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Showing, Not Saying, Negation and Falsehood: Establishing Kimhi's Two-Way Logical Capacities with Wittgenstein's Samples

Abstract

Irad Kimhi has argued that negation and falsehood can be made intelligible by understanding assertions/judgements as acts of two-way logical capacities. These are capacities that are, at the same time, for (1) positive and negative assertions/judgements and (2) positive and negative facts. Kimhi's account of negation and falsehood, however, faces several problems. As Jean-Philippe Narboux has shown, it is threatened with incompleteness or inconsistency in its employment of negative ostensible assertions that are not acts of two-way logical capacities, and, as I demonstrate in this article, it does not explain the assumed logical connections between two-way logical capacities or the acknowledged differences between acts of two-way logical capacities in the world and in assertion/judgement. I argue that these problems can be avoided and that a new understanding of the negation and falsehood of predicative assertion/judgement can be achieved by, first, regarding two-way logical capacities for predicative assertion/judgement and facts as established by our treating things as what Ludwig Wittgenstein calls "samples", and, second, drawing a distinction between predicative assertions/judgements and normative assertions/judgements that, e.g., introduce samples into our language-games and show the rules for using samples for the purpose of representation.

Keywords: Negation; Falsehood; Facts; Samples; Logical Capacities; Irad Kimhi; Ludwig Wittgenstein

1. Two-way logical capacities and samples

This article deals with one of the most persistent topics in the history of philosophy, namely, negation and falsehood.[1] It does so by way of

[1] For studies of the history of negation, see Horn (1989), Speranza and Horn (2012). Perhaps the earliest text to deal with the topic of negation and falsehood in the history of Western philosophy is Parmenides'

consideration and critique of Irad Kimhi's *Thinking and Being*. In that work, Kimhi seeks to make intelligible how we can assert/judge that something is not the case, and how we can assert/judge something to be the case when it is not, by giving an account of a common fundamental logical structure of assertion/judgement and reality. This structure, according to Kimhi, is comprised of what he calls two-way logical capacities – i.e., capacities for both positive and negative assertions/judgements and facts. Kimhi's philosophy, as it stands in *Thinking and Being*, faces several problems. I will build on Kimhi's notion of two-way logical capacities to elaborate a new way of understanding the negation and falsehood of predicative assertions/judgement. I will argue that we can make such negation and falsehood intelligible, and avoid the problems Kimhi's philosophy faces, by (1) seeing two-way logical capacities as established by our treating things as what Ludwig Wittgenstein calls "samples", and (2) taking there to be some non-truth-apt normative assertions/ judgements that, amongst other things, *show* the rules for making predicative assertions/judgements.

2. The two puzzles

This article will focus on (1) resolving what Wittgenstein describes as "the mystery of negation: This is not how things are, and yet we can say *how* things are *not*" (NB: 30); and (2) answering the following question, posed by Wittgenstein, concerning false thought/judgement: "How can one think what is not the case? If I think King's College is on fire when it is not on fire, the fact of its being on fire does not exist. Then how can I think it?" (BBB: 31) (Hereafter, I will refer to the mystery of negation and the question concerning false thought/judgement as "the two puzzles".) Solving the two puzzles is also the concern of Kimhi's *Thinking and Being*. According to Kimhi, the two puzzles arise from the following reasoning:

> Whereas a true judgment/proposition judges/says what is the case, a false one judges/says what is not (the case) – but what is not does not exist; it is nothing, hence a false judgment/proposition judges/says nothing and is therefore not a judgment/proposition at all. (2018: 120)

poem, *On Nature*, in which it is stated that "neither can you know what is not (for it is not to be accomplished) nor can you declare it" (Curd 2011: 58). One way to read this line is as a statement of the unintelligibility of negation and falsehood (cf. Kimhi 2018: 2ff.).

Kimhi aims to articulate an alternative way of reasoning, one grounded in what he calls a "philosophical logic – the idea of a study that achieves mutual illumination of thinking and what is: an illumination through a clarification of human discursive activity in which truth (reality, *aletheia*) is at stake" (ibid.: 1).

3. Kimhi's philosophy

Kimhi builds his philosophy on a critique of Gottlob Frege's work, which I do not have space to discuss here. It is important to note, however, that Kimhi rejects Frege's assumption that to adhere to "*Frege's observation*" (Kimhi 2018: 38), which Kimhi endorses, one must endorse "*Frege's point*" (ibid.: 39). Frege's observation is expressed by Peter Geach when he writes:

> a proposition may occur in discourse now asserted, now unasserted, and yet be recognizably the same proposition.[2] (1972: 254-5)

Frege's point is:

> assertoric force must be dissociated from a proposition's semantical significance. (Kimhi 2018: 39)

The question thus arises for Kimhi: How can the same proposition, *p*, occur both asserted and unasserted if assertoric force is not dissociated from its content? Kimhi's answer: the assertion/judgement "*p*" is the positive act of a two-way logical capacity, while the unasserted occurrence of *p* (in, e.g., A believes *p*) is a mere assertoric gesture that displays, without being, this positive act. Where "[a]n assertoric gesture", Kimhi explains, "is analogous to a *mimetic* gesture that displays an act without being it – as a stewardess in an airplane displays the use of a life jacket without using it" (2018: 56). This needs some unpacking. I will begin with the notion of a two-way logical capacity.

Kimhi elucidates his notion of a two-way logical capacity by means of a consideration of Aristotle's notion of a rational capacity. For Aristotle, a capacity that is not rational (i.e., is without reason) is only for one thing. For example, the capacity, *the hot*, is only for heating. Whereas a rational capacity (i.e., a capacity with, or accompanied by, reason) is for two things. For example, the capacity of *medical art* is for both producing health (*informing*) and producing

[2] As Kimhi notes (2018: 38), Geach is using the term "proposition" "in the sense, inherited from medieval logic, of a bit of language in a certain logically recognizable employment" (Geach 1979: 221). This is different to Frege's use of the term, according to which it means that which expresses a thought or content.

disease (*deforming*) – the very same knowledge can be used to make a patient healthy or ill, by, e.g., giving them different dosages of certain medications (see Aristotle 1984: *Metaphysics*: Theta 2). While Kimhi uses Aristotle's notion of a rational capacity to elucidate his own notion of a two-way logical capacity, the latter differs from the former in two important respects. Firstly, as already noted, assertions of propositions are acts of Kimhi's two-way logical capacities. But assertions of propositions cannot be acts of Aristotelian rational capacities because these capacities relate not to the propositional whole but solely to the predicates inside propositions (see ibid.; Kimhi 2018: 61). Secondly, and relatedly, Aristotelian rational capacities are for two *contraries* (e.g., health and disease), whereas the acts of Kimhi's two-way logical capacities are *contradictories*. For Kimhi, the two acts of a two-way logical capacity (in assertion/judgement) are, e.g., the assertion/judgement "*p*" and the assertion/judgement "not-*p*" (see Kimhi 2018: 60-1).

In Kimhi's philosophy, the assertion/judgement "*p*" is regarded as "a *self-identifying display*" (2018: 41). That is, it is a display of act *p* that *also* identifies the consciousness of the judging subject as agreeing with this act. It displays *p* as inhering in the judging subject's consciousness. The assertion/judgement "not-*p*", on the other hand, is an assertoric gesture, or mere display, of *p* that is *also*, in Kimhi's words, "an identification of consciousness as disagreeing with the act displayed by the gesture" (ibid.: 58). It displays *p* as *not* inhering in the judging subject's consciousness. There are a few important consequences Kimhi draws from this that further articulate his philosophy.

(1) "Judging that *p* is the same as judging that I think *p*" (Kimhi 2018: 58). That is, adding I think(…) in front of a proposition does not alter the semantic content of the proposition. Similarly, adding ~(…) in front of a proposition (in, say, expressing the judgement "not-*p*") does not alter the semantic content of the proposition, it merely identifies consciousness as disagreeing with *p*. To account for this, Kimhi treats propositions and assertions/judgements as *syncategorematic*, which he defines in contrast to *categorematic*:

> A *categorematic* expression or term is one that can significantly occur within a predicative proposition, while a *syncategorematic* expression is one that cannot play a significant role within a predicative proposition. (ibid.: 81)

Relatedly, Kimhi treats the larger propositional contexts within which propositions and displays of acts of two-way logical capacities occur as governed by syncategorematic connectors:

> Hence, the *logical connective* "…and__," the *indirect speech / thought connector* "A says…" / "A believes…," and the *truth connector* "…is true" are all syncategorematic. (ibid.: 82)[3]

(2) Tautologies (e.g., *p* or not-*p*) and contradictions (e.g., *p* and not-*p*) are what Kimhi calls "self-cancelling displays" (2018: 66).[4] They display, as flanking the connectives, a pair of acts that are opposed and thus cancel each other out.

(3) Given that the assertion/judgement "not-*p*" is a display of the positive act *p*, there is a priority of the latter over the former. However, given that these are the two acts of a two-way logical capacity, there is also a priority, over both, of the unity they comprise.

(4) Given (3), and given that a proposition is what is asserted/judged in the positive act of a *two-way* logical capacity, all propositions are subject to the "full context principle" (Kimhi 2018: 64), which contrasts with Frege's "partial" context principle (i.e., "never […] ask for the meaning of a word in isolation, but only in the context of a proposition" (Frege 1953: x)). According to the full context principle, a proposition, *p*, can only be comprehended by reference to the unity of the contradictory pair *p* and ~*p*. This unity, moreover, can only be comprehended by reference to the larger linguistic context within which *p* is repeatable through acts of the relevant two-way logical capacity, e.g., the context of "*p* or ~*p*", "A believes *p*", etc. (see Kimhi 2018: 65).

There is one important piece of Kimhi's philosophy that is still missing from my summary. It is the following. Kimhi regards the two-way logical capacities that are activated in assertion/judgement as also activated in reality, in the world, in being. When a two-way logical capacity is positively activated in reality, according to Kimhi, it constitutes a positive fact (e.g., *p* – i.e., what is said in the assertion/judgement "*p*"). When it is negatively activated in reality,

[3] Kimhi glosses the indirect speech / thought connector "A says…" / "A believes…" as being an operation that places a judging subject in possible agreement or disagreement with A concerning the proposition that replaces the placeholder (…) (see 2018: 93, 67).

[4] Kimhi's notion of tautology, to be precise, includes all self-cancelling displays. Hence, tautologies understood in the traditional sense, e.g., *p* or not-*p*, and contradictions are both tautologies in Kimhi's philosophy (see 2018: 66).

on the other hand, what results is a negative fact (e.g., ~*p*), by which Kimhi means the not holding of a positive fact. Here is Kimhi:

> what is said […] about the form of the capacity for judgment can also be said about the form of facts – for there is only one syncategorematic (or logical) form [i.e., capacity] at issue throughout. Hence, we can equally say: the positive fact that Venus is beautiful and the negative fact that Quasimodo is not beautiful are different acts of the same logical form [i.e., capacity, namely, __ *is beautiful*]. (2018: 22; see ibid.: 152ff.)

Yet, as Kimhi explains, there are two differences between the ways a two-way logical capacity is activated in assertion/judgement and the ways it is activated in reality. "First", he writes, "(*p* or ~*p*) is a tautology, but of course (A judges *p* or A judges not-*p*) is false when A does not hold any view as to whether or not *p* is the case" (ibid.: 113).[5] So, while a two-way logical capacity (for, e.g., the facts *p* and ~*p*) *must* be activated one way or the other in reality, the same capacity (for the assertions/judgements "*p*" and "not-*p*") does not have to be activated in a judging subject. Second, while a two-way logical capacity is negatively activated in a judging subject through the application of the negation sign ~(…) or the addition, in assertion/judgement, of a not-(…) to a proposition, this is not the case in reality because reality is not a linguistic judging subject. "Thus", writes Kimhi, "a negative fact (e.g., that the book is not red), sometimes holds in virtue of […] a positive fact [e.g., that the book is blue]" (ibid.: 114). I will come back to these differences below.

We can now see why Kimhi takes himself to have solved the two puzzles. According to Kimhi, we can both say how things are not and think what is not the case because we can negatively (or positively) activate a two-way logical capacity that is also positively (or negatively) activated in reality. Kimhi thus takes himself to have made negation and falsity intelligible through a philosophical logic – i.e., a mutual illumination of thinking and being.[6]

[5] In the section from which I am quoting here, Kimhi is explicating what he takes to be Aristotle's position. However, what he writes also applies to his own position. He is writing about Aristotle's position to draw certain lessons from it.

[6] For different elaborations of Kimhi's philosophy, see Della Rocca (2021), Haddock (2020), and Narboux (2021).

4. Problems with Kimhi's philosophy

Jean-Philippe Narboux has raised a significant criticism of Kimhi's philosophy. Narboux notes that Kimhi at times makes ostensible assertions that use negation to articulate his account of negation. For instance:

> The separation which is the negation of the verb is *not* a different combination, i.e., a different way of holding the terms…(Kimhi 2018: 107; my emphasis, following Narboux)
>
> For saying or holding that something is not the case is *not* a special way of saying or holding that something is the case; negating a determination of the subject is *not* a special way of determining that subject. A contradictory difference is therefore *not cross-categorematic*. (ibid.: 115; all emphases except on the last term are mine)
>
> By contrast, positive and negative facts – combination and separation – are *not* categorematic, they can only be stated by a proposition, and cannot be signified by anything categorematic. (ibid.: 114; my emphasis)

The issue here, as Narboux makes clear, is that negative ostensible assertions like these have no intelligible positive contradictory in Kimhi's philosophy. Thus, they cannot be acts of two-way logical capacities. (Nor are they self-cancelling displays like tautologies.) But Kimhi's philosophy, as outlined in *Thinking and Being*, appears to leave no space for ostensible assertions that make use of negation but are not acts of two-way logical capacities. Thus, Narboux argues, either Kimhi's account of negation is incomplete – in that it does not account for the negative ostensible assertions used in its own articulation – or it is inconsistent – in that it cannot be articulated without being undermined.[7]

There are further problems in Kimhi's philosophy. As we have seen (§3), Kimhi states that a two-way logical capacity must be activated one way or the

[7] Michael Della Rocca (2021) raises several criticisms of Kimhi's philosophy that he couches in a series of "in virtue of what" questions, directed at the principles of this philosophy. For instance, he asks "in virtue of what are *p* and not-*p* unified?" (ibid.: 7) Della Rocca contends that Kimhi cannot satisfactorily answer all these questions and seems to treat certain principles, such as the identity of propositions and repeatability, as "primitive, without explanation" (ibid.: 8). In criticising Kimhi's philosophy, however, Della Rocca leans too heavily on his own view of explanatory relations. He assumes that explanatory relations must be asymmetric and that an explanans must be intelligible prior to, and independently from, its explanandum. Kimhi could respond to Della Rocca by rejecting these assumptions and stating that the principles of his philosophy are co-explanatory and co-constitutive. I am thankful to an anonymous reviewer for pointing this out.

other in reality but need not be activated one way or the other in a thinking subject. This begs the question: Why should we not conclude that the two-way logical capacity for, e.g., the facts *p* and ~*p* is distinct from, rather than identical to, the two-way logical capacity for the assertions/judgements "*p*" and "not-*p*"? This question becomes more pressing when we consider the other difference, noted by Kimhi, between activations of two-way logical capacities in reality and in thought. This difference is that, unlike in thought, a negative fact, ~*p* (e.g., *the book is not red*), sometimes holds in virtue of the holding of a positive fact, *q* (e.g., *the book is blue*), that is not its contradictory. Two-way logical capacities are, it would seem, linked in reality, but not in thought, in networks of co-activation, such that when one is activated, so are the others.

There is an implicit answer to the above question in *Thinking and Being*: Attempting to think the two-way logical capacities activated in reality and thought as *not* identical results in an incoherent account of propositions, truth, falsehood and negation. This might be true (indeed, I think it is) but it does not resolve the problems in Kimhi's philosophy or justify his account of two-way logical capacities.

In Kimhi's philosophy, the two-way logical capacity __*is red* is distinct from the two-way logical capacity __*is blue*, and nothing Kimhi writes establishes any logical connection between them. Kimhi simply does not have the resources to say why, e.g., the negative fact *the book is not red* holds in virtue of the holding of the positive fact *the book is blue* rather than in virtue of, say, the holding of the positive fact *the book is rectangular*.[8] Kimhi's philosophy is, to echo Narboux, at best incomplete, in that it does not provide the resources for a complete account of two-way logical capacities and their activations in reality. At worst, however, (to build on Narboux's criticism) it is doomed to inconsistency, since attempts to say how activations of the same two-way logical capacities in reality and in thought are different will likely involve negative ostensible assertions (that say something of reality, thought, and/or two-way logical capacities and their acts) for which there are no intelligible contradictories in this philosophy. For example,

> the syncategorematic capacity *p* is negatively active in the intellect as not-*p,* namely, through the (potential) use of the negation sign; but the world, by contrast to the

[8] Considerations of the logical connections between colour facts and the logical connections between assertions/judgements of such facts were, in part, responsible for Wittgenstein's move away from the *Tractatus*. Samples played an important role in these considerations. For elucidating discussions of this topic, see Beaney (2008) and Silva (2017: esp. Chs. 3, 4, and 8).

> soul/intellect, is *not* a language-user, and thus the negative act, separation, does *not* inhere in it by means of the negation sign. (Kimhi 2018: 114; my emphasis)

5. A new way: samples, assertions, and facts

In §50 of his *Philosophical Investigations*, Wittgenstein writes:

> There is *one* thing of which one can say neither that it is one metre long, nor that it is not one metre long, and that is the standard metre in Paris.—But this is, of course, not to ascribe any extraordinary property to it, but only to mark its peculiar role in the language-game of measuring with a metre-rule. —Let us imagine samples of colour being preserved in Paris like the standard metre. We define: "sepia" means the colour of the standard sepia which is there kept hermetically sealed. Then it will make no sense to say of this sample either that it is of this colour or that it is not.
>
> We can put it like this: This sample is an instrument of the language used in ascriptions of colour. In this language-game it is not something that is represented, but is a means of representation […]. And to say "If it did not *exist*, it could have no name" is to say as much and as little as: if this thing did not exist, we could not use it in our language-game […]. It is a paradigm in our language-game; something with which comparison is made. (PI: §50)

This needs unpacking.[9] I will focus, to begin with, on the standard metre sample. The point Wittgenstein is making is that when, within a language-game of metric measurement, we represent something, x, as one metre long – by, say, asserting "x is one metre long" - we are (implicitly) representing x as like the standard metre with respect to length. This is because, as Wittgenstein sees things, x's being one metre long just is its being like the standard metre with respect to length. The standard metre sample, for Wittgenstein, is thus the thing in virtue of which we can, within a language-game of metric measurement, represent other things as being one metre long. If it did not exist, we would not be able to represent anything as being one metre long. This is the same as to say: If the standard metre did not exist, we would not be able to represent anything as like the standard metre with respect to length.

That the standard metre is the thing in virtue of which we can represent other things as being one metre long is also the reason we cannot say that it is

[9] Wittgenstein introduces the examples of the standard metre and the standard sepia for a purpose somewhat different to mine here. He introduces them in the context of a discussion of why being and non-being cannot be attributed to elements of a language-game. It not making sense to say of the standard metre either that it is or is not one metre long functions for Wittgenstein as an analogue for it not being possible to attribute either being or non-being to elements.

or is not one metre long (that is, represent it as or as not one metre long). To say the former would be to say that the standard metre is like itself with respect to length, while to say the latter would be to say that it is unlike itself with respect to length. Yet, within a language-game of metric measurement, the standard metre, used as a sample, always plays the special role of that with which other things, distinct from it, are to be/can be compared for the purpose of representing them as or as not one metre long. This, of course, is not to say that the standard metre has no length or some utterly indeterminate length. Indeed, we compare the length of other things to its length when we use it as a sample. And, within a language-game of imperial measurement, where the standard metre is not used as a sample, we can say that it is 3.28084 feet long.

Yet, we, unlike Wittgenstein, *can* now say either that the metre bar in Paris is or is not one metre long. This is because the official sample for one metre has changed since Wittgenstein's time. The official sample for one metre is now the path travelled by light in a vacuum in 1/299,792,458 of a second (hereafter, path_L).[10] I note this here to make two general points about samples. Firstly, what functions as a sample, and whether it continues to function as a sample, are decided by our practices. The metre bar in Paris did not cease to be the sample for one metre because it lost some mystical property but because we stopped treating it as the thing with which a comparison can be/is to be made for the purpose of representing other things as one metre long. Depending on circumstances and needs (e.g., the development of a new system of measurement, the need for greater precision, the destruction of a previous sample, the cessation of a language-game, etc.), samples can be introduced, dropped, forgotten, etc. When introducing a child to a language-game of metric measurement for the first time, it would not be advantageous to explain that something is one metre long if it is, with respect to length, like path_L. It would be better to explain that something is one metre long if it is, with respect to length, like, say, a tape measure one has on hand. That is, it would be better to treat, and have the child treat, the tape measure as the sample for one metre. Further along in the child's development, perhaps when they begin taking physics classes, one may require them to use path_L as the sample for one metre.

Secondly, a sample need not be some singular thing that one could hold in one's hands (e.g., a bar). A sample can be some intangible thing determined

[10] There have been further refinements made to the definition of a metre, but they need not concern us here.

through a general procedure (e.g., $path_L$), or even a general procedure itself (e.g., a certain sequence of movements that results in a leg break delivery in cricket). "Sample", I suggest, is, to use another of Wittgenstein's phrases, a "family resemblance" term that does not admit of a universal description beyond "that with which other things can be/are to be compared for the purpose of representation".[11] If we were to examine the samples of our language-games, we would not see something common to all but rather, to use Wittgenstein's words, "a complicated network of similarities overlapping and criss-crossing. Similarities both great and small" (PI: §66, translation modified).

How does invoking samples provide support to a philosophical logic like the one Kimhi advocates? To answer this question, I begin with the claim that our treating things as samples can be understood as establishing and sustaining Kimhi's syncategorematic two-way logical capacities, both on the side of predicative assertions/judgements and on the side of facts. Consider the side of predicative assertions/judgements first. To assert/judge, e.g., "*x* is one metre long" is, I suggest, to display the relation of likeness-with-respect-to-length holding between *x* and $path_L$ (i.e., it is to display a relation of likeness as holding between *x*'s feature of length and $path_L$'s feature of length), while to assert/judge the contradictory, "*x* is not one metre long", is to display the same relation as not holding between *x* and $path_L$ (i.e., it is to display the relation of likeness as not holding between *x*'s feature of length and $path_L$'s feature of length).Yet, only our treating $path_L$ as the sample for one metre makes this the case. For it is simply an aspect of our treating it as a sample that we represent other things with the feature of length as either standing or not standing in relations of likeness-with-respect-to-length with it, such that when we represent the former we represent other things as one metre long and when we represent the latter we represent other things as not one metre long.

Now to the side of facts. I said above that, for Wittgenstein, *x*'s being one metre long just is its being like $path_L$ with respect to length. Another way to state this: The relation of likeness-with-respect-to-length holding between *x* and $path_L$ constitutes the positive fact *x is one metre long*. Of course, a relation between the lengths of *x* and $path_L$ would hold regardless of whether we treat $path_L$ as the sample for the length of one metre. Yet, only when we treat $path_L$ as the sample for one metre does this relation, if it counts as a relation of likeness (more on this in § 7), constitute the positive fact *x is one metre long*. We

[11] See PI: §67.

can see this if we once again consider the change of samples for the length of one metre. In Wittgenstein's time, the relation of likeness-with-respect-to-length holding between *x* and the metre bar in Paris constituted the positive fact of *x is one metre long*. This, however, is no longer the case – even though this relation may still hold. Today, it is the relation of likeness-with-respect-to-length holding between *x* and $path_L$ that constitutes this fact. And it is *x*'s being, with respect to length, unlike $path_L$ – or, the not holding of the relation of likeness-with-respect-to-length between *x* and $path_L$ - that constitutes the negative fact of *x is not one metre long*. It is an aspect of our treating something as a sample that we treat it as either standing or not standing in relations of likeness (with respect to some feature/s) with other things, such that the former constitutes a set of positive facts, and the latter constitutes a set of negative facts.

Seeing the fact *x is one metre long* as constituted by the holding of the relation of likeness-with-respect-to-length between *x* and $path_L$ may not pose any challenge, since the metric properties of an object are explicitly relational in that they involve a reference to, or comparison with, a unit of measurement. But what about facts that are not explicitly relational? Take the facts *x is sepia* and *x is a tree*. Regarding the first fact, consider how you might answer the question, asked by someone learning the language-game of colour ascription: What is it to be sepia? An appropriate response would be to hold up a swatch and say, "To be sepia is to be like this with respect to colour". The questioner would then understand the fact *x is sepia coloured* as constituted by the holding of the relation of likeness-with-respect-to-colour between *x* and the swatch. In this scenario, the swatch is being treated, by you and the questioner, as the sample for sepia. And it is your treating it as such that establishes the fact *x is*

sepia.[12, 13] Similarly, regarding the second fact, an appropriate response to the question, "What is it to be a tree?", would be to point to an oak and say, "It is to be like this with respect to life cycle and anatomy". The oak would thus be treated as a sample for tree, and its being treated as such would be, for those treating it as such, what establishes the fact *x is a tree*.

I am not trying to prove false the claim that facts like *x is sepia* and *x is a tree* are not constituted by the holdings of relations of likeness to samples with respect to certain features. I am only trying to show that such facts *can* be seen as constituted by the holdings of these relations, with a view to recommending that they *do* be seen this way. The upshot of accepting this recommendation is the viability of a philosophical logic that makes the negation and falsehood of predicative assertions/judgements intelligible.

6. A few objections

I will pause here to respond to a few possible objections. The first is that it cannot be correct to say that facts are constituted by the holdings of relations of likeness to samples, which only function as samples due to our treating them as such because many facts held long before we existed. This objection poses no problem to the position I am advocating. Introducing samples into

[12] In PI: §56, Wittgenstein has his reader imagine that they are instructed to paint a colour, C, "which was the colour that appeared when the chemical substances X and Y combined". He then has his reader suppose that the painted colour strikes her as brighter on one day than it did on another. He writes, "would you not sometimes say: "I must be wrong, the colour is certainly the same as yesterday"? This shews that we do not always resort to what memory tells us as the verdict as the highest court of appeal." One way to understand what Wittgenstein is getting at here is to take him to be advocating the position that in cases like this, it can only be samples and relations to samples that decide the facts. What sort of case is this? It is one in which a sample – specifically, a sample for the colour C - is introduced as the outcome of a particular procedure – of a chemical combination. To be C coloured, then, just is to be produced by a chemical combination that is the same as the one that produced the sample for C. Thus, the colour one paints on day 2 striking one as brighter than the colour one paints on day 1 plays no role in determining the fact of these painted colours being the same, i.e., being both coloured C. What decides this fact is the relation of likeness-with-respect-to-chemical-production holding between the colour one paints on day 1, the colour one paints on day 2, and the sample for C.

[13] Exactly which holdings or not holdings of relations of likeness constitute facts comes down to what the samples of a given language-game are and how they are used. Consider a language-game in which people have a sample for yellow but do not have samples for what we take to be the different shades of yellow. In this language-game, the relations of likeness-with-respect-to-colour that hold between the sample for yellow and, first, something that would, in our language-game, be taken to be acid yellow, and, second, something that would, in our language-game, be taken to be orpiment, will constitute the facts of both these things being yellow. In another language-game, there may not be any fact such as *x is yellow* but only facts such *x is acid yellow*, *x is orpiment*, etc.

language-games retroactively establishes a plethora of facts. Yet, we can only speak of these facts *within* these language-games. Within the language-game of metric measurement, and only within this language-game, we can speak of many length facts that held in the past – e.g., that certain Brontosauruses had necks of 15 metres in length.

The second objection one might raise is that our treating things as samples cannot establish two-way logical capacities, and thus predicative assertion, because our treating things as samples is grounded in practices of predicative assertion (e.g., assertions of likeness and unlikeness). It is true that our treating things as samples is, in part, exhibited in practices of predicative assertion. When I speak of "our treating things as samples", I am speaking of all the ways we use samples. One of the ways we use samples is to make predicative assertions through displays of relations of likeness to them. And it is an aspect of our treating things as samples that saying, e.g., "*x* is like the sample for one metre with respect to length" is just another way of saying "*x* is one metre long". Yet, our treating things as samples is not *grounded* in practices of predicative assertion. Our treating things as samples is also exhibited and, more importantly, grounded in non-predicative assertions/judgements that are neither true nor false. These are the assertions/judgements that introduce and/or specify (or name) samples. For example, "*this* is the sample for sepia", which may be shortened to "*this* is sepia". This assertion is not the empirical, predicative assertion that *this* (swatch, say) is sepia coloured, even though it has the surface grammar of this assertion, but the normative assertion that *this* is what other things can be/are to be compared with for the purpose of representing them as sepia coloured.[14] Only with such normative assertions/judgements introducing and/or specifying the samples of our language-games can the practices of predicative assertion/judgement, which are on a different logical level, proceed.

My thesis is that a predicative assertion/judgement is a display of a relation of likeness holding between a certain feature of an object, *x*, and the same feature of a sample; and the negation of predicative assertion/judgement is the display of this relation as not holding. If *x* lacks the relevant feature, then we can neither display this relation as holding nor not holding. Thus, the third

[14] Cf. Wittgenstein ROC: §32: "Sentences are often used on the borderline between logic and the empirical, so that their meaning changes back and forth and they count now as expressions of norms, now as expressions of experience."

objection: What of an assertion/judgement that seems to predicate of *x* the feature that is being treated as relevant in the comparison of *x* and a sample (and its negation) – e.g., "*x* is coloured", "*x* is spatially extended"? On my proposal, such an assertion/judgement is not predicative. It is normative. It expresses that *x* has the appropriate feature to be displayed as like or unlike certain samples – e.g., the colour samples, the measurement samples. Saying "*x* is not coloured" or "*x* is not spatially extended", in this context, is not to display a relation of likeness to a sample as not holding (i.e., it is not to negate a predicative assertion). It is to express that *x* lacks the relevant feature for comparison and can thus be neither like nor unlike the colour samples or the measurement samples.

7. A new way, continued: showing *not* saying

Taking our treating things as samples to be what establish two-way logical capacities provides a way to see the two-way logical capacities in thought and reality as identical. The assertion "*x* is one metre long" and the fact *x is one metre long* are, on my proposal, both displays of the holding of the relation of likeness-with-respect-to-length between *x* and $path_L$, which is a positive act of the two-way logical capacity for the holding or not holding of the relation of likeness-with-respect-to-length between $path_L$ and other things.

But what of the differences, noted by Kimhi, between activations of two-way logical capacities in reality and in thought? The first difference is that a two-way logical capacity *must* be activated in reality one way or the other, while it need not be activated in thought. The reason a two-way logical capacity must be activated one way or the other in reality is that relations of likeness between something we treat as a sample and other things with the relevant feature hold (or do not hold) independently of whether we are aware of them. The relation of likeness-with-respect-to-length holds (or does not hold) between $path_L$ (treated as the sample for one metre) and, e.g., a branch of a eucalyptus tree in the Blue Mountains, Australia, independently of whether anyone is even aware of the branch. Yet, the display of this relation as holding (or not holding) in thought requires, at the very least, that a thinking subject be aware of the branch. Of course, which relations to samples count as relations of likeness is decided by how and for which purposes we use samples. (There is a greater degree of precision required in measuring sections of the large hadron collider than there is in measuring branches. So, what counts as a relation of likeness-

with-respect-to-length in the latter practice may not count as such in the former practice.) Yet, with this being decided, relations of likeness to samples are there to be discovered.

The second difference is that two-way logical capacities are connected in networks of co-activation in reality but not in thought. Invoking samples provides an explanation for this difference. I suggest that samples be thought of as grouped categorially. The categories here take the place of *c* in "relation of likeness-with-respect-to-*c*".[15] Consider a pair of simple language-games of shape and colour ascription, in which we make use of wood samples for square, circular, triangular, etc., and swatch samples for yellow, blue, green, red, etc. The wood samples, we can say, are categorially grouped as the shape samples, while the swatch samples are categorially grouped as colour samples. The samples within a categorial group are to be thought of as logically connected such that relations of likeness-with-respect-to-*c* between something, *x*, and one or more of the samples within a categorial group hold only when relations of likeness-with-respect-to-*c* do not hold between *x* and the remaining samples of the group. So, when a relation of likeness-with-respect-to-shape holds between something, *x*, and the sample for circular, for example, the relation of likeness-with-respect-to-shape does not hold between *x* and all the other shape samples. Yet, the holding of the relation of likeness-with-respect-to-shape between *x* and the sample for circular is of no consequence with respect to which colour sample/s *x* stands in a relation of likeness-with-respect-to-colour with, assuming it has the feature of colour.[16] Given what I have said about these relations constituting facts, this just means that the fact *x is circular* holds when, and only when, the negative facts *x is not square*, *x is not triangular*, etc., also hold. Once again, the relations at issue here hold or do not hold independently of

[15] I would contend that something, *y*, cannot be treated as a sample unless it is treated as a member of a categorial group. For, if we were to not treat *y* as a member of a categorial group, it would not be possible for us to understand which feature of *y* is relevant in its playing the role of a sample. And the holding of a relation of mere, unqualified likeness would be too indeterminate to constitute a fact.

[16] I leave open the possibility of relations of likeness-with-respect-to-*c* holding between something and more than one sample of a categorial group so that sense can be made of cases like the following. In our simple language-game of colour ascription, we compare some absinthe with our colour swatches. We might say it is like the swatch samples for both yellow and green with respect to colour. We might then say that it is a yellowish green. The holdings of the relations of likeness-with-respect-to-colour between the absinthe and the swatch samples for yellow and green constitute the fact, *the absinthe is yellowish green*. Which samples in a categorial group can mutually stand in relations of likeness-with-respect-to-*c* with something, which cannot, and what facts the mutual holdings of these relations constitute, will come down to what the samples of the given language-game are and how they are used.

our being aware of them. Hence, when the positive fact *x is circular* holds, the two-way logical capacities associated with the other shape samples *simply are* (negatively) co-activated in reality. The assertoric/judgemental display of the relation of likeness-with-respect-to-shape holding between *x* and the sample for circular, however, can occur without the assertoric/judgemental display of the relation of likeness-with-respect-to-shape not holding between *x* and any of the other shape samples. We can assert/judge one thing without at the same time saying/judging a raft of other things.

What of Narboux's criticism of Kimhi's philosophical logic? The philosophical logic I am advocating can avoid it. Earlier, I discussed non-predicative, non-truth-apt, normative assertions/judgements that (1) introduce and/or specify samples and ground our practices of predicative assertion/judgement, and (2) express that things have or lack features relevant to being like or unlike samples. Taking a pair of terms from the *Tractatus* (see TLP 4.121, 4.122), we might say that these normative assertions/judgements do not *say* (i.e., predicatively assert/judge) anything, but rather *show* something about our language-games (e.g., what functions as a sample, what has the relevant features to be like or unlike samples).[17] These are not the only normative assertions/judgements that show something about our language-games. Consider the assertion "A predicative assertion/judgement is a display of a holding of a relation of likeness-with-respect-to-*c* between something, *x*, and a sample, *y*". This is not a predicative assertion/judgement in the philosophical logic I am advocating. It is not an example of the display it mentions and has no intelligible contradictory. It is a normative assertion/judgement that shows a rule for predicative assertion/judgement and a rule for the use of a sample (for the purposes of representation) within a language-game.[18] Relatedly, saying "'A predicative assertion/judgement is a display of a holding of a relation of likeness-with-respect-to-*c* between something, *x*, and a sample, *y*', is not a predicative assertion/judgement" is not the negation of a predicative assertion/judgement. It, too, is a normative statement that shows (something of) what predicative assertion/judgement is. It does so in a way analogous to

[17] I take no stance on the distinction between saying and showing as discussed in the *Tractatus*. However, for an argument that something of Wittgenstein's early notion of showing carries through to his later work, especially with respect to samples, see Beaney (2008).

[18] Although I do not have the space to discuss this here, I would claim that modal assertions/judgements (e.g., it is necessary that a human is a mammal) are normative assertions/judgements that show, amongst other things, logical connections between samples.

the way in which saying "Shooting a basketball through the hoop from outside the boundary line is not to score" shows (something of) what scoring in basketball is. The suggestion, then, is that Narboux's criticism can be avoided by drawing a distinction between predicative assertion/judgement and normative assertion/judgement, and treating the former, but not the latter, as acts of two-way logical capacities established by our treating things as samples. In the philosophical logic I am advocating, as opposed to that proposed by Kimhi, not all assertions/judgements are treated the same. But their not all being treated the same is precisely what makes a consistent account of predicative assertion/judgement possible.

We can now see that invoking samples in the way I have suggested makes the negation and falsehood of predicate assertion/judgement intelligible and resolves the two puzzles. We can both say that *x* is *not* one metre long when it is not and think that *x is* one metre long when it is not because we can negatively (or positively) activate the two-way logical capacity for the likeness and unlikeness with respect to length between $path_L$ (treated as the sample for one metre) and *x*, which is also positively (or negatively) activated in reality.

8. A new philosophical logic

As it stands in *Thinking and Being*, Kimhi's philosophy faces serious problems. As Narboux argues, Kimhi's account of negation is either incomplete or inconsistent. And, as I have explained, Kimhi does not explain the differences between two-way logical capacities in reality and in thought. Taking syncategorematic two-way logical capacities to be established by our treating things as Wittgensteinian samples resolves these issues and makes the negation and falsehood of predicative assertion/judgement intelligible. On the philosophical logic I am proposing, facts and assertions/judgements are both acts of identical two-way logical capacities in that they are two types of displays of the holdings or not holdings of relations of likeness-with-respect-to-*c* between samples and other things. And the differences between two-way logical capacities in reality and in thought are explained by (1) these relations holding in reality independently of our being aware of them and (2) samples constituting categorial groups. The philosophical logic I am proposing requires a distinction to be drawn between predicative, truth-apt assertion/judgement and non-truth-apt, normative assertion/judgement. Not all

assertions/judgements are treated the same. But drawing this distinction allows us to give an account of predicative assertion/judgement that is not inconsistent. [19]

References

Aristotle, 1984. *The Complete Works of Aristotle*. J. Barnes, ed. Princeton, NJ: Princeton University Press. (References given in the form: Name of Work: Ch.)

Beaney, M., 2008. "Wittgenstein on Language: From Simples to Samples". In: E. Lepore and B. Smith, eds., *The Oxford Handbook of Philosophy of Language*. Oxford: Oxford University Press, 40-59.

Curd, P., ed., (2001). *A Presocratic Reader: Selected Fragments and Testimonia,* second edition. R. McKirahan and Curd, trans. Indianapolis: Hackett Publishing Company, Inc.

Della Rocca, M., 2021. "Parmenides's Insight and the Possibility of Logic". *European Journal of Philosophy*, 1–13. DOI: 10.1111/ejop.12703

Frege, G., 1953. *The Foundations of Arithmetic: A Logico-Mathematical Enquiry into the Concept of Number*. J. L. Austin, trans. Oxford: Blackwell.

Geach, P., 1972. *Logic Matters*. London: Basil Blackwell.

Geach, P., 1979. "Kinds of Statements". In: C. Diamond and J. Teichman, eds., *Intention and Intentionality: Essays in Honour of Elizabeth Anscombe*. Ithaca, NY: Cornell University Press, 221–235.

Haddock, A., 2020. "Thinking and Being: Review". *Mind* 129, 974–983. DOI: 10.1093/mind/fzz049

Horn, L., 1989. *A Natural History of Negation*. Chicago: University of Chicago Press. (Reissued, Stanford: CSLI Publications, 2001.)

Kimhi, I. 2018. *Thinking and Being*. Cambridge, MA: Harvard University Press.

Narboux, J.-P., 2021. "Thinking and Being: Review". *Notre Dame Philosophical Reviews*, https://ndpr.nd.edu/reviews/thinking-and-being/ (Accessed: 27 March 2022).

Silva, M., ed., 2017. *Colours in the Development of Wittgenstein's Philosophy*. Cham: Palgrave Macmillan.

Speranza, J. and Horn, L., 2012. "A Brief History of Negation". In: D. Gabbay, F. Pelletier, J. Woods, *Logic: A history of its central concepts, Vol. 11 (Handbook of the History of Logic*). Amsterdam: Elsevier, 127–174.

Wittgenstein, L., 1958. *The Blue and Brown Books*. Oxford: Blackwell. (BBB)

Wittgenstein, L., 1974. *Tractatus Logico-Philosophicus*. D. Pears and B. McGuiness, trans. London: Routledge. (TLP)

Wittgenstein, L., 1977. *Remarks on Colour*. G. E. M. Anscombe (ed.) Linda L. McAlister and Margarete Schättle (trans.). Berkeley: University of California Press. (ROC)

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Wittgenstein, L., 1979. *Notebooks 1914–1916*. G. E. M. Anscombe, trans. Oxford: Blackwell. (NB)
Wittgenstein, L., 2001. *Philosophical Investigations*. G. E. M. Anscombe, trans. Malden: Blackwell. (PI)

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