

## Unit VII: Kripke on Wittgenstein's 'sceptical paradox'

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### 1 The paradox

Wittgenstein: "this was our paradox: no course of action could be determined by a rule, because every course of action can be made out to accord with the rule." This is the paradox that Kripke develops in this essay via the example of plus and quus.

Plus and quus are mathematical functions, which we can symbolize as '+' and ' $\oplus$ ' respectively. Plus, or the addition function, is defined in the usual way. The quus function is the same as the addition or plus function for low arguments, but diverges past a certain point. More specifically, it is defined as follows:

$$x \oplus y = x + y \text{ if } x, y < 57$$

$$x \oplus y = 5 \text{ otherwise}$$

The skeptical question is: in the past, by the symbol '+', did you mean plus or quus?

As Kripke puts it, the skeptical challenge really has two parts: (i) Is there any fact that I meant plus, not quus? (ii) Do I now have any reason to be confident that I should answer '125' rather than '5' to '68+57'? The first is a question about the nature of (i.e., the metaphysics of) linguistic meaning: in what does the fact that I meant addition by '+' consist? The second is a question about our knowledge of (i.e., the epistemology of) facts about linguistic meaning: how do we know that in the past we meant addition by '+'?

One question you should ask yourself: how are these two parts of the skeptical challenge related, if at all?

Note: this is not, at least in the first instance, any sort of skepticism about mathematics. We can see the skeptic as granting that both plus and quus are perfectly well-defined arithmetic functions. The skepticism is about meaning rather than mathematics: it is about how we know which of these two well-defined functions is attached to the symbol '+.'

Kripke next goes on to consider a number of different possible answers to the skeptic's two questions.

## **2 Meaning as determined by past use of words**

Claim: the fact that I meant addition by '+' consists in the fact that I used '+' as a symbol for the addition function; i.e., I held true just those equations involving '+' which are made true by letting '+' stand for the addition function.

Skeptical reply: In the past you held true only a finite number of equations involving '+.' But the addition function is not the only function which can make these equations true; there are an infinite number of functions which make true the equations you held true involving '+.' And among these infinitely many functions is the quus function.

## **3 Meaning as determined by rules or algorithms**

Claim: the fact that I meant addition by '+' consists in the fact that I adopted certain rules, or algorithms, to govern my use of '+'; and these algorithms single out the addition function.

Skeptical reply 1: this is just to give a 'rule for interpreting a rule.' And just as the skeptic can give a skeptical reinterpretation of one expression (the '+' sign) so he can also give a skeptical reinterpretation of the expressions used in

stating the rule for the interpretation of ‘+’. The presumption is that each of these expressions may be reinterpreted to preserve the skeptical hypothesis that in the past you meant quaddition by ‘+.’

Skeptical reply 2: in fact, many people mean addition by ‘+’ without doing anything so sophisticated as mastering algorithms for or recursive definitions of addition. So association with an algorithm is not a plausible candidate for the fact that a speaker means addition by ‘+.’

## 4 Meaning as determined by dispositions to use words in certain ways

### 4.1 The simple dispositional theory

Claim: the fact that I meant addition by ‘+’ consists in the fact that I was disposed, when presented with any expression ‘ $x + y$ ’ to respond with the sum of  $x$  and  $y$  (rather than their quum). This has an obvious advantage over the claim that meaning consists in actual past usage. After all, even if I never considered the expression ‘ $68 + 57$ ’ before, I surely was *disposed* to accept ‘ $68 + 57 = 125$ .’

Skeptical reply 1: Error. Typically we are not disposed to respond to *every* instance of ‘ $x + y$ ’ with the sum of  $x$  and  $y$ : everyone is disposed, in at least some cases, to make mistakes. But then it follows that if the function attached to ‘+’ is determined by the equations involving ‘+’ which we are disposed to accept, we do *not* mean addition by ‘+.’ (It is worth thinking about the consequences of this point for Davidson’s interpretational foundational theory of meaning.)

Skeptical reply 2: Finitude. We are finite creatures capable only of understanding numbers of limited size; so “not only my actual performance, but also the totality of my dispositions, is finite” (26). But the addition function is defined over numbers of arbitrary size. So, once again, the dispositional theory delivers the wrong result: if our dispositions for using ‘+’ really did determine the function attached to it, then the function expressed by ‘+’ would apply to only numbers small enough for us to grasp. But addition is not like this.

Skeptical reply 3: Normativity. The dispositionalist tries to explain the nature of meaning in terms of what we are disposed to do. But, Kripke says, this is the wrong sort of answer. He says: “Suppose I do mean addition by ‘+’. What is the relation of this supposition to the question how I will respond to the problem ‘ $68 + 57$ ’? The dispositionalist gives a *descriptive* account of this relation: if ‘+’ meant addition, then I will answer ‘125.’ But this is not the proper account of the relation, which is *normative*, not descriptive. The point is *not* that, if I meant addition by ‘+’, I *will* answer ‘125’, but that, if I intend to accord with my past meaning of ‘+’, I *should* answer ‘125.’ ... The relation of meaning and

intention to future action is *normative*, not *descriptive*” (37). We should be clear about two points about this objection. (i) It is supposed to explain why the error and finitude objections get their force. (ii) It is closely related to the second form of the skeptic’s challenge, that of explaining how we are justified in answering ‘125’ when queried with ‘ $68 + 57$ ’. The idea is that even if we knew our past dispositions, this would not be enough to justify our view that ‘125’ is the *correct* answer. (See on point (ii) pp. 23-24.)

#### 4.2 *The counterfactual dispositional theory*

Claim: the fact that I meant addition by ‘+’ consists in the fact that, *were my brain expanded* or *were my cognitive capacities massively increased*, I *would have been disposed*, when presented with any expression ‘ $x + y$ ’ to respond with the sum of  $x$  and  $y$  (rather than their quum). So on this view facts about meaning consist not in what people are or were disposed to do, but in what they would have been disposed to do, had certain conditions been fulfilled.

Skeptical reply 1: Science fiction. This makes facts about meaning hostage to claims about what would have happened had the world been changed in certain radical ways. But really we have no idea what the world would have been like in such settings.

Skeptical reply 2: Normativity. (See above. The counterfactual version of the dispositional theory seems to meet the same problems here.)

#### 4.3 *The ‘whatever-it-takes’ dispositional theory*

Claim: the fact that I meant addition by ‘+’ consists in the fact that, *were I free from mistakes*, I *would have been disposed*, when presented with any expression ‘ $x + y$ ’ to respond with the sum of  $x$  and  $y$  (rather than their quum).

Skeptical reply 1: this is circular. The skeptic is challenging you to say what the facts are in virtue of which you meant addition rather than quaddition by ‘+.’ If you appeal to facts about what you would have said had you not made any mistakes, the skeptic will say that in such a situation you would have been correct to answer ‘5’ to ‘ $68 + 57$ ’ since, after all, you mean quaddition all along. To rule this out you must assume that you meant addition, which is of course the point at issue. (See pp. 27-28.)

Skeptical reply 2: Normativity. (Again.)

## 5 Meaning as determined by ‘machine program’

Claim: Machines can be built to embody functions; in particular, they can be built to embody the addition function. (Just think of a calculator.) But if a machine can be built to embody the addition function, then surely human beings, which are relevantly like complex machines, can do so as well. “A machine can follow this rule; whence does a human being gain a freedom of choice in this matter which a machine does not possess?” (Dummett, quoted p. 32)

As we’ll see, there are two different versions of this response to the skeptic.

### 5.1 *Machine as physical object*

Claim: a machine like a calculator embodies the addition function just in case when given two numbers as input, the machine spits out their sum (rather than their quum).

Skeptical reply: This is just a version of the dispositionalist’s response, and open to the same objections. In particular, calculators like human beings are finite, and are prone to breakdown.

### 5.2 *Machine as instantiated program or algorithm*

Claim: But cases in which machines break down are cases in which they fail to act as they were programmed to act. So when it is said that a machine can embody the addition function, what is meant is not that some particular physical machine or other can embody it, but rather that a computer *program* can embody it.

Skeptical reply: This is just a version of the view, discussed above, that the meaning of ‘+’ for me is determined by which algorithm or rule I associate with the symbol. That is to say that this is just giving a rule for interpreting a rule, which is open to the objections discussed above.

## 6 Meaning as determined by simplicity

Claim: It is true that my dispositions do not single out the addition function as the meaning of ‘+’. But the addition function is the simplest function similar enough to my dispositions. (Quaddition seems a more complex function perhaps because it is defined in terms of addition.) I mean addition by ‘+’ in part because of my dispositions and in part because when there is indeterminacy between

an expression meaning one of several things, the simplest of these things is automatically assigned as the meaning.

(For relevant discussion, see footnote 25 rather than the - in my view - confused discussion on pp. 38-39.)

Skeptical reply 1: Problems defining simplicity.

Skeptical reply 2: Seems on the wrong track. Would we decide that we didn't mean addition by '+' if we found out that, according to the true measure of simplicity, quaddition was simpler than addition?

Skeptical reply 3: This reply is ill-suited to answer the justificatory problem raised by the skeptic; "I do not justify my choice of '125' rather than '5' ... by citing a hypothetical simplicity measure of the kind mentioned" (p. 40).

## **7 Meaning as determined by irreducible meaning-experiences**

Claim: Meaning addition by '+' is having a certain introspectible experience, like a headache (except, presumably, more subtle), upon using '+' with this meaning. This view has the significant advantage that it can explain how we know that we mean addition by '+.'

Skeptical reply 1: But it cannot explain how we can be so sure that we should answer '125' rather than '5.' Even if we had a special headache associated with meaning addition by '+', how would this headache tell us how to answer?

Skeptical reply 2: It does not seem that there is any such introspectible experience. (If there were such, how could the skeptic's challenge have seemed difficult in the first place?)

## **8 Meaning as a Platonic Fregean sense**

Claim: Meanings - including the meaning of '+' - are abstract objects in Frege's third realm, and thus are not contained in anyone's minds. It is simply in the nature of such abstract objects to determine their reference: so it is simply in the nature of the addition function to imply that '125' is the right answer to '67 + 58'.

Skeptical reply: This is confused. Granted, once we have the result that the addition function is the meaning of '+', there is no further problem about why '125' is the right answer to '68 + 57.' But the skeptic's challenge is to show us how the addition function gets to be the meaning of '+' in the first place.

**9 An alternative never (explicitly) considered by Kripke's skeptic:  
meaning as determined by the intentions of language users**

Consider, e.g., the sort of response that a proponent of Grice's analysis of meaning might have to the skeptical paradox.

Do the same problems arise at the level of thought as at the level of language?

**10 Another alternative never (explicitly) considered by Kripke's  
skeptic: the community-wide dispositional theory**

Do the same problems arise for the community-wide dispositionalist theory as for the individualist version of that theory?

**11 Kripke's proposed 'skeptical solution'**

**12 A concluding question: what is meant by 'determine'?**