THEORIA

EDITED BY
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Volume LIII 1987 Part 2–3

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Received on August 19, 1987.
Revised version received on October 7, 1987.

Kripke and 'quus'

by

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KRIPKE, in *Wittgenstein on Rules and Private Language* (Oxford, Blackwell, 1982) interprets the discussion prior to sec. 202 of *Philosophical Investigations* in this way. There is nothing in any instructions I give myself (or which are given to me) for the production of values for a function called '$\emptyset(x_1 \ldots x_n)$' which forces me for all arguments $a_1 \ldots a$ for $x_1 \ldots x_n$ to give an answer denoting $\emptyset(a_1 \ldots a_n)$. Rather, given that the totality of my past and present performance is finite, it is possible, even if I have *so far* responded to queries about '$\emptyset(a_1 \ldots a_n)$' by giving values that indeed denote $\emptyset(a_1 \ldots a_n)$, so to interpret my behaviour that it accords with an endless number of intended functions; for instance, it is possible to claim that I meant, not $\emptyset(x_1 \ldots x_n)$, but $\emptyset^*(x_1 \ldots x_n)$, where $\emptyset^*(x_1 \ldots x_n)$ yields these values for arguments $a_1 \ldots a_n$: $\emptyset(a_1 \ldots a_n)$ when and only when (if we are dealing with number-theoretic functions) $a_1 \ldots a_n < m$; the constant value k otherwise. (Kripke uses, as an example, the quus' function, which yields: $x + y$, $x,y < 57$; 5 otherwise.) Nor is there any fact about my mental history or present mental state which licenses talk of my having meant $\emptyset(x_1 \ldots x_n)$ rather than $\emptyset^*(x_1 \ldots x_n)$. What we have here is *ontological* scepticism about the fact of meaning something by one's words (Baker and Hacker wrongly call it epistemological, in 'On Misunderstanding Wittgenstein', *Synthese* 58 (1984), pp. 407–450, and in *Scepticism, Rules and Language,* Oxford, Blackwell, 1984): there are, given the absence of determining factors to the contrary, many different specifiable rules with which my linguistic (and other) behaviour accords. Since an endless variety of functions could have

I would like to thank Graeme Marshall, Tony Coady and Len O'Neill for comments on an earlier draft of this paper.

been meant, we cannot speak of my *meaning* any individual function at all.

As Kripke points out (pp. 38–39), it is because the scepticism is ontological, rather than epistemological, that the paradox is not that 'another community' might find the quus function simpler than the plus function; and the solution does not consist in arguing that the plus function is indeed simpler. The problem is not one of relative simplicity, since that is an epistemological question: what the sceptic claims, however, is that since neither the hypothesis that I meant plus nor the hypothesis that I meant quus are genuine factual claims, there is no question of choosing between rival hypotheses. As Kripke says (p. 38): "If the two competing hypotheses are not genuine hypotheses, not assertions of genuine matters of fact, no 'simplicity' considerations will make them so."

It is proposed that, independently of evaluating what Kripke sees as Wittgenstein's 'sceptical solution' to the above paradox, there is a good case for claiming that this alleged 'new form of scepticism' does not get off the ground in the first place, in that we need not have ontological doubts about what A means in talking about an arbitrary function. (This extends to non-mathematical usage as well.)

It is incompatible with the paradox as presented by Kripke that A act merely as an automaton, doing brute manipulations with that which we call 'natural numbers', but which has no significance for A other than that he is moved by stimulus to give a certain response (and might be conscious of this, eg. if he were part of a neurological experiment). For this would involve A's having no understanding of the natural numbers (and functions of them), but merely acting as an innumerate might, eg. a young child or person of another culture: but the paradox implies that when A considers, for instance, arguments less than 57, he really *does* give their sum (rather than their quum), ie. he performs addition upon them and *acknowledges* this, by using the familiar grade-school algorithm. It is not as though he is simply stimulated to respond with what *others* would call the sum – *he* would call it the sum too. To deny this is to fail to make a distinction between the human case and the case with non-human animals, or worse, a case of throwing three darts at a board full of numbers, calling the first two numbers hit the 'summands' and the third the 'sum', and becoming proficient enough to hit the 'sum' whenever the other two numbers hit are less then 57! It would be a cheap victory if all the sceptic were trying to show was that humans acting automatically, unknowingly, in a robotic state and the like cannot be said to mean anything, as a matter of fact, by their behaviour.

What the sceptic claims, however, is: "Well, A might, in the restricted sense, mean plus by 'plus', in that when he adds x and y he really does *know* what he is doing, but what neither he nor any of us know is what he will do in arbitrary cases, because anything he *has* done conforms with his *ultimately* meaning eg. quus by 'plus' when, say, x and y are larger than 57." So let us suppose that A is given x and y >57, queried about their 'sum', and that A replies '5'. Now it is hard to grasp just what is going on here: given that A understands what are natural numbers and functions thereof, all he can say is that he really does mean 5 by '5', and is applying a non-algorithmic (or maybe trivially algorithmic) function which yields a constant value for arguments >57. The sceptic then says that this does not entail that A means quus by 'plus', for given *further* arguments he might respond with eg. 'x_0' and so mean *quus* etc. ad infinitum. So the sceptic is challenging us to provide a fact about A that demonstrates his meaning something *timeless* by 'plus', something which would cover all future cases.

In response, it is claimed that A provably means plus by 'plus' in a timeless sense (which sense will become clear in the course of argument) given only that he has *so far* produced the sum of any x and y with which he has been presented. The first point is that the sceptic is clearly restricted in the endless different functions he can produce as 'governing' A's past and present behviour. He cannot, for instance, claim that A's behaviour conforms with his having meant eg. *times* by 'plus', or *minus* by 'plus', or *ratio of* by 'plus'. The permissible functions can only be of the form:

$f(x,y) = x + y$ for $x,y < m$ (or until time t, or until some other condition obtains)
$= k$ otherwise (or $f^*(x,y)$ otherwise, or some other value).

The first line is *crucial*: the common element in all of the sceptic's functions is that in certain cases, ie. those cases in which A has already carried out computations, A has indeed given the *sum* – and remember, knowingly so. This specification can be carried on indefinitely. If A, when presented with x and y greater than eg. 57, responds with '5', we can still say that A might mean, by 'quus', *quus* or **quus** etc., but so long as he has indeed sometimes performed quaddition!

Now, our original problem was: can A be said determinately to mean anything by 'plus'? Consider Goodman's problem as illustration (the Kripke paradox is a semantic version of it, and Kripke notes the parallel between his/Wittgenstein's paradox and Goodman's at p. 20 of *Wittgenstein on Rules and Private Language*): what is an emerald – is it green or is it grue? Certainly it can be considered grue, but this is only because of this fact – it was a stone green before the year 2000. Its greenness is the common element in any other supposedly paradoxical Goodman-classification of it. So the emerald most certainly is grue, or grellow (meaning that it is green before 2000 or yellow after 2000) or . . ., in a *trivial* sense, ie. in the sense that it can be classified in all sorts of ways, as long as its greenness is one of the disjuncts out of which the complex and unfamiliar disjunction-classifications are formed, just as, from p, we can form (pvq), (pvr), (pvs) etc. Similarly, A most certainly non-trivially means plus by 'plus'. It does *not* follow that A will always respond to 'x + y' with their sum. He might respond with '5', ie. their quum. But *then* it is a fact that he non-trivially means quus by 'plus'. *Until* he so responds, it is a fact that he non-trivially means plus, but trivially means quus. After he so responds, it is a fact that he non-trivially means quus, but trivially means *quus* *until* he replies 'x_0' – *then* he non-trivially means *quus*, but trivially means **quus**. But this is not as strange as it may seem. It is a necessary condition of A's having trivially meant *quus* by 'plus' that he non-trivially meant quus by 'plus'; but it is a necessary condition of his having trivially meant quus by 'plus' that he non-trivially meant plus by 'plus'. The emerald is trivially grue *in virtue of* its non-trivially *being green*. The reason it is non-trivially green is that it indeed has the physical property of greenness. It is *trivially* grue because it has

a non-physical (call it logical) property which is parasitic upon the non-trivial physical property, just as the truth of '(pvq)' is parasitic upon the truth of 'p' (or 'q'): the 'q' (or 'p') is not doing any work. So, for x,y < 57, the fact of the matter is that A knowingly performs addition, by using the plus algorithm; and if A knowingly performs addition by using the plus algorithm, he can properly be said to *mean plus* by his behaviour, as an ontological truth. It is only by logical implication that he can be said trivially to mean quus, just as when A thinks or utters 'p' he can be said trivially to mean (pvq), (pvr) etc. Once he responds, for x,y > 57, with '5', he non-trivially means quus, just as A non-trivially means (pvq) when he thinks or utters '(pvq)', assuming, as both the sceptic and I want to, that A is acting intelligently and is not lying. But *then* he can be said trivially to mean ((pvq)vr), or ((pvq)vs) ad infinitum. (The expression 'trivially means' might strike one as contradictory – if A means plus, he surely cannot trivially mean quus. It is used here as a convenient abbreviation. More precisely, A trivially means p just in case his behaviour is trivially in accord with his having meant p; so that A trivially means quus just in case the answers he gives (here, sums for summands less than 57) are trivially in accord with his having meant quus.) Or think of it this way: if A gives only sums, then he trivially means quus as a matter of logical implication. But once he actually does come up with a '5', ie. a quum, in response to a query from us about the 'sum' of x and y, then our lives have been affected, as it were, ie. our communication has suffered a setback (he has surprised us, given all the previous sums he gave), and so it now becomes a serious (ie. non-trivial) matter that he means quus.

Of course, one might object that A can non-trivially mean quus without ever uttering '5' for x,y > 57. To this it can be replied that, even then, he must knowingly perform addition until such time as he is given x,y > 57. Even if he silently intends to deviate in the future he must first add, that is, he must first mean plus by 'plus' for x,y < 57.

Which is to say that there is a distinction between what A *means* at any given time and what he *will do* at a later time. Our attribution to A of meaning-something, in particular non-trivially meaning plus by 'plus', which A does (until he *actually* responds with '5' for x,y > 57, i.e. a quum, and *even if* he intends to deviate in the future) must, then, be distinguished from our predicting what A will do: he might not respond with a sum in all future cases. The sceptic is wrong to assert that there is no fact of the matter about what A means at any given time. It is a timeless meaning, not in the sense that all of A's future responses are fixed in accordance with what he means *before* he makes those responses, but in the sense that there is a *fact* of the matter at any given time: A's mental events and external behaviour are time-relativised, ie. the events constituting his responses in the past are temporal – but the *fact* that given those finished responses, he non-trivially means plus, is *atemporal*, and obtains at any time in the future, *given* the previous events, and side by side with his trivially meaning quus, or *quus* etc. It is *because* he non-trivially means plus that he can trivially mean quus et. al. as well.[1]

Received on August 24, 1987.

The preface paradox dissolved

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I. *Introduction*

The preface paradox strikes us as puzzling because we feel that if a person holds a set of inconsistent beliefs, i.e. beliefs such that at least one of them must be incorrect, then he should give at least one of them up. Equally, if a person's belief is rational, then he has a right to hold it. Yet the preface example is *prima facie* a case in which a person holds an inconsistent set of beliefs each of which is rational, and thus a case in which that person has a duty to relinquish what he has a right to keep.

I shall argue that counterintuitive appearances are not always deceptive; the preface case demonstrates the possibility of rational inconsistent belief. Attempts to deny the inconsistency of the case by giving it a probabilistic treatment misrepresent it. On the other hand, attempts to deny the rationality of the case by insisting upon the dependence of the available sets of evidence, stem from a crucial failure to recognise that the relevant beliefs are *inconsistent* rather than *contradictory*.

It might be thought that this distinction is trivial, but it has important consequences for rational belief. One reason for ignoring it is a misguided 'conjunction principle', namely that belief or rational belief in various propositions entails a belief or rational belief in their conjunction. It is this principle that gives the example its air of paradox. Once we make explicit and abandon the conjunction principle, the example can be seen as a possible and perhaps natural kind of situation.

I am grateful to Paul Gilbert, Richard McDonough, Toomas Karmo and the referee for suggestions and criticisms of earlier drafts of this paper.