) and Fodor and Lepore (1992), attribute this kind of holism to Quine on the level of meaning; others, such as Glymour (1980) and perhaps Grünbaum (1960), attribute it to him on the level of knowledge.

[8] It is foundational because it can be used in foundational projects in philosophy that eschew foundationalism (see Sher 2016), but here I focus on its structurality.

do, they continue their journey. And when, in the course of studying the world, they acquire new resources, they re-patch the hole. At each point in their investigations, they rely on what they have, i.e., take something as given. But they do not take the same thing as given at all times. Everything is open to critical examination. Nothing is absolutely prior to anything else.

Our next step is to explain what is meant by "correspondence".

1.2 Non-naive correspondence

The epistemic function of truth is determined by the basic human cognitive situation. This situation involves humans' desire to know *the world as it is*, their cognitive limitations which make them prone to error, and their cognitive capacities and initiative which enable them to discover and correct some of their errors. It is because of these that they need, and can make use of, a concept and norms of *truth* and that these concept and norms are *correspondence* concept and norms.

This basic human cognitive-epistemic situation further determines the structure of correspondence-truth, a structure that is far richer than, and quite different from, the *naive* and *simplistic* structure attributed to it by traditional correspondence theory: copy, mirror image, or direct-isomorphism. In the remainder of Sect. 1 I will discuss the *general structure* of correspondence-truth, and in Sect. 2 I will turn to its *specific patterns* in diverse fields.

The *general setting* for correspondence-truth consists of (i) the world, and (ii) the human pursuers of knowledge of the world.

(i) *The World* Philosophers are accustomed to saying that the world is *completely independent* of humans and their minds. And indeed, many facets of the world have nothing to do with the existence of humans and their cognitive activities: stars and galaxies, mountains, valleys and planes, and so on. But other facets do. First, humans themselves, as well as their cognitive activities, are part of the world. Second, things humans generate, such as artifacts (tables, microscopes, space stations), human desires, ideas, concepts, norms, languages and their components (sentences), theories, etc. are also part of the world. The world is thus *partly*, but *not completely*, independent of humans and their cognitive activities. For the purpose of this paper, there is no need to determine the precise boundaries of the world. Most of what we say here applies to multiple delineations of these boundaries.

(ii) *The human pursuers of knowledge* Although the human pursuers of knowledge are part of the world, they also stand *against* the world: they are actively engaged in a cognitive activity *directed* at the world; they seek to *know* the world and their thoughts and actions have the world *in view*.

It is in this context that humans set out to create a concept and a norm of correspondence-truth.[9] But to create a concept and norms of correspondence-truth,

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[9] Clarification of the way the above discussion answers the question "what, exactly, is correspondence-truth, from the perspective of its function in knowledge?". The correspondence theory of truth, as I understand it in this paper, requires a systematic account of the connection between sentences and the world that captures

at least three fundamental conditions have to be satisfied. I call these conditions "immanence", "transcendence", and "normativity".

1.3 Three fundamental conditions on truth

1.3.1 Condition 1: immanence

For a full-fledged correspondence-truth concept to arise, humans need to be able to direct their cognitive gaze at the world and say that the world is so and so: object o in the world has property P, objects o_1 and o_2 in the world stand in relation R, property P of objects in the world has feature (property) F, and so on.[10] The concept and property of truth are *immanent*.

The caption "immanence" is inspired by one of Quine's uses of "immanence": to speak immanently is to speak in the way we speak from within a theory, i.e., speak about the world, or some facet of the world. The concept of immanence is also related to Tarski's (1933) concept of object language and to Kripke's (1975) first stage in the construction of language.[11]

1.3.2 Condition 2: transcendence

Immanence by itself, however, is not sufficient for truth. In directing our cognitive gaze at the world we form a view of how the world (a particular facet of the world) is, but the issue of truth (correctness) does not yet arise. For truth to arise, we need to transcend our immanent standpoint to a point from which we can see both the world and our immanent thoughts (statements, theories) about it and check whether they are correct. To arrive at truth, then, we need to be capable not just of an immanent standpoint (mode of cognition), but also of a transcendent standpoint (mode of cognition).

To prevent misunderstandings, let me clarify a few points:

(a) By "a transcendent standpoint" I mean a *human* transcendent-standpoint rather than a Godly transcendent-standpoint (a God's eye view). An example of a human transcendent-standpoint is the standpoint of a Tarskian meta-language.

Footnote 9 continued

the idea, noted above, that a sentence is true iff what it says about the world holds in the world as it in fact is. One task is to explore the forms this connection takes. I treat this as an open question that requires philosophical work in order to answer. In answering this question, we are not bound by the traditional answers (which I regard as naive) to this question. Nor are we bound to the traditional view that the details of this structure are exactly the same for sentences in different fields of knowledge. We also take it as an open question whether a given field is truth-apt. In the above paragraph I described my view on the two basic components of the correspondence relation—mind and world. Later on in the paper I will make two initial steps toward further describing the structure of the correspondence relation. Specifically, I will make initial steps toward delineating a pattern of correspondence that holds in mathematics and a pattern of correspondence that holds in ethics. This is not intended to be the end of the investigation, but it suffices to distinguish the present theory from other theories discussed in the literature.

[10] Using the terminology of objects, properties, and relations is not essential, but for the sake of simplicity I adopt this familiar terminology in this paper.

[11] For expanded accounts of immanence, see Sher (2004, 2016). For the relation to Tarski and Kripke, see Sher (2023a).

This standpoint gives us a view both of the world and of our statements about it, but it is a human standpoint.

(b) "Transcendence" in the sense relevant to truth is not essentially connected with the metaphor of "viewing from above". It can just as well be captured by the metaphor of "sideways view".[12] However, truth-transcendence, as it arises from the basic human cognitive-epistemic situation, is an ordering relation: a strict partial ordering—anti-reflexive, anti-symmetric, and transitive. Furthermore, it is an ordering with minimal elements (some sentences are immanent but not transcendent), and each element in the ordering is connected to some minimal element(s) in a finite number of steps. This reflects a natural order of the pursuit of knowledge. The pursuer of knowledge starts by directing her gaze at some facet of the world. This is the minimal stage of pure immanence. Then she transcends this standpoint to a human transcendent viewpoint from which she views both the given immanent sentence and the facet of the world it is directed at. This immanent sentence is not directed at the transcendent sentence, hence, there is no symmetry, and it is not directed at itself either, hence there is no reflexivity. But because the question of truth (correctness) applies to all immanent statements, including immanent-transcendent statements, truth-transcendence is transitive. Finally, because of the finiteness of human life,[13] each transcendent statement stands in a finite distance to the purely immanent statement it is transcendent to.[14]

(c) Every immanent statement can be transcended to a (human) transcendent standpoint.

(d) Transcendence is relative to a given immanent standpoint.

(e) A statement made from a transcendent standpoint (relative to a given immanent standpoint) is a transcendent statement (relative to statements made from the given immanent standpoint).

(f) Most transcendent statements are also immanent. For example, the statements "S is a three-words sentence" and "S is true", where S is a given immanent statement, are transcendent immanent statements. They are transcendent to S, but since S is part of the world, they are also immanent statements: they attribute a property to something in the world.

1.3.3 Condition 3: normativity

By themselves, however, immanence and transcendence are still not sufficient for truth. Truth is a normative property; transcendence is not. From a transcendent standpoint

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[12] As in McDowell (1994).

[13] Which, in the present context, is a condition of well-foundedness.

[14] (i) These features block the semantic paradoxes as well as vacuous sentences such as

(T)   T is true.

Note, however, that here transcendence and its order are not ad hoc. The avoidance of paradoxical and vacuous sentences is not what motivates these features. Rather they are integral to our understanding of the inner structure of truth.

(ii) Our goal is not to simulate the exact use of "true" in natural language, but to offer a critical account of truth that allows us to express truth-apt contents in one way or another.

we can attribute to a sentence S both normative and non-normative properties. For example, we can attribute to it the non-normative property of having three words, or the normative property of being right about the world. Truth is normative and requires a normative mode of thought: a mode of thought in which we critically evaluate a given sentence for success in telling us how the world in fact is.[15]

1.4 The fundamental principle of truth

To have an adequate concept and norms of truth, humans have to be capable of having (i) immanent, (ii) transcendent, and (iii) normative modes of thought. Based on this, we also say that the concept (property) of truth is immanent, transcendent, and normative. This is the general structure of correspondence-truth on the present functional-epistemic view. I call the principle of the immanence, transcendence, and normativity of truth "the fundamental principle of truth". This principle says:

(a) The concept (property) of truth is immanent, transcendent, and normative.
(b) An adequate concept and norms of truth require immanent, transcendent, and normative modes of thought.

Needless to say, the fundamental principle of truth is not the only principle of truth. But it affects its other principles. For example, it constrains the equivalence principle. The equivalence principle now says:

(EQ) For any properly immanent truth-bearer X:
    "X" is true iff X,

where "properly" indicates satisfying the immanence condition (the immanence and transcendence conditions if X is a truth sentence).

To further understand the structure of non-naive correspondence, we need to proceed to pluralism.

2 Why pluralism? What kind of pluralism?

We have seen why the concept, norms, and property of truth are of the correspondence kind: this is required by the function of truth in the human pursuit of knowledge.

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[15] The normativity of truth is a debated issue today. There are important discussions (by Horwich 1990/8, Wright 1992, Engel 2001, Lynch 2004, Wrenn 2015, Ferrari 2022, and others) about whether truth, by its very nature, is normative and in what sense, whether the value of truth is merely instrumental, etc. I am unable to engage in the rich literature on these issues here. Very briefly, however, my view is that truth is highly normative. Constitutively, truth statements are normative, as we have just seen. Epistemically, the source of the normativity of truth is the tension between the goal of knowledge and the predicament of error. Valuing knowledge for its own sake implies valuing truth, too, for its own sake and not just instrumentally. The norms of truth are of two kinds: norms that apply to humans and norms that apply to truth-bearers. The former include such norms as: Search for the truth and tell the truth; be willing to expend effort on finding the truth about significant matters. The latter say that our theories and sentences should attribute to the world (or to objects in the world) properties it has (they have), not properties it does (they do) not have. The norms of truth are not the only norms that humans are subject to; sometimes the norms of truth conflict with other norms. Accordingly, these norms are not absolute. For example, one is exempt from the duty of telling a dying child the truth about her situation in order to spare her unnecessary fear and sadness.

We have also identified a central structure of correspondence-truth: the threefold structure of immanence, transcendence, and normativity. This structure is common to correspondence-truth in all fields. Why, then, correspondence-pluralism? Because how sentences and theories correspond to the world may vary according to (i) the kind of facet of the world they are directed at, (ii) how the human mind reaches this facet, and (iii) features of the language used to formulate these sentences and theories. Different combinations of (i)–(iii) may result in different patterns of correspondence for different fields. And the more complex and less direct the fit between (i), (ii), and (iii) is, the more complex and less direct the appropriate pattern of correspondence in that field is likely to be.

In the next section we will discuss the patterns of correspondence in two fields which are widely thought to be problematic with respect to correspondence: mathematics and ethics. First, however, let me say a few words about the similarities and differences between the present conception of truth-pluralism and two other conceptions, one due to Terence Horgan and his collaborators and the other due to Crispin Wright and Michael Lynch.

2.1 Horgan and Barnard's correspondence-pluralism

Horgan (2001) and Barnard and Horgan (2006) argue that for a sentence to be true it has to be systematically tied to reality, but it does not have to be tied to reality directly; it can be tied to it indirectly as well. According to Horgan, for example, the singular term "Beethoven" is connected to the world directly, by referring directly to the person Beethoven, while the singular term "Beethoven's fifth symphony" is connected to the world indirectly, by a pattern that connects it to the person Beethoven and his musical behavior as well as to other persons and their musical behavior. This allows us to establish correspondence-truth even in areas where there is no direct correlation between singular terms and individuals in the world, thus expanding correspondence-truth to discourse where it might be thought to be problematic.

Horgan, however, subjects correspondence-truth to strict naturalistic requirements. For example, he rules out correspondence-truth in fields like mathematics. While we can extend correspondence-truth to cultural discourse by connecting abstract cultural singular-terms such as "Beethoven's fifth symphony" to physical objects and behaviors, we cannot extend it to mathematical discourse by connecting mathematical singular terms (or other mathematical terms) to physical objects (of any kind). Mathematical truth, according to Horgan, is not correspondence-truth; mathematical truth is purely conventional.

While Horgan's and Barnard's pluralism is similar to the present pluralism in allowing indirect patterns of correspondence, thereby expanding correspondence beyond the narrow boundaries of physical discourse, Horgan (2001) differs from it by being committed to naturalism. The present version of correspondence-pluralism is not committed to naturalism (or any other philosophical ideology). It extends to fields like mathematics and ethics without being committed to either naturalism (understood as radical empiricism) or Platonism, as we shall see in Sect. 3.

2.2 Wright and Lynch's truth-pluralism

Wright (1992), followed by Lynch (1998, 2004, 2009), divides the principles of truth
into two kinds: general principles that hold in all fields of truth, and special principles
that vary from one field of truth to another. How truth varies from field to field is an
open question, free of extraneous commitments—to naturalism, idealism, rationalism,
or some other ideology. In all these ways Wright and Lynch's pluralism is (mutatis
mutandis) similar to the present pluralism. But there are two major differences between
them: a difference concerning the *character of the general principles*, and a difference
concerning *what changes from field to field*.

2.3 First difference

Both Wright and Lynch limit the general principles of truth to *platitudes*. What, exactly,
"platitude" means is unclear. For the purpose of the present discussion, it is sufficient
to note that the general principles are said to be "minimalist" in the sense that there
is no room for a lengthy substantive account of these principles, there are no difficult
questions concerning these principles, and they do not go beyond what most theories
of truth (or "the folk") standardly say (or believe) about truth. The platitudes are brief
truisms about truth, such as "to assert is to present as true", "any truth-apt content
has a significant negation which is likewise truth-apt", "a statement may be justified
without being true, and vice versa", and so on (Wright, 1992, p. 34). In contrast,
the truth-pluralism presented here allows that the general principles of truth are, or
include, substantive (non-minimalist, "non-folk") principles which require a lengthy
(rather than a one-sentence) account, that there are difficult questions (questions that
require much effort and ingenuity to answer) concerning these principles, that these
principles are the subject of deep controversies, that some of these principles are new
(unfamiliar to "the folk" and do not appear in existent theories of truth), and so on.
The fundamental principle of truth is (or may be further developed into) an example
of a new, substantive, non-minimalist, general principle.[16]

2.4 Second difference

According to Wright and Lynch, the special principles or types of truth, those that vary
from one field to another, are associated with competing philosophical conceptions
of truth, such as the correspondence, coherence, and pragmatist conceptions. For
example, truth in everyday physics may be based on correspondence principles, truth

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[16] A few reasons the fundamental principle of truth is not platitudinous:

    (a) It has a richer content than the truth platitudes.

    (b) It is a new principle that adds new elements to the existent discussion of truth and was introduced
into the literature on truth only recently (Sher 2004, 2016). As such it is not known by all or even most
philosophers, let alone non-philosophers, or automatically accepted by all, and it is definitely not a well-
known "truism" or a "folk" principle.

    (c) While the account of the principle given here is brief, reflecting its limited place in the paper as a
whole and the limited space allotted to the paper itself, its expanded versions present it as open to multiple
questions that require substantive answers.

in mathematics on coherence principles, and truth in the comic domain may not go beyond the general minimalist principles. In contrast, according to the present theory, all truths, in all fields, are based on correspondence principles. It is only the patterns of correspondence that may differ from field to field.[17]

Let us now turn to the correspondence patterns in two fields in which correspondence is widely thought to be, and naive correspondence indeed is, problematic.

3 Applications: mathematics and ethics

How do we determine whether a given field X, such as physics, mathematics, or ethics, is truth—correspondence-truth—apt?[18] First, we consider the world. We ask: Is there something in the world that requires X (or a field similar to X, or part of field X) to study it? If the answer is positive, field X (or a field similar to X, or part of field X) is truth-apt. If the answer is negative, field X is not truth-apt.

What is the correspondence pattern of a given truth-apt field X? The correspondence pattern of X depends on several factors, including the world, our cognitive access to the part of the world studied by X, and language. To determine the correspondence pattern of truths of X, we thus ask: (a) What part, Y, of the world does X study? What do X-truths correspond to in the world? (b) How do we (can we, would we best) cognitively access Y? (c) What linguistic (mental) resources do we have to say things (speak, think) about Y and how do we (can we, would we best) use these resources to say true things about Y (elements/aspects of Y)?

In examining truth in mathematics and ethics I will take as an initial point of comparison everyday discourse on the physical world (i.e., sentences such as "Everest is a mountain"). I will assume such discourse is truth-apt, its target in the world is straightforwardly accessible (using sensory perception plus basic intellectual operations), and its pattern of correspondence simple and direct, exhibiting a familiar syntax-semantics parity relation: singular terms denote individuals directly, 1st-level predicates denote properties[19] of individuals directly, or have sets/classes of individuals as their direct extension, etc. This simple conception of the relation between language and the world is often taken for granted. Here we take it as applicable to certain simple contexts, but below we show that it should not be taken as normative for all contexts, including most theoretical contexts.

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[17] I should indicate that Wright and Lynch too have *general* and *special* correspondence principles, though only one of each: there is a general, minimal correspondence principle which says that "to be true is to correspond to the facts" (Wright 1992, p. 34), and a special, substantive, correspondence principle which holds in certain fields of truth but not in others. In contrast, in the present account, the general (correspondence) principles are, or at least may be, substantive, and the special principles are all correspondence principles, varying only in the patterns they assign to diverse fields.

[18] In this section "truth"/"true" will always stand for "correspondence-truth/true". (In identifying truth with correspondence I reject Frege's (1918) claim that the two cannot be identified since correspondence is a relational term while truth is not).

[19] Depending on the context, I use "property" to denote both proper properties and relations.

3.1 Mathematical truth

Our first question is: Is there anything in the world that requires a field like mathematics to study it? Does the world have formal or mathematical features? The answer to this question is quite clearly positive. Many objects and situations in the world have formal features. And beings like us, who want to know and understand these features in their full complexity and generality, including the laws governing them (or regularities they exhibit), need something like a mathematical discipline to study them. As an example, consider the real world situation of people sitting in a room (possibly a classroom). Each person has many properties[20]: it is a person, it has body parts, it has a certain eye color, and so on. None of these are formal or mathematical features. But the people in the room, and some of their properties, have formal or mathematical features as well. Each person is identical to itself and different from all the other persons in the room, the property is-a-person-in-the-room has a certain cardinality, the property (relation) sits-next-to has the formal features of being non-reflexive, symmetric, and non-transitive (assuming there are at least three persons in the room sitting next to each other), and so on.[21] All these features are part of the reality of this room, and to study the properties and laws governing these features we need something like a mathematical field of knowledge.[22]

Indeed, it is reasonable to surmise that studying such formal features and their laws is one of the things that mathematics, or some of its branches, do. Arithmetic, for example, studies finite cardinalities, and set theory studies all formal properties. Since, as we have just seen, formal properties (such as cardinality properties, reflexivity, symmetry, transitivity, and many others) are real, the mathematical theories studying them and their laws, and mathematical sentences more generally, are truth-apt in the correspondence sense.

How does the truth-aptness and worldly orientation of finite mathematics extend to transfinite mathematics? Due to their special features, such as their especially high degree of invariance,[23] formal properties abstract from (do not pay attention to) most features of physical objects, including their physicality. Accordingly, formal laws abstract from these features as well. In this sense, their scope exceeds that of all actual physical objects (or even all physically-possible objects). And this affects the ways in which we can adequately express them. One way to adequately express formal

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[20] (i) The term "property" is used here in its everyday sense, not as an ontological term-of-art. Accordingly, it does not involve ontological commitment to properties in some specific metaphysical sense. I use this term largely for the sake of simplicity and familiarity.

(ii) It is sometimes thought that substantiveness in the field of truth is centered on the ontology of properties, but I diverge from this view. There are many other substantive things to say about truth besides the ontology of properties, in my view. Ontology, for me, comes after we have clarified substantive features of truth, not before. (For further discussion, see below as well as Sher, 2023c).

[21] In speaking about mathematical properties, I use the languages of arithmetic and standard set-theory largely for the sake of simplicity and familiarity, but the same ideas could in principle be expressed in other terms.

[22] I allow that studying real formal properties and their laws is not the only task or goal of contemporary mathematics. But it is this task that I focus on here.

[23] For invariance and formality, as well as related issues such as formal possibilities, see Sher (2016, 2021, 2022, 2023b).

laws (to express them in complete generality) is to posit a sufficiently large domain of mathematical objects and formulate the formal laws as holding in this entire domain. We may think of this domain as representing all formal possibilities.[24]

We have seen that mathematics is *truth-apt* in the *correspondence* sense but to express its laws, or truths, in full generality we may need an elaborate apparatus. Next, let us turn to the *pattern* of correspondence at work in mathematics, including its elementary parts. Traditionally, philosophers assumed that if there is correspondence-truth in mathematics, it is based on the simple syntax-semantics parity principle described above: numerals (of linguistic level 0) denote mathematical individuals, i.e., numbers (ontological level 0), predicates (of linguistic level n, n > 0) denote mathematical properties (ontological level n). To the extent that contemporary mathematics is partly 1st-order (i.e., its non-logical constants are of levels 0 and 1), this conception of mathematical truth involves ontological commitment to mathematical individuals and their properties, and this, in turn, is often understood as commitment to a Platonic world of mathematical individuals, distinct from the physical world with its physical individuals.

This standard conception of mathematical correspondence, however, raises serious problems. Two of these are: (i) lack of evidence for the existence/reality of mathematical individuals, (ii) the applicability problem which arises from breaking reality into two disjoint realities: physical and Platonic. The applicability problem is the problem of how mathematical laws, which on this conception govern/describe one reality (Platonic reality), can apply to another, altogether different reality (physical reality). These problems have led philosophers to such views as (a) There is no correspondence-truth in mathematics, or (b) All mathematical sentences/theories are correspondence-false (the so-called error theory of mathematical truth).

These views, however, are countered by the observation, made above, that the world has (that individuals and properties in the world, be they physical or non-physical, have) formal or mathematical features, and that mathematics, or significant parts of it, study these features and the laws governing them. This suggests that mathematics *is* correspondence-truth apt and that mathematical correspondence does not involve commitment to a Platonic mathematical reality with its own unique individuals. Mathematical correspondence is compatible with the view that there is just one world, with formal and physical features. Physical objects—individuals and properties—generally have both features, and this explains why and how mathematics applies to these objects. If this is right, it points to one way in which the view we propose is highly explanatory: it offers a straightforward solution to the stubborn problem of the applicability of mathematics to physics (Wigner, 1960; Steiner, 1998, and many others).

What pattern of correspondence is available for mathematics? Our observations concerning mathematical reality suggest that the mathematical features of objects (individuals and properties) in the world are for the most part of level ≥ 2, i.e., properties of properties. For example, the lowest level of cardinality properties is 2. Accordingly, we have two options: (i) reformulate our mathematical theories as higher-order theories and assign to them the usual correspondence pattern associated

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[24] In this way, even the highest reaches of set theory express real formal laws. Set theory, on the present conception, studies the formal laws holding in all formally-possible situations, where these are represented by an unending transfinite collection of structures or sets.

with higher-level reference and satisfaction, (ii) continue formulating them as 1st-order theories and adjust their correspondence pattern. What may motivate us to opt for (ii)? One motivation has to do with our cognitive makeup. It is quite reasonable to presume that our cognitive makeup is such that we are better at, more effective in, more comfortable with, or simply more accustomed to figuring out things when we think about them in lower-level terms, i.e., in terms of individuals and their properties, rather than in higher-level terms, that is, in terms of properties of individuals and their properties (and properties of those, and so on). This would explain why, in spite of the fact that we have greater evidence for the reality of the formal (mathematical) on the level of properties of properties of individuals, we tend to think about the formal and formulate mathematical theories in lower-level terms. This would be problematic if we demanded that the correspondence pattern is the traditional direct pattern, but it is not problematic if we allow the correspondence pattern to be indirect. We can posit mathematical individuals and connect mathematical singular terms to 2nd-level mathematical properties through these posits.

3.1.1 Indirect mathematical correspondence

Consider the 1st-order sentence "$1 + 2 = 3$". An indirect correspondence pattern for this sentence that adequately captures its connection to the world involves the following reference, satisfaction, and truth conditions.

Reference condition   The numeral n (ranging over "1", "2", "3", …) refers to the (2nd-level) cardinality property N (ranging over ONE, TWO, THREE, …) in two steps: (i) n refers to the 1st-level individual posit *n*, (ii) *n* is correlated with the (2nd-level) cardinality property N.

Satisfaction condition   The (1st-level) functional relation $+$ is satisfied by *<1, 2, 3>* iff the (3rd-level) functional relation of DISJOINT UNION is satisfied by <ONE, TWO, THREE> . This satisfaction condition also proceeds in two steps: (i) "+" is satisfied by the triple of mathematical posits *<1, 2, 3>* iff the sum of *1* and *2* is *3*, (ii) the sum of *1* and *2* is *3* iff the DISJOINT UNION of ONE and TWO is THREE.

These lead to the indirect correspondence truth condition of mathematical statements:

Indirect correspondence truth condition   "$1 + 2 = 3$" is true iff the DISJOINT UNION of ONE and TWO is THREE. This condition, too, proceeds in two steps: (i) "$1 + 2 = 3$" is true iff the sum of the mathematical posits *1* and *2* is *3*, (ii) The sum of the mathematical posits *1* and *2* is *3* iff the DISJOINT UNION of ONE and TWO is THREE.[25]

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[25] Clarifications:

(a) The reason 1st-order mathematical correspondence is not simply direct correspondence with facts about posited mathematical individuals is that this is only one part of mathematical correspondence, according to the present view. The second part is the correlation between facts about (non-real) posited individuals and facts about (real) formal properties. If we want to have a thorough understanding of the present view of mathematical correspondence, the second part cannot be eliminated.

There is much more to say about mathematical correspondence, but the main idea should be clear.[26]

3.2 Moral truth

Our first question here is: Is there something objective in the world for moral statements/theories to be true or false about? To set the ground for answering this question, let us return to our discussion of the "world" in Sect. 1. There we said that the common truism that the world is *completely* mind-independent is overly naive. Humans themselves, including their minds, the artefacts they build using their minds, their feelings, thoughts, ideas, theories, concepts, values, and norms—all involving their minds—are part of the world, either directly or indirectly, i.e., parts of humans' (real) life in the world. This does not depend on whether they are eventually reducible to mind-independent physical objects or not. Therefore, the world is *not completely* mind-independent.

Why do many philosophers require complete mind-independence, then? Mind-dependence is often equated with subjectivity, and as such is viewed as incompatible

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Footnote 26 continued

(b) The reason 1st-order mathematical correspondence is not direct correspondence with facts about higher-level formal properties is that we need to distinguish truth in 1st-order mathematics from truth in higher-order mathematics. The former uses singular mathematical terms; the latter does not. This difference is reflected in the difference between the indirect character of reference and correspondence in the former system, their direct character in the latter. Why is this difference important? Because the fact that humans tend to think of mathematics in 1st-level terms rather than in higher-level terms is philosophically significant. As noted above, this has to do with humans' cognitive make up, which, on the approach described in this paper, is relevant for understanding their (our) concept of truth. The possibility of a 1st-level language reaching facts about higher-level features of reality indirectly is philosophically significant.

(c) Note that the explanation of mathematical correspondence in the example in the text is given in higher-level terms (marked by capital letters): "DISJOINT UNION", "ONE", "TWO", and "THREE". As such, it does not involve commitment to mathematical individuals.

[26] Still, let me address two points.

(a) A relevant context for the present account of mathematical correspondence is Benacerraf's (1973) paper, "Mathematical Truth", which has dominated the discussion on mathematical correspondence since then. In the opening to his paper Benacerraf says: "It is my contention that two quite distinct kinds of concerns have separately motivated accounts of the nature of mathematical truth: (1) the concern for having a homogeneous semantical theory in which semantics for the propositions of mathematics parallel the semantics for the rest of the language, and (2) the concern that the account of mathematical truth mesh with a reasonable epistemology." (1973, p. 661) Benacerraf's (1) is what I call in this paper "the principle of syntax-semantic parity". Benacerraf is worried that satisfying both (1) and (2) is impossible, yet he still insists on both. The present account renounces (1), introducing indirect reference and correspondence in mathematics. This indirect correspondence is both systematic and pays attention to the form mathematics takes in the world (our one world, not some platonic world), as cognized by us. As such it meets the concern expressed by Benacerraf's (2).

(b) I recognize, of course, that some philosophers object to mathematical realism. However, the existent objections do not take into account the view of mathematical reality presented here. These objections deny the reality of mathematical individuals, but on the present view, the reality of mathematics consists not in the reality of mathematical individuals but in the fact that real individuals and their properties have formal properties, such as identity and difference, cardinality properties, properties like reflexivity, symmetry, and transitivity, and so on. I have not heard objections to such facts as that the cardinality of the physical property *is-a-moon-of-Earth* is in fact, or really, ONE. This, and similar facts, are what I mean when I talk about mathematical reality as a basis for (non-naive) correspondence-truth in mathematics. If, and when, objections to this view of mathematical reality arise, I will of course consider them.

with the objectivity of the world. But this view, too, is overly simplistic, as was aptly argued by Railton in "Subject-ive and Objective" (1995). Railton coined a new term, "subject-ive", which he distinguished from "subjective":

> Let us coin the technical term 'subject-ive' (with a hyphen) [as distinct from 'subjective' (without a hyphen)] to express the notion of that which is essentially connected with the existence or experiences of subjects, i.e., beings possessing minds and points of view, being capable of forming thoughts and intentions. [*Ibid:* 263]

"Subject-ive" does not have the connotation, associated with "subjective", of "a domain without standards, where arbitrary opinion takes the place of judgment" (*ibid*., p. 264). Not all objective things are subject-ive, and not all subject-ive things are objective, but some objective things are subject-ive (some subject-ive things are objective). For example: moral values, according to Railton, are both objective and subject-ive, i.e., they are objective yet not mind-independent. Reality requires objectivity, but not complete mind-independence.

I think this is a significant key to the correspondence-truth aptness of ethics and to the special pattern that correspondence takes in this field: correspondence between *true moral statements* and relevant *objective moral values* (which are usually not mentioned in these statements). To flesh out this idea we need to (i) account for the objectivity of moral values, and (ii) describe the pattern of correspondence between moral truths and moral values. Intuitively, one might expect (i) to precede (ii), but in fact it might be better to attend to (ii) before turning to (i). The reason is that the same account of moral correspondence may be compatible with multiple conceptions of objective moral values, hence independent of any particular conception. If this is the case, then to tie moral correspondence to a particular conception of moral values is to distort it.

3.2.1 Moral correspondence

For the sake of simplicity, I will focus on the morality of human actions and on the truth of sentences of the form "'Human action X is moral' is true". For the purpose of the present discussion, I will use *saving human life* as an example of a moral value.[27]

Under what conditions are human actions moral, immoral, moral-neutral? My proposal is[28]:

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[27] I will allow that, depending on the circumstances, other moral values may restrict or even override the relevance or applicability of this value. For example, in some cases (e.g., Eichmann) the life of a person ought not to be saved, or under certain circumstances (e.g., a terminally sick patient) a person's request to not save his life ought to be granted. I will also allow that there are conflicts between values that need to be adjudicated in one way or another.

[28] (i) Note that although the entries (a)-(c) below are formulated in short sentences, they are not platitudes about truth. First, they are not familiar truisms or "folk" sayings about moral truth, and second, they are brief formulations of ideas that can, and should, be further expanded. Below and above I expand these ideas further to some extent, but due to limitations of space I cannot say all that there is to be said about them in this paper. For further discussion, see Sher (2023c).

(ii) This proposal is partial: it does not cover cases of the kind noted in footnote 27. There are various ways to extend it to such cases (for example, use a three-value logic, develop a method for balancing

(a)   Action X is *moral* if it is sanctioned by (or agrees with, or is positively correlated with) the relevant moral value(s).

(b)   Action X is *immoral* if it violates (or conflicts with, or is negatively correlated with, or is forbidden by) the relevant moral value(s).

(c)   Action X is *morally neutral* if it is neither sanctioned nor forbidden by relevant moral value(s).

For example, the act of saving the life of a particular child, Johnny, is moral if it is sanctioned by the relevant moral values; it is immoral if it violates the relevant moral values; and it is morally neutral if it is neither sanctioned by nor is in violation of relevant moral values. Assuming the relevant moral value in this case is saving life, the act of saving Johnny's life is moral (rather than immoral or morally neutral).

The pattern of moral correspondence for the sentence "Saving Johnny's life is moral' is true" is, thus:

"Saving Johnny's life is moral" is true
iff
the act of saving Johnny's life is sanctioned by /
positively correlated with the relevant moral value(s).

This is a correspondence-truth condition of a special kind, exhibiting a special pattern: positive correlation with relevant human values.

And in general, we have:

"Action X is moral" is true
iff
X is positively correlated with the relevant moral value(s).

"Action X is immoral" is true
iff
X is negatively correlated with the relevant moral value(s).

"Action X is morally neutral" is true
iff
X is neither positively nor negatively correlated with relevant moral value(s).

Let us call an action "morally engaged" iff it is not morally neutral. Then for morally engaged actions X we have the usual condition for falsehood: "X is moral" is false iff it is not true. And we also have: "X is immoral" is true iff "X is moral" is false. Once again, there is much more to be said, but what we have said here should suffice to introduce the reader to the main idea. Next, let us turn to the reality cum objectivity of moral values.

3.2.2 Moral values

Are moral values real? Are moral values objective? Assuming Railton is right, neither being non-physical nor being mind-dependent in the subject-ive sense is problematic:

both are compatible with reality cum objectivity. Do any well-established moral theories affirm the objectivity of moral values? Yes. In fact, the objectivity of moral values is supported by two of the most influential moral theories in the history of philosophy: Kantian and Millian ethics. Although these theories are different in important respects and neither focuses on *moral truth* or *moral values*, both in effect affirm the objectivity of the moral values, indeed in similar ways.

Kant   Let us focus on the moral values of duty. We can construe the Kantian argument for the reality of moral values as follows:

1. The moral values of duty (e.g., the value of saving human life) are (is) based on the categorical imperative.
2. The categorical imperative, as applied to humans, is based on their rationality and freedom.
3. The rationality and freedom of human beings is real (objective). Therefore:
4. The moral values are real (objective).

Mill   The Millian argument for the reality of moral values can be construed as follows:

1. The moral values (e.g., the value of saving human life) are (is) based on the maximization of well-being (happiness) principle.
2. The maximization of well-being principle is a principle of human psychology and rationality.
3. The principles of human psychology and rationality are real (objective). Therefore:
4. The moral values are real (objective).

There is room for other types of theories that affirm the reality (objectivity) of moral values, for example, an evolutionary or a contractarian theory of moral values, a theory that views moral values as created/enshrined by human civilization (broadly conceived) based on its vision of our humanity[29] or in some other way, and so on. The correspondence account of moral truth can, in principle, be combined with each of the above conceptions of moral values.

Two additional issues that I would like to briefly comment on are *disagreement* and *ontology*.

3.2.3 Disagreement and ontology

Moral disagreement is a widely discussed topic today, spanning a large array of moral views.[30] Moral correspondence requires that *there is an objective fact of the matter* concerning the standing of a significant range of values as moral, immoral, or non-moral. But it does *not* require agreement about what this fact of the matter is.

Turning to ontology, some philosophers might say that to argue for the reality of moral values we need an *ontological* account of such values and that such an ontology is highly problematic. To this, my answer is threefold:

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[29] For a theory of this kind see Sher (Forthcoming, 2023c).

[30] For an overview and references see, e.g., Tersman (2021).

(i) The view that moral values are real is not connected to any particular ontology; in principle, diverse ontologies are compatible with this view. Indeed, it will distort this view to connect it with a specific ontology when it is not tied up with that ontology.

(ii) The question whether an ontology of moral values is problematic is far from being settled. One of the most well-known criticisms of moral values on this ground is due to Mackie (1977) who says that if there were moral objects, they would be "queer". This claim, however, draws a *naive analogy* between moral values and midsize physical objects such as tables and trees. More generally, claims of this kind assume the simple syntax-semantics parity principle mentioned earlier in this paper. Just because our language uses singular terms in discourse about specific moral values does not mean that theoretically, moral values are individuals. We have inherited a language that was created a long time ago, for many purposes, in response to many needs, and by people who had very different views of the world from those expressed by our current theories. To let this language dictate our theoretical commitments is quite unreasonable.

(iii) Developing an ontology of moral values is best done at the end of, rather than at the beginning of, the development of a philosophical theory of moral values. The reason is that in order to construct an ontology for a field X, we need to have a fairly thorough understanding of the subject-matter of X and its structure. In the case of ethics, there is much that we need to find out about moral values before determining their ontology. To decide in advance that the ontology of moral values must be so and so is to curtail our freedom to study moral values without prejudice.[31]

4 How correspondence-pluralism avoids existent criticisms of truth-pluralism

Criticisms of truth-pluralism in the philosophical literature have so far centered on the Wright-Lynch version. Two distinctive characteristics of this version are: (a) The general principles of truth are intuitively platitudinous, i.e., they are largely superficial, minimalist, folk principles, rarely disputed, etc. (b) The specific principles of truth, specific to diverse fields, are (i) substantive, and (ii) potentially radically different from each other: truth in one field is correspondence, in another field coherence, in a third field pragmatist, and so on. For the duration of this section, let us use "truth-pluralism" for the pluralism characterized by (a) and (b).

In their encyclopedia article "Pluralist Theories of Truth" (2012/18) Pedersen and C.D. Wright list seven criticisms of truth-pluralism (which are directed at this type of pluralism).

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[31] As always, there are additional issues to consider in discussing deep philosophical topics such as the objectivity of moral values. Such considerations may affect our conclusion, but given space limitations, it is rarely possible to consider all the relevant issues in a single paper, especially when the topic in question in just one element in the content of the paper. For further discussion of the objectivity of human (including moral) values, see Sher (Forthcoming, 2023c). Additional issues are left for future works.

4.1 Criticisms of truth-pluralism

(i) *Ambiguity* By treating truth as correspondence in some fields, coherence in others, and so on, truth-pluralism renders truth ambiguous. Coherence and correspondence are so different from each other that it is unclear in what sense they are types of the same thing, truth.

(ii) *Pseudo scope-problem* The difference between different fields is not a difference in types of truth but a difference in the objects referred to in these fields.

(iii) *Unclear criteria of platitudinousness* Truth-pluralism does not provide clear criteria for what counts as a platitude of truth.

(iv) *Instability (disjunction) challenge* Truth-pluralism is unstable in the sense that we can always reduce it to disjunctive monism, i.e., one disjunction of all the truth principles of diverse types of truth.

(v) *Mixed discourse/inferences* Truth-pluralism faces the problem of handling (1) cross-field truths and (2) logical inferences with sentences from diverse fields. If truth in one field is correspondence and truth in another field is coherence, what kind of truth are sentences that include mixed vocabulary, vocabulary that belongs to diverse fields of truth, apt for? What kind of truth is appropriate for

    (1) Causing pain is bad,
    (2) Killing innocent people is bad and $7 + 5 = 12$?

Similarly, if the premises of a logical inference include truths of different kinds, as in

    (3) Satiated dogs are lazy. Our dog is satiated. Therefore: Our dog is lazy,[32] what type of truth is transmitted from its premises to its conclusion? (A further complication arises if the conclusion includes a third type of vocabulary).

(vi) *Explaining generalization* Truth-pluralism does not explain how the truth-predicate can be used to state generalizations such as

    (4) Everything Tarski said is true,
    (5) Every sentence of the form S or not S is true.

In the case of (4): Since some sentences asserted by Tarski are correspondence-truth apt and others are (only) coherence-truth apt, how can we generalize to all truth-apt sentences of whatever type? What kind of truth belongs to the generalization? The same problem arises for (5).

(vii) *The problem of normativity* Given that the normativity of truth is not affected by whether truth is of the correspondence type, the coherence type, etc., the division of truth into types appears superfluous.

Pedersen and C.D. Wright treat these criticisms as substantial yet inconclusive. Two additional criticisms are made in Sher (2004, 2016):

(viii) *Connection between generality and platitudinousness* It is unreasonable to require that in the field of truth, unlike all other fields, the general principles

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[32] These examples are due to Pedersen and C.D. Wright (2012/18).

are platitudinous, that is, not open to a lengthy, deep, substantive discussion and/or disagreement.

(ix) *Radical disunity* Truth-pluralism violates the methodological principle that in all fields we ought to aim at a fruitful balance between unifiers and disunifiers (between attention to commonalities and attention to differences). The differences between correspondence-truth, coherence-truth, pragmatist-truth, and so on are so deep and radical, and the general platitudes are so weak, that there is an unacceptable imbalance between unity and disunity in truth-pluralism.

Without trying to adjudicate these criticisms with respect to *truth-pluralism*, I will show that they *do not* hold of *correspondence pluralism*.

4.2 Correspondence-pluralism avoids the criticisms of truth-pluralism

Criticisms (i), (ii), (iv), (v), (vi), (vii) are all directed at the multiplicity of types of truth countenanced by truth-pluralism. But correspondence-pluralism countenances only one type of truth: correspondence.[33] To see how correspondence-pluralism avoids criticism (iii), let us turn to criticism (viii)—*connection between generality and platitudinousness*. Correspondence-pluralism does not require that the general principles of truth be platitudinous. It allows (and indeed expects) the general principles of correspondence-truth to be just as lengthy, deep, substantive, and open to disagreements as the general principles of all other branches of philosophy, and indeed all branches of knowledge.

Finally, let us turn to criticism (ix), *radical disunity*. The radical disunity problem *does not arise* for correspondence-pluralism. Correspondence-pluralism's view of all truths as *correspondence*-truths is a *strong unifier*, and its view of the differences between fields as *limited to patterns* of correspondence is a *moderate disunifier*. In this way, correspondence-pluralism achieves the requisite balance between unity and disunity (generality and particularity, similarity and difference).

In conclusion let me mention something that Horwich said in his 1990/8 book: "The common-sense notion that truth is a kind of 'correspondence with the facts' has never been worked out to anyone's satisfaction" (p. 1). That may have been true at the time. The pluralist theory of truth discussed in this paper attempts to remedy this situation by bringing to the table a new philosophical rendition of correspondence.

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[33] To prevent misunderstanding, let me emphasize that the criticisms mentioned in the last sentence, as formulated in Pedersen and Wright (2012/18), are not presented as criticisms of the type of pluralism proposed in the present paper. They are presented as criticisms of the type of pluralism endorsed by Crispin Wright (not C.D. Wright) and Lynch, according to which truth in some fields is correspondence, truth in others is coherence, truth in still others is pragmatist, etc. From the point of view of these criticisms, the account of truth presented in the present paper is monistic: truth in all fields is based on correspondence. These objections, as formulated by Pedersen and C.D. Wright (or anyone else I know of), are not directed at variations within correspondence itself. Indeed, this paper shows that one can accept the above criticisms of radical pluralism while being a pluralist of a different, much more limited, kind.

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Declarations

References

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