



Weir and Those 'Disproofs' I Saw before Me

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WEIR AND THOSE 'DISPROOFS' I SAW BEFORE ME

By NEIL TENNANT

In his *Rejoinder to Tennant* (ANALYSIS 45.2, March 1985) Weir complains that the anti-realist owes him an account of why it is justified to move from denying that a speaker does not understand a sentence to asserting that he does. The anti-realist's reply must be that the question whether a speaker understands a sentence or a particular word or a particular kind of construction is one that can always be decided after appropriate investigation. This not to say that at any stage of one's acquaintance with the other speaker's use of the language, one is able definitely to pronounce on his competence one way or the other. It is merely to say that, should the question of his competence in any regard ever be raised, we know what the appropriate avenues of investigation are that would very quickly put us in a position confidently to be able to assert that he does after all understand the word or construction in question or confidently to be able to deny the claim. This is why the classical rule of dilemma:

$$\begin{array}{r}
 \text{---(i)} \quad \text{---(i)} \\
 A \qquad \sim A \\
 \vdots \qquad \vdots \\
 \vdots \qquad \vdots \\
 B \qquad B \\
 \hline
 B \qquad (i)
 \end{array}$$

is justified when the assumptions A and $\sim A$ for the two case proofs are, respectively, attribution of the understanding in question and its denial. Attributions of semantic understanding are a special kind of psychological report. They happen to be decidable.

It is in examples such as *attributions* of understanding, and other psychological reports, that Weir forces the discussion away from the straightforward cases of claims with the nature of whose understanding I was concerned. He claims that this is quite in order, since he is concerned to bring out a tension between maintaining determinacy of meaning and rejecting determinacy of truth value. I confess to feeling no such tension. My example was of a mathematician's understanding of an arithmetical statement. In such a case, the means for deciding a statement one way or the other are more strictly circumscribed than they are in the case of a psychological report. One is better placed to see in advance what the general shape of conclusive evidence for one's assertion would be. To say this is not to lose sight of the fact that the notion of proof, for the anti-realist in mathematics, is still a reasonably open-textured one. The reason why I am at a loss to understand why possession of appropriate proof-checking abilities should not be

taken to entail grasp of meaning (as Weir maintains it should not) is implicit in my example. Weir has no justified complaint in pointing out that I have merely produced one example of proof-checking ability and have offered no general argument for my conclusion. This would be to see the point of my example in a perversely myopic way. The example is sufficiently illustrative of the general claim involved for me to be able to rest my case. We know how to set about effectively determining whether someone has grasped the meaning of a mathematical statement. But we do not necessarily know how to test for truth or falsity of that statement. My example was chosen so as to have a clear cut meaning but be devilishly difficult to decide. That there are such statements, and that we readily grasp their meanings, was the general point being made.

Weir replies (in correspondence) that my point is weakened by the fact that I am still relying on a general theory of beliefs and desires etc. – in short, engaged in radical interpretation. Presumably the holistic blurring of focus thereby incurred is supposed to undermine faith in determinacy of meaning at the cost of determinacy in truth value. My short retort is that this is to take the spectre of interpretative indeterminacy too far. I maintain that we can be clear about our way with words, even though unclear about where in the world those ways might lead us.

If I am in any doubt as to a mathematician's grasp of the meaning of Goldbach's conjecture, I cannot imagine satisfying myself that he has the relevant competence in any way other than checking his recognitional capacities in connection with the constituents of the sentence, both in that sentence and in others, in the general sort of way that I indicated in my example.

The grounds for asserting that a speaker understands a given sentence will always be of that general criterial kind. In some circumstances one may not have reached a verdict on a speaker's competence either way. But it is in the nature of the case that we know how we can, and normally do, extend the evidential basis so as to decide the question of competence one way or the other. I am not relying, as Weir claims I am, on intuition as 'a poor guide in such a complicated area'. There is more than a mere appeal to intuition in the detailed Dummettian *reductio* that I set out of the three claims that I labelled 'Realism', 'Manifestation' and 'Fact'. Weir complains further that I hold that a particular sentence is not neither true nor false. He applies double negation elimination to conclude that it is either true or false. He asks what legitimate objection could be made to this move and says that, significantly, I offer none. But it is surely not for me, if I object, to dissuade the misguided classicist from his contemplated course of reasoning. It is rather for the classicist to persuade me that it is leading somewhere sanitary.

The deep difficulty that some realist classicists have in appreciating the force of anti-realist considerations about meaning surfaces

once again in Weir's account of the sense of the universal quantifier. He intends this account to show that the realist 'would be justified in interpreting the quantifiers as infinitary truth functions ... over all the (possibly infinite) number of values of substitution instances'. But, one may ask, what about alternative interpretations of the sense of the universal quantifier that explain exactly the same range of behavioural dispositions and/or observed behaviour? Weir's account is as follows:

S understands universal quantification iff for all predicates F in S's language, and for all objects x , if S were to understand a as referring to x , and $(x)Fx$ and F_a^x were to be queried, then S's utterances would be such that the degree of belief attached to the former will always be less than or equal to the degree of belief given to F_a^x . Moreover, were S disposed to make fully decisive responses to all instances of $(x)Fx$ then S would be able to produce an instance believed true to the same degree as the generalization, whenever the queried instance was not so believed.

But so what! All this is perfectly acceptable to the anti-realist. It is still not enough to force the anti-realist to assert

$$\forall x Fx \vee \sim \forall x Fx$$

As Weir himself concedes, there are still considerable difficulties facing an account of the notion of degrees of belief. One is tempted to see the easy transition from degrees of belief to probabilities, and thence to the conditional probability semantics of Hartry Field. But the new validation that that semantics provided for classical logic was premised (in Field's seminal work) on the mathematical axiom of probabilities that states that the sum of the probability of an event with the probability of its complement is 1. This is a classical assumption built in at the very beginning on which, of course, the whole semantics bootstraps. That semantics is open to intuitionistic modification by rejecting this axiom for probability in the classical case. Leblanc and Morgan have already explored this line and, predictably, produce a probability semantics with respect to which it is intuitionistic logic, not classical logic, that is sound and complete. For lack of space, however, I cannot investigate degrees of belief or probabilities further here.

Weir asks how one can make sense of determinate dispositions grounding determinate meanings, if subjunctives, being undecidable, lack stable truth values. He merely records his doubt, without argument, that appeal to defeasible assertability conditions will resolve this problem.

In the light of this question I should enter one note of caution for the reader concerned to assess the overall strength of the anti-realist's case, taking areas of discourse one by one as Dummett recommends we should. If Weir thinks that his point about subjunctives is a telling one, it can be pointed out that he is mistakenly supposing that every anti-realist with regard to any area of dis-

course would have to be an anti-realist specifically on subjunctives. This may not, however, be so.

A further cautionary note should be entered on the locution 'being an anti-realist on...'. I don't, of course, intend to suggest that we are free to take up or drop the anti-realist's basic postulates of publicity and compositionality in a given area of discourse simply as the spirit moves us. These two postulates, rather, hold across the board and are the starting points of any anti-realist critique. I assume them as obvious for any area of discourse. Rather, 'being an anti-realist on' any given area of discourse is arrestingly different from the classical position only when the *result* of prosecuting those principles to the full is a refusal to accept orthodox moves in reasoning. An example would be a refusal to regard every statement in the area as decidable, and hence a refusal to apply to it the law of excluded middle or the rule of dilemma or any of the usual classical equivalents. Whether one should reach such a result in the case of subjunctives is a matter I cannot discuss in detail here.

Weir believes himself able to

assuage the self-doubts of realists that the classical conception of quantifiers, as exposing infinitistic truth functions, and hence capable of generating undecidable sentences, *clashes with* plausible views about how we could grasp such truth functions. (my emphasis)

To assuage *that* self-doubt is easy. More difficult, however, is to assuage the doubt that the anti-realist is more subtle in entering: to wit, that the classical conception *goes unjustifiably beyond* plausible views about how we could grasp such truth functions.

Once again, this is where a deep misunderstanding of the anti-realist's position surfaces in the writings of a realist. It is the extra theoretical slack in the realist's account, the slack that has no behavioural import on any methodology sensitive to normative issues, that the anti-realist is concerned to eliminate.

If this 'revolution' involves abandonment of classical logic for intuitionistic logic, or indeed any other, we have yet to see whether Weir's misgiving is correct that this would have a 'debilitating effect ... on our reasoning, our mathematics and, through it, on our physical science'. It is a major concern of mine in [198?] to show that this is emphatically not so. I can summarize here results already obtained for the system of intuitionistic relevant logic, which I would argue for as the logic that is justified on an anti-realist account of the meanings of the logical operators: It is adequate for the development of a theory of truth adequate in Tarski's sense. It is adequate for the falsificationist method in science. It is adequate for the foundations of constructive mathematics. It is therefore up to Weir to substantiate his misgivings at being deprived of strictly classical canons of reasoning.

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NOONAN, 'BEST CANDIDATE' THEORIES AND THE SHIP OF THESEUS

By B. J. GARRETT

IN 'Wiggins, artefact identify and "best candidate" theories' (ANALYSIS 45.1, pp. 4-8), Harold Noonan discusses the 'best candidate' theorist's description of three possible histories of the Ship of Theseus and poses a dilemma for such a theorist. I wish to argue, however, that this dilemma can be resisted and that either horn can be accepted without impalement.

The three possible situations involving the Ship of Theseus can be pictured as follows:

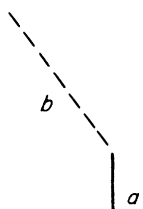


Figure 1

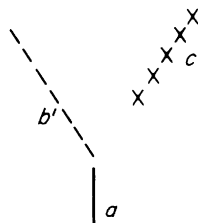


Figure 2

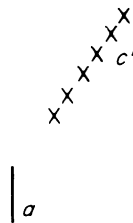


Figure 3

In all three situations 'a' denotes the Ship of Theseus. In situation 1, 'b' denotes the continuously repaired ship. In situation 2 (the situation described by Hobbes), 'b'' denotes the continuously repaired ship and 'c' denotes the plank-hoarder's ship, reconstituted from a's original planks. In situation 3 the ship reconstituted from a's original planks is denoted by 'c''. Given that we regard spatio-temporal continuity (under a sortal) as the most important

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Truth Conditions and Truth Values

Alan Weir

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Alan Weir

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