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DOES ASSERTIBILITY SATISFY THE *S*4 AXIOM?

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I

Many discussions of warranted assertibility take the following principle for granted:

(AA) If it is assertible that P, then it is assertible that it is assertible that P.

'Assertible' abbreviates 'warrantedly assertible' throughout. (AA) is the result of reading $\Box$ in the *S*4 axiom of modal logic $\Box p \rightarrow \Box\Box p$ as 'it is assertible that', or of substituting those words for 'one knows that' in the *KK* schema 'If one knows that P, then one knows that one knows that P'. This paper argues that (AA) has false consequences.

Some clarifications: Assertibility depends on circumstances; it is gained or lost as the available evidence changes. Thus (AA) has implicit generality both over circumstances and in the schematic variable 'P'. 'P' is replaceable by declarative sentences, which may have features sensitive to the circumstances, e.g. tense (as in the third occurrence of 'is' in (AA)). The circumstances are the

context in which the assertion that *P* is envisaged as being made, which need not be the context in which (AA) itself is asserted. Although circumstances need not be actual, those considered below are physically possible and probably actual. It will be left open whether more than one person can be in the same circumstances; empirically, it may happen that only one person is in given circumstances. 'Assertible' will not be further defined, for the objection to (AA) is intended to apply over a wide range of readings.[1]

II

(AA) is particularly relevant to Michael Dummett's arguments for an anti-realist theory of meaning. To summarize very roughly, Dummett objects to truth conditional theories of meaning that they violate a required connection between meaning and use: since the users of a sentence may be unable to recognize its truth condition as obtaining when it does obtain, its obtaining then would be a feature of its meaning not properly reflected in its use. The proposed remedy is that the meanings of sentences should be given by their assertibility conditions, not by their truth conditions. The remedy would fail if the objection to truth conditional theories of meaning applied equally to assertibility conditional theories of meaning; thus the argument requires that the users of a sentence must be able to recognize its assertibility condition as obtaining when it does obtain. Dummett endorses this requirement: 'The conditions under which a sentence is recognized as true or false [...] have, by the nature of the case, to be

[1] A comprehensive account of the topic would require a rigorous treatment of circumstances and of the semantics of circumstance-dependence. The arguments of this paper are not very sensitive to the details of such a treatment, whose development here would entail undue technicality. The use of quotation marks is casual for the same reason.

conditions which we can recognize as obtaining when they obtain' (Dummett 1981, p. 586); 'according to a verificationist theory, [. . .] that in which an understanding of the sentence consists is an ability to recognize, whenever presented with it, whatever we take to count as establishing its truth' (Dummett 1991, p. 317; see also Dummett 1993, pp. 45–46). That is, if one is in a position to recognize that the truth condition obtains, then one is in a position to recognize that one is in a position to recognize that it obtains. When the truth condition is that P, and 'one is in a position to recognize' is abbreviated by 'it is assertible' (as Dummett's account permits), the result is (AA).[2,3]

[2] Crispin Wright also seems to assume (AA) in arguing that truth and warranted assertibility coincide in positive normative force (Wright 1992, p. 18).

[3] The focus of Dummett's critique of truth conditional theories of meaning is often on the undecidability of truth, i.e. on the fact that speakers sometimes lack an effective procedure for recognizing whether the truth condition of a sentence obtains (incidentally, this holds on both realist and anti-realist conceptions of truth; it is just because intuitionists take such procedures sometimes to be lacking that they reject the law of excluded middle). If the argument for an anti-realist theory of meaning takes this form, then it requires assertibility to be decidable, i.e. there must always be an effective procedure for recognizing whether a given sentence is assertible in a given context (a conclusion endorsed by Wright 1992, p. 56). This would not imply a procedure for recognizing whether it is true, even on an anti-realist conception of truth, which does not identify truth with assertibility in a given non-ideal context. For example, the intuitionist identifies assertibility with the subject's possession of a proof and truth with the existence of a proof (i.e. the subject's possible possession of one). The decidability of assertibility does not follow from (AA), since the former implies that if it is *not* assertible that P then, once the effective procedure has been applied, it is assertible that it is not assertible that P, a matter on which (AA) is silent (just as, in modal logic, the $S5$ axiom $\neg\Box p \rightarrow \Box \neg\Box p$ does not follow from the $S4$ axiom). Thus it makes a significant difference to what the anti-realist requires of assertibility whether the objection to truth conditional theories of meaning is that truth is not always recognizable or that it is not always decidable, even though the two claims are equivalent given bivalence

Dummett treats (AA) as unproblematic (see also Dummett 1977, p. 375). It is not clear why. On the natural understanding of recognition as the acquisition of knowledge, (AA) is tantamount to the highly contentious principle that if one is in a position to know that P, then one is in a position to know that one is in a position to know that P: not something to be assumed without argument.[4] Now both recognition and knowledge are factive attitudes; one is not even in a position to recognize or know that P unless P. If having a warrant to assert that P is equated with being in a position to know or recognize that P, then only truths are warrantedly assertible. Even if a falsehood is strongly supported by evidence, one is not warranted in asserting it. Perhaps surprisingly, there is much to be said for the principle that one has a warrant to assert that P if and only if one knows that P (Williamson 1995). However, this is not the place to say it, and the principle will not be assumed in what follows. The anti-realist may wish to adopt a conception of assertibility on which falsehoods are assertible when strongly supported by evidence, and may even suppose that such a conception makes (AA) more plausible. The arguments below are neutral towards the factiveness of assertibility; its denial does not help the anti-realist to defeat them.[5]

and the presence of classical negation in the object language. However, if assertibility is decidable then (AA) should hold, so the argument in the text applies to both forms of anti-realism. It could also be turned into a direct argument against decidability.

[4] In mathematics, knowing that P is to a first approximation having a proof that P (but see n. 5 for one necessary qualification), and (AA) becomes the principle that a proof that P is recognizable as a proof that P. For some questions about this principle see Weinstein 1983 and Stirton 1995.

[5] An anti-realist theory of meaning is likely to distinguish between canonical and non-canonical warrants for assertion, e.g. between having a proof and having been told by a reliable informant that there

If the argument in III is correct, Dummett's objection refutes truth conditional theories of meaning just in case it also refutes assertibility conditional theories of meaning. The point is not confined to assertibility as an alternative to truth in theories of meaning. If the generalized argument in VI is correct, *nothing* could have the characteristics that Dummett's objection requires of the central notion in a theory of meaning. The moral presumably to be drawn is not that an adequate theory of meaning is impossible, but that something is wrong with Dummett's objection. However, this is not the place to examine the grounds for Dummett's objection. It will be more fruitful to consider what positive view of the relation between assertibility and truth is suggested by the arguments below. Some brief remarks to that effect will be made in conclusion.

III

Imagine an early navigator sailing unknown seas on a slowly moving boat. He wonders whether there is land ahead (at any distance: assume for simplicity that he does not know that the earth is round). Early in the morning, he has no idea; it is clear to him that no land is yet visible. Gradually something appears on the horizon. At first he is not sure whether he is imagining it; even after he is sure, he has at first no idea whether it is land or a mere bank of clouds. The former hypothesis slowly gains in probability over the latter. After several hours there is no doubt. By evening the boat is moored to land. The navigator is phlegmatic; his confidence that there is land ahead grows

is one. The recursive semantics will be formulated in terms of canonical warrants, and non-canonical warrants are explained as warrants for supposing there to be canonical warrants. The argument in the text applies whether or not 'assertible' is understood as qualified by 'canonically'.

as slowly as the visible scene changes; he experiences no flash of conviction. The whole process is gradual.

Let t_0 be a time early in the morning; for each natural number i, let t_i be the time i seconds after t_0; let t_n be a time late in the evening. For each natural number i from 0 to n, let c_i be the navigator's circumstances at t_i insofar as they are relevant to the assertibility of the claim that there is land ahead (this qualification will henceforth be understood). Although the navigator can easily discriminate between c_n and c_0, for no i can he discriminate between c_i and c_{i-1} (indiscriminability is non-transitive). He cannot discriminate between his present circumstances and those in which he was a second ago; the change is too slow. For all that he has a warrant to assert in c_i, he is in c_{i-1}. Thus the following holds whenever a sentence concerning his circumstances replaces 'P':

(1) If in c_i it is assertible that P, then in c_{i-1} P.

($1 \leq i \leq n$, a qualification understood henceforth). 'P' should be read as expressing a condition on circumstances, not a fixed proposition: 'In c_i P' does not entail 'In c_j P' when $i \neq j$. We often use declarative sentences like that in natural languages: 'In Mexico it is raining' does not entail 'In Britain it is raining'.

(1) holds in virtue of the specific circumstances at issue; it does not purport to be a general truth. If (1) failed, something would be assertible in c_i without being true in c_{i-1}: but then the navigator would have a warrant to assert something in c_i that was incompatible with being in c_{i-1}. Moreover, c_{i-1} is a contextually relevant alternative to c_i, for he was in it only a second earlier. The navigator has no such warrant; the difference between c_i and c_{i-1} is far too small for him to detect. (1) would fail if he had misleading evidence that made some general falsehood assertible, but clearly the example can be so constructed

that he has no such evidence. Although his evidence is inadequate at first to warrant a judgement whether there is land ahead, that does not make it positively misleading. Again, (1) might fail if he made a perceptual misjudgement, but the example can be so constructed that he makes no such misjudgement. If there is a warrant to assert that P, then it appears to be safe to assert that P, so, unless appearances are misleading, it is safe to assert that P. In c_i appearances are not misleading, but it is not *safe* to assert that P, unless in c_{i-1} P, for otherwise the example can be so constructed that someone who asserted in c_i might easily have asserted falsely in c_{i-1} that P (for relevant values of 'P', whether in c_{i-1} P does not depend on whether someone asserts that P). Thus if in c_i there is a warrant to assert that P, then in c_{i-1} P.

The following objection to (1) might be made. In c_i the navigator could introduce a name, e.g. 'Kirk', for his circumstances by ostension. Thus in c_i it is trivially assertible that one is in Kirk. It would then follow by (1) that in c_{i-1} one is in Kirk: but that consequence is true only if c_i and c_{i-1} are identical, which in general they are not. Although the distinctness of c_i and c_{i-1} does not follow merely from the distinctness of i and $i - 1$, since there might have been no change in circumstances from t_{i-1} to t_i, c_i and c_{i-1} must be distinct for many i, otherwise c_n and c_0 would not differ as much as they do. What the objection neglects is the significance of the qualification 'in c_i' in the antecedent of (1). 'In c Q' on its intended reading is true only if it is necessary for the realization of c that Q. That condition is not met when $c = c_i$ and 'Q' = 'It is assertible that one is in Kirk'. For c_i can be realized again in the future, and it will not then be assertible that one is in Kirk; although one will in fact be in Kirk, one will be unable to discriminate finely enough to assert that one is in Kirk rather than a different but very similar set of circum-

stances in which one could easily be (since the introduction of the name 'Kirk' is not relevant to the assertibility of the claim that there is land ahead, it is not part of c_i). Thus the antecedent of (1) is not true in the relevant case, and the objection fails.

A similar objection to (1) might exploit ostension of the time rather than of the circumstances. The suggestion would be that in c_i it is assertible that the time is now, even though it is not the case that in c_{i-1} the time is now. The reply to the objection is also similar: the time is not essential to the circumstances, because it is not as such relevant to the assertibility of the claim that there is land ahead. Thus it is not the case that in c_i it is assertible that the time is now.

One sentence concerning the navigator's circumstances is 'It is assertible that there is land ahead'. Thus the following holds as an instance of (1):

(2) If in c_i it is assertible that it is assertible that there is land ahead, then in c_{i-1} it is assertible that there is land ahead.

Note that, in the replacement for 'P', 'assertible' adverts to one set of circumstances in the antecedent of (2) and another in the consequent. That is quite consistent with the rationale for (1), for the navigator in c_i has no warrant to assert a feature of his circumstances that would differentiate them from c_{i-1}. The assertibility of the claim that there is land ahead is just such a feature of the circumstances.

Now assume (AA), for a *reductio ad absurdum*. Then the following instance of (AA) holds, with the circumstances made explicit:

(3) If in c_i it is assertible that there is land ahead, then in c_i it is assertible that it is assertible that there is land ahead.

By the transitivity of the conditional (which may as well be material throughout), (2) and (3) yield:

(4) If in c_i it is assertible that there is land ahead, then in c_{i-1} it is assertible that there is land ahead.

So far, i has been arbitrary. Thus (4) has been derived for each i from n to 1. Given transitivity again, those n conditionals together yield:

(5) If in c_n it is assertible that there is land ahead, then in c_0 it is assertible that there is land ahead.

(5) is false. The antecedent is true; in c_n (late evening) it is manifestly assertible that there is land ahead. The consequent is false; in c_0 (early morning) it is manifestly not assertible that there is land ahead (recall that assertibility varies with the evidence). Thus (AA) has false consequences. When the navigator is warranted in asserting 'There is land ahead', his warrant need not be transparent to him; he may have no warrant to assert 'My last assertion was warranted'.

IV

Could a rival case be made for blaming one of the other assumptions of the argument, (1) or the transitivity of the conditional? The best prospect for such a case is by appeal to the apparent affinity between the argument and sorites paradoxes. It might be suggested that the support for (1) is defective in whatever way the support for the major premise of a sorites paradox, e.g. 'If i grains make a heap, then $i - 1$ grains make a heap', is defective. Alternatively, it might be suggested that, although (1) is true enough, the conditional is non-transitive, as some treatments of sorites paradoxes allege it to be.[6] In either case, the problem will

[6] The argument can be reworked so that each step uses *modus*

be traced to *vagueness* in some relevant term, and (AA) will be exonerated.

Treatments of the conditional on which vagueness makes it non-transitive are independently objectionable (Williamson 1994, pp. 123–138). They involve a problematic notion of degree of truth on which a conditional can be true enough to be true even though its consequent is slightly less true than its antecedent. In any case, one can shift the problem from the alleged non-transitivity of the conditional to the status of (1) by moving to a context in which only perfect truth counts as truth, so that a conditional is true enough to be true only if its consequent is at least as true as its antecedent. In this context, the transitivity of the conditional is unproblematic. Such a standard of truth is not unfair to (AA), whose proponents do not advance it as only roughly true.

The only serious candidate for the relevantly vague term is 'assertible'. It is indeed vague; it has borderline cases. The question is whether its vagueness is the source of the present problem for (AA). If it is, then the problem would disappear if 'assertible' were made precise. That is, (1) would gain an obviously false instance, just as the schema 'If i grains make a heap, then $i - 1$ grains make a heap' gains an obviously false instance when 'heap' is made precise enough by the stipulation of an arbitrary cut-off point. Suppose then that 'assertible' is sharpened, and in particular that this is done by tightening up the conditions for its application, so that borderline cases are resolved in favour of its non-application. 'Assertible' still applies in its new sense wherever it manifestly applied in its old sense; it still fails to apply in its new sense wherever it manifestly failed to apply in its old sense. For example, one might

ponens rather than transitivity, but vagueness has sometimes been supposed to threaten even *modus ponens*.

pick appropriate circumstances c_i and stipulate that to be assertible is to be at least as assertible as it is assertible in c_i that there is land ahead (for reasons connected with the discussion of the name 'Kirk' above, it would be misleading as well as unnecessary to imagine the navigator himself making the stipulation). Although the stipulation would not make 'assertible' perfectly precise, it would eliminate some vagueness. If the plausibility of (1) depends on the vagueness of 'assertible', then enough stipulation should give (1) an obviously false instance.

Does sharpening give (1) a false instance? On the contrary, (1) becomes *more* plausible, not less, for one only strengthens its antecedent by restricting the application of 'assertible'. Such verbal stipulations do nothing to improve the navigator's ability to discriminate between his successive circumstances. Note that, although the term 'assertible' may itself occur in substitutions for '*P*' in (1), this does not matter, because (1) holds for *any* appropriate substitution for '*P*', irrespective of whether 'assertible' in it has been sharpened. Moreover, (5) remains obviously false, for it involves only cases in which 'assertible' manifestly applies or manifestly fails to apply in its old sense. Thus the present problem for (AA) is merely exacerbated when 'assertible' is sharpened. The case for (1) does not depend on the vagueness of 'assertible'. Vagueness is a red herring.[7]

Further to contrast (1) with the major premise of a sorites paradox, note that a classical semantics can make all instances of (1) true and (5) false. The following example uses some ideas from possible world semantics with a non-transitive relation of accessibility between worlds, corresponding to the failure of the *S*4 axiom. It is intended for illustrative purposes only. Treat truth-functional con-

[7] Nothing in the text presupposes the positive epistemic account of vagueness in Williamson 1994.

nectives classically. Evaluate 'In c_i it is assertible that P' as true if and only if 'In $c_{i-1}P$' (for $i \geq 1$), 'In c_i P' and 'In c_{i+1} P' (for $i < n$) are all true, and otherwise as false. Thus every instance of (1) is evaluated as true. Evaluate 'In c_i there is land ahead' as true if and only if $i \geq n - 1$. Then (5) is evaluated as false, as is the instance (3) of (AA) for $i = n$.

V

Granted the failure of (AA), an attempt might be made to *construct* a new notion of assertibility, assertibility*, that does satisfy the $S4$ axiom, out of the old one. Call circumstances c' accessible from circumstances c if and only if everything assertible in c is true in c'. Let accessibility* be the (strong) ancestral of accessibility, i.e. c' is accessible* from c if and only if for some sequence $c_0, \ldots, c_n$ $(n > 0)$, $c_0 = c'$, $c_n = c$ and each c_{i-1} is accessible from c_i. Let it be assertible* in circumstances c that P if and only if in all circumstances c' accessible* from c, P. Since accessibility* is automatically transitive, even though accessibility is nontransitive, assertibility* satisfies the $S4$ axiom.

The trouble with this construction is that assertibility* does not provide a reasonable standard of assertibility. Consider the navigator again. For each i, c_{i-1} is accessible from c_i, by (1). Moreover, it is consistent with everything assertible in c_0 that there is no land ahead, so circumstances d in which there is no land ahead are accessible from c_0. Thus d is accessible* from c_n. By definition of 'assertible*', it is not assertible* in c_n that there is land ahead. Yet it is quite obvious in c_n that there is land ahead. The standard for assertibility* is too demanding to be of much interest.

A closely related point is this. For any i, let 'it is assertible^i that' abbreviate a string of i occurrences of 'it is assertible that'. One can easily show by induction on i that

in c_i it is not assertible^{i+1} that there is land ahead, using (1) and the fact that in c_0 it is not assertible that there is land ahead. In particular, in c_n it is not assertible^{n+1} that there is land ahead. Warrants are not perfectly transparent even in c_n. Although the navigator is warranted in asserting 'There is land ahead' in c_n, and in adding several iterations of 'it is assertible that' to his assertion, he has no warrant to iterate indefinitely.

VI

The argument of III generalizes. Nothing in it requires the replacement for '*P*' in (1) to involve the notion of assertibility. Rather, an argument schema has been provided against any principle of the form:

(AA*) If *P*, then it is assertible that *P*.

(AA*) is to be understood as advanced for all circumstances but a fixed '*P*'. Restrict circumstances to what is relevant to the assertibility of the claim that *P*. Suppose that circumstances c in which not *P* can change gradually into circumstances c' in which *P*, without passing through circumstances in which one has misleading (as opposed to inadequate) evidence, makes perceptual misjudgements, etc. Since the subject's powers of discrimination are limited, there is a series of successive circumstances, $c_0, \ldots, c_n$ between $c(= c_0)$ and $c'(= c_n)$, each close enough to the next for (1) to hold (as reinterpreted for this case). Call such a series a *fadeout* for '*P*'. Thus (5*) is false:

(5*) If in c_n *P*, then in c_0 *P*.

Now assume (AA*), for a *reductio ad absurdum*. Then the following instance holds, with the circumstances made explicit:

(3*) If in c_i *P*, then in c_i it is assertible that *P*.

(1) and (3*) yield:

(4*) If in c_i P, then in c_{i-1} P.

Since i was arbitrary, n instances of (4*) yield the false (5*). (AA*) is the culprit. As before, it would be a mistake to appeal to sorites paradoxes and blame (1) or the transitivity of the conditional.

(AA*) has false consequences whenever there is a fadeout for 'P'. Most ordinary empirical claims have fadeouts. One can pass gradually from not being in pain to being in pain, from not seeing a red patch to seeing a red patch; things can change gradually from its not raining to its raining, from there not being humans to there being humans, and so on. Thus the principles 'If one is in pain, then it is assertible that one is in pain', 'If one is seeing a red patch, then it is assertible that one is seeing a red patch', 'If it is raining, then it is assertible that it is raining', 'If there are humans, then it is assertible that there are humans' and so on all have false consequences. Nor is the vagueness of the terms 'pain', 'red', 'rain' and 'human' crucial here; if they were sharpened by verbal stipulations, (AA*) would still fail under the relevant interpretations, for the subject's powers of empirical discrimination would not have been improved.

The form of argument just considered does not apply when 'P' is an eternal sentence, always true if ever true, for no change would then take one from circumstances in which not P to circumstances in which P. If it is nevertheless contingent whether P, one might consider a revised version of the argument in which the series of circumstances $c_0,\ldots,\ c_n$ runs through different possible worlds rather than different times. However, a better revision is available, for even if 'P' is an eternal or non-contingent sentence, 'It is assertible that P' need not be.

Restrict circumstances to what is relevant to the assertibility of the claim that it is assertible that P. Suppose that circumstances c in which it is *not assertible* that P can change gradually into circumstances c' in which it is *assertible* that P, without passing through circumstances in which one has misleading (as opposed to inadequate) evidence. Since the subject's powers of discrimination are limited, there is a series of successive circumstances $c_0, \ldots, c_n$ between $c(= c_0)$ and $c'(= c_n)$, each close enough to the next for (1) to hold (as reinterpreted for this case). Such a series is a fadeout for 'It is assertible that P'. Thus (5**) is false:

(5**) If in c_n it is assertible that P, then in c_0 it is assertible that P.

Now assume (AA*), for a *reductio ad absurdum*. Then the following instance holds:

(3**) If in c_{i-1} P, then in c_{i-1} it is assertible that P.

(1) and (3**) yield:

(4**) If in c_i it is assertible that P, then in c_{i-1} it is assertible that P.

Since i was arbitrary, n instances of (4**) yield the false (5**). As before, (AA*) is the culprit.[8]

(AA*) has false consequences whenever there is a fadeout for 'It is assertible that P'. What correct principles of the form (AA*) does that leave? If in no circumstances P, then (AA*) is vacuously correct. If in all circumstances it is assertible that P, then (AA*) is again automatically correct, although an obvious question is whether this case can

[8] The revised argument against (AA*) yields as a special case a revised argument against (AA), pushing 'It is assertible that it is assertible that P' rather than 'It is assertible that P' through the series of circumstances.

arise: is it assertible that P in circumstances incompatible with cognitive activity? However, no argument for a negative answer will be provided here.[9] Suppose that in some circumstances P and in some circumstances it is not assertible that P. If (AA*) is correct for 'P', then the former conjunct implies that in some circumstances it is assertible that P. Thus it is assertible that P in some circumstances and not in others. What is to stop the construction of a fadeout from the former to the latter? Could there be an unbridgeable abyss between the circumstances in which it is assertible that P and all other circumstances, defeating the gradualness requirement? Could all the circumstances in which it is assertible that P involve misleading (as opposed to inadequate) evidence, perceptual misjudgements, etc., undermining (1)?[10] An attractively simple conjecture is that such obstacles do not arise. More boldly, one may conjecture the following, for every claim that P:

(Conj) It is assertible that P in all circumstances in which P if and only if there are no circumstances in which P.

The foregoing arguments do not establish (Conj), but they do suggest that, at worst, it fails only in a few marginal cases.[11]

VII

The argument against (AA) is closely related to an argument against the *KK* principle that if one knows that P,

[9] A negative answer follows from the assumption that it is assertible that P only if it is known that P (Williamson 1995).

[10] Again, a negative answer seems to be required by the assumption that it is assertible that P only if it is known that P, since knowledge should not depend on misleading evidence.

[11] One consequence of (Conj) is that (AA) holds for a fixed claim that P only if it is in no circumstances assertible that P.

then one knows that one knows that P (Williamson 1992). Indeed, the substitution of 'known' for 'assertible' turns the argument against (AA) into an argument against the KK principle. All the relevant assumptions retain their plausibility under this substitution. As already noted, nothing in the argument presupposes the general equivalence of 'assertible' and 'known'; rather, its strategy is to exploit special cases in which any reasonable form of assertibility will behave in a knowledge-like way. This explains the need for assertibility not to depend on misleading evidence in the relevant cases. Indeed, since (1) relies on the similarity between the circumstances c_i and c_{i-1}, it is only as plausible as:

(6) If in c_i it is assertible that P, then in c_i P.

Although the argument does not require assertibility to be factive in general, it does require it to behave factively in the special cases at issue.

When 'known' replaces 'assertible', (1) becomes a *margin for error principle*, according to which something is known in given circumstances c only if it is true in all circumstances within a margin for error of c.[12] Such principles are motivated by reliability conditions on knowledge.[13] Margin for error principles hold generally only of factive notions; (1) reflects the knowledge-like behaviour of assertibility in the chosen circumstances. (AA) fails in that case because its antecedent is true and its consequent false in circumstances that are within a margin for error of circumstances within a margin for error of circumstances in which not P but are not within a margin for error of circumstances in which not P. More generally, (AA*) fails in

[12] For adaptations of margin for error principles to non-factive attitudes, see Williamson 1992, pp. 237–239 and 1994, pp. 244–247.

[13] It is consistent to accept reliability *conditions* on knowledge while rejecting reliability *analyses* of knowledge.

case assertibility behaves in a knowledge-like way because its antecedent is true and its consequent false in circumstances in which P that are within a margin for error of circumstances in which not P. Moral: the assertibility of something in one set of circumstances can depend on its truth in other circumstances in which it is not assertible.

Suppose that (AA) and its converse held generally.[14] Then 'P' would have the same assertibility condition as 'It is assertible that P'; moreover, the assertibility condition of 'It is assertible that P' would be the same as its truth condition. That 'P' had a given assertibility condition would never ground a distinction between its truth condition and its assertibility condition, for having that assertibility condition would be consistent with also having that condition as a truth condition (just as 'It is assertible that P' has). If one started with assertibility conditions, the distinction between truth and assertibility would therefore look problematic. It might still be made by appeal to the difference in assertibility conditions between 'Not P' and 'It is not assertible that P' (as in Wright 1992), but then issues about the identification of a genuine negation in the object language will arise. The distinction becomes at least difficult.

On the conception developed in this paper, by contrast, that 'P' has a given assertibility condition almost always grounds a distinction between its truth condition and its assertibility. For, given almost any condition C, if C is the truth condition of 'P' then (AA*) fails, so C is not the assertibility condition of 'P'; thus if C is the assertibility condition of 'P', something other than C is its truth condition. No appeal to embedded occurrences of 'P' is needed

[14] The biconditional is endorsed by Wright 1992, p. 18. The converse of (AA) is much less contentious than (AA) itself. Nothing said here threatens it, and it would follow from the factiveness of assertibility.

to make the distinction. Of course, once the failure of (AA) is conceded, assertibility no longer appears to have the kind of Cartesian transparency that truth so signally lacks, and the idea that one should *start* with assertibility conditions rather than truth conditions loses much of its appeal.

That truth can exceed assertibility in given circumstances does not immediately imply that there can be truths not assertible in any circumstances at all. Many failures of (AA) and (AA*) are not of that kind. It is sometimes assertible that there is land ahead but not assertible that it is assertible that there is land ahead; nevertheless, at other times it *is* assertible that it is assertible that there is land ahead. Such contents are not essentially unassertible. Moreover, if '*P*' is assertible in no circumstances, then an appeal to its assertibility condition will not distinguish '*P*' from an obvious contradiction (although an appeal to the assertibility condition of 'Not *P*' might).

The arguments of this paper do nevertheless hint at essentially unassertible truths. If (AA) has false instances, then there are true conjunctions of the form 'It is assertible that *P* and it is not assertible that it is assertible that *P*'. Surely one could never be warranted in asserting a conjunction of that form. But this is not the place to discuss the consequences of that fact.[15]

[15] Earlier versions of this material were given in talks at the Universities of Edinburgh, Canterbury (Christchurch) and Waikato, at Oriel College Oxford and at the Instituto de Investigaciones Filosóficas of the Universidad Nacional Autónoma de México. I am grateful to the audiences there for helpful comments, to the University of Canterbury and the Research School of Social Sciences at the Australian National University for hospitality while the paper was written, and to the University of Edinburgh for leave that enabled me to accept that hospitality.

BIBLIOGRAPHY

Dummett, M.A.E., 1977, *Elements of Intuitionism*, Clarendon Press, Oxford.
——, 1981, *Frege: Philosophy of Language*, 2nd. ed., London: Duckworth.
——, 1991, *The Logical Basis of Metaphysics*, London: Duckworth.
——, 1993, *The Seas of Language*, Oxford: Clarendon Press.
Stirton, W., 1995, 'Anti-realism, truth-conditions and Verificationism', *Synthèse* (typescript).
Weinstein, S., 1983, 'The Intended Interpretation of Intuitionistic Logic', *Journal of Philosophical Logic*, 12, pp. 261–270.
Williamson, T., 1992, 'Inexact Knowledge', *Mind*, 101, pp. 217–242.
——, 1994, *Vagueness*, London: Routledge.
——, 1995, 'Knowing and Asserting' (to appear).
Wright, C.J.G., 1992, *Truth and Objectivity*, Cambridge (Mass.): Harvard University Press.

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RESUMEN

En este artículo se intenta mostrar que el principio (AA) tiene consecuencias falsas. Dicho principio es el siguiente (donde 'ser afirmable' abrevia 'ser afirmable de manera justificada'):

(AA) Si es afirmable que *P*, entonces es afirmable que es afirmable que *P*.

(AA) está implícito en las objeciones de Dummett a las teorías del significado en términos de condiciones de verdad. Según Dummett dichas teorías violan la conexión necesaria entre uso y significado: dado que los usuarios exitosos de una oración pueden ser incapaces de reconocer que se dan las condiciones de verdad de la oración cuando éstas de hecho se dan, el que se den dichas condiciones es una característica del significado que no está reflejada adecuadamente en el uso de la oración. Dummett propone que los significados de las oraciones se den en términos no de sus condiciones de verdad, sino de sus condiciones de afirmabilidad. Para evitar que la objeción se aplique a la teoría del significado propuesta por Dummett, éste requiere que los usuarios de la oración puedan reconocer sus condiciones de afirmabilidad cuando éstas se dan.

El argumento en este trabajo intenta mostrar que la objeción de Dummett a las teorías veritativo condicionales del significado es exitosa sólo si es una objeción exitosa a las teorías del significado como las que él propone, a saber, basadas en las condiciones de afirmabilidad. De hecho, el argumento generalizado mostraría que nada podría tener las características que la objeción de Dummett requiere de la noción central dentro de una teoría del significado. A partir de esto, se concluye que algo está mal con la objeción de Dummett.

El argumento es por medio de un ejemplo y una reducción al absurdo. Supongamos que un marinero navega lentamente en un barco por mares desconocidos. Se pregunta todo el tiempo si hay tierra más adelante (ignorando que la Tierra es redonda). Temprano por la mañana le es claro que no hay tierra visible. Gradualmente algo aparece en el horizonte. Al principio el marinero no está seguro de si está imaginando lo que cree ver; pero aún después de estar seguro de no estar imaginándolo, no sabe en un principio si lo que ve es tierra o nubes. La primera

hipótesis se vuelve gradualmente más probable que la segunda. Después de varias horas no tiene dudas y para la noche el barco está anclado en tierra. La seguridad en el marinero de que hay tierra más adelante se va incrementando gradualmente conforme la escena visual cambia.

Sea t_0 un momento temprano por la mañana; sea t_i, para cualquier número natural i, el tiempo que es i segundos posterior a t_0; y sea t_n un momento tarde por la noche. Sean c_i (para cualquier número natural i de 0 a n) las circunstancias del navegante relevantes a la afirmación de que hay tierra adelante en t_i. Aunque el navegante puede discriminar fácilmente entre c_0 y c_n, no puede discriminar fácilmente c_i de c_{i-1} para cualquier c_i. No puede discrimar entre sus circunstancias actuales y aquellas en las que se encontraba un segundo antes pues el cambio es demasiado lento. No importa la justificación que él tenga para afirmar c_i, él está en c_{i-1}. Así pues, (1) es cierto siempre y cuando una oración acerca de las circunstancias en las que está el marinero reemplaza a '*P*' (donde dicho reemplazo expresa una condición en las circunstancias y no una proposición fija):

(1) Si en c_i es afirmable que P, entonces en c_{i-1} P.

(1) se sostiene en virtud de las circunstancias específicas en cuestión y no intenta ser una verdad general. Si (1) fuese falso, entonces algo sería afirmable en c_i sin ser verdadero en c_{i-1}; pero entonces el navegante tendría una justificación para afirmar algo en c_i que fuese incompatible con estar en las circunstancias c_{i-1}. Sin embargo, el navegante no tiene dicha justificación pues la diferencia entre c_i y c_{i-1} es demasiado pequeña para que él la pueda detectar.

Una oración acerca de las circunstancias del marinero es 'Es afirmable que hay tierra más adelante'. Luego, (2) es una instancia de (1):

(2) Si en c_i es afirmable que es afirmable que hay tierra más adelante, entonces en c_{i-1} es afirmable que hay tierra más adelante.

Asumiendo que (AA) es verdadero, (3) sería verdadero:

(3) Si en c_i es afirmable que hay tierra más adelante, en-

tonces en c_{i-1} es afirmable que es afirmable que hay tierra más adelante.

Por transitividad (2) y (3) dan:

(4) Si en c_i es afirmable que hay tierra más adelante, entonces en c_{i-1} es afirmable que hay tierra más adelante.

Dado que i es arbitrario (4) se puede derivar para cualquier i de n a 1. Nuevamente dada la transitividad los condicionales n juntos dan:

(5) Si en c_n es afirmable que es afirmable que hay tierra más adelante, entonces en c_0 es afirmable que hay tierra más adelante.

(5) es falso, pues el antecedente es verdadero y el consecuente falso. En c_n es afirmable que hay tierra adelante, pero en c_0 no es afirmable que hay tierra más adelante. Luego (AA) tiene consecuencias falsas. Cuando el marinero está justificado en afirmar 'Hay tierra más adelante', su justificación no es necesariamente obvia o transparente a él, y puede entonces no estar justificado en afirmar 'Mi última afirmación estaba justificada'. La afirmabilidad de que P no tiene pues la transparencia cartesiana que Dummett requiere (y que la verdad carece). Por esto la idea de que se debería construir una teoría del significado en términos de condiciones de afirmabilidad y no de condiciones de verdad pierde gran parte de su atractivo.

En el artículo se muestra cómo el argumento se generaliza para principios de la forma (AA*), donde no es necesario que la afirmabilidad de P esté presente en el antecedente y, no obstante, (AA*) tiene consecuencias falsas.

(AA*) Si P, entonces es afirmable que P.

(AA*) falla pues su antecedente es verdadero y su consecuente falso en circunstancias en las que P está dentro de un margen de error de las circunstancias en las que no-P.

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