

Michael Dummett (1925–)

ALEXANDER MILLER

Michael Dummett (Wykeham Professor of Logic at Oxford 1979–92) is one of the most important and influential British philosophers of the second half of the twentieth century. In addition to making seminal contributions to the exposition and study of the philosophy of Frege, Dummett started a debate – concerning how issues in metaphysics might best be prosecuted via arguments in the philosophy of language and theory of meaning – which continues to be one of the central issues in contemporary analytic philosophy. The two are intimately related. We are given a large-scale exposition and partial defense of a broadly Fregean theory of meaning. It is then argued that the realist position in metaphysical debates about a disputed subject matter is best cast as a semantical thesis about the meaning of sentences concerning that subject matter. Once Wittgensteinian insights about linguistic understanding and language mastery are incorporated into the Fregean theory of meaning, it emerges that the semantical thesis in which the realist view is best cast turns out to face very serious challenges. An anti-realist alternative is explored, drawing on the theory of meaning proposed by intuitionism for mathematical statements, and it is argued that one consequence of this is the rejection of certain theorems of classical logic, such as the law of excluded middle.

Frege

Dummett's exposition and partial defence of a Fregean theory of meaning is writ large throughout his work, but the key texts are *Frege: Philosophy of Language, Truth and Other Enigmas* (essays 7–9), *The Interpretation of Frege's Philosophy*, *Frege and Other Philosophers*, and *Origins of Analytic Philosophy*.

For Frege, whether or not a sentence is grammatically well formed is determined by syntactical rules. These are the province of *syntax*, and tell us how expressions from different syntactic categories may be combined to form grammatical sentences. In the province of *semantics*, the *Bedeutung* of any expression is that feature of it that determines whether sentences in which it occurs are true or false. The *Bedeutung* of a sentence is its truth-value (true or false). Whether a sentence is true is determined by the *Bedeutungen* of its constituents. Expressions from different syntactic categories are assigned different types of *Bedeutung*: the *Bedeutung* of a proper name is the object

it stands for, the *Bedeutung* of a predicate is a first-level function from objects to truth-values, the *Bedeutung* of a sentential connective is a first-level function from truth-values to truth-values, and the *Bedeutung* of a quantifier is a second-level function from concepts (first-level functions) to truth-values. The *Bedeutung* of a constituent of a sentence is determined by its *Sinn* or sense (that ingredient of its meaning that determines its contribution to the truth or falsity of sentences in which it may appear), which in turn determines, in conjunction with the senses of the other constituents, the *Sinn* of the sentence. The *Sinn* of a sentence is the thought which it expresses, conceived not as some psychological episode or entity, but as a *truth-condition*: the condition which must obtain if the sentence is to be true. The *Sinn* of an expression is what someone who understands an expression grasps: our understanding of whole sentences therefore consists in part in our grasp of their truth-conditions (see FREGE).

Much of Dummett's work consists in a sophisticated elaboration of the theory thus crudely summarized, and an examination of the other notions – such as *force* (that ingredient in meaning which distinguishes, e.g., assertions from questions and commands) and *tone* (that ingredient in the meaning of, e.g., “and” which distinguishes it from “but” even though it has the same *Sinn*) – that need to be added to the notions of *Sinn* and *Bedeutung* in order to obtain a comprehensive theory of meaning. *Inter alia*, Dummett defends the Fregean theory in the face of attacks from the causal theory of reference advocated by Kripke (1973: appendix to ch. 5) and the holistic picture of language advanced by Quine (1978: essays 9 and 22, 1973: ch. 17). On Dummett's interpretation of Frege, it is possible for an expression, such as the proper name “Vulcan,” to have a *Sinn*, even though it has no *Bedeutung*, since there is no object for which it stands: sentences containing expressions which have no *Bedeutung* themselves fail to have a *Bedeutung*, that is, fail to possess a truth-value (1973: ch. 6). This facet of Dummett's interpretation is challenged in important work by Gareth Evans (1982) and John McDowell (1998a: essays 8–12). Whereas for Dummett, the sense of an expression is a method or procedure for determining its *Bedeutung*, so that the sense of a sentence, for example, is a method or procedure for determining its truth-value, a method which can exist even if the sentence in question has no truth-value, for Evans and McDowell the sense of an expression is “a way of thinking about its *Bedeutung*.” For them, lack of *Bedeutung* necessarily involves a corresponding lack of *Sinn*. For a discussion, see Dummett 1993a: ch. 7.

Dummett himself criticizes and qualifies the Fregean theory in various ways in *Frege: Philosophy of Language* (e.g. Frege's explanation of how expressions can differ in tone is rejected in chapter 5; Frege's assimilation of sentences to complex proper names and the associated claim that truth-values are a kind of object is questioned in chapter 6; and his claim that expressions other than proper names, such as predicates and quantifiers, also have *Bedeutungen*, is qualified in important ways in chapter 7). However, the suggestion of his that has excited the greatest interest among contemporary philosophers is that, in many important cases, debates in metaphysics between realists and their opponents may and perhaps must be cast as debates in the theory of meaning, between rival accounts of the nature of our grasp of sentences' *Sinne*, or truth-conditions.

Realism

The remarks germane to this suggestion are scattered throughout Dummett's writings, but the key texts are *Truth and Other Enigmas* (1978) (Preface and essays 1, 10, 14, and 21), *The Seas of Language* (1993b) (essays 1–7, 11, and 20), and *The Logical Basis of Metaphysics* (1991c).

This approach to metaphysical questions is indicative of Dummett's view that the philosophy of language – the theory of meaning – has a *foundational* role to play within philosophy. Indeed, Dummett sees this view about the priority of philosophy of language as the defining characteristic of analytic philosophy:

What distinguishes analytical philosophy, in its diverse manifestations, from other schools is the belief, first, that a philosophical account of thought can be attained through a philosophical account of language, and, secondly, that a comprehensive account can only be so attained. (1993a: 4)

Dummett believes that one of the reasons why philosophical speculation about metaphysical issues has made little progress over the centuries is that the opposing positions in various metaphysical disputes have only been explained in pictorial, or metaphorical terms:

Even to attempt to evaluate the direct metaphysical arguments, we have to treat the opposing theses as though their content were quite clear and it were solely a matter of deciding which is true; whereas . . . the principal difficulty is that, while one or another of the competing pictures may appear compelling, we have no way to explain in non-pictorial terms what accepting it amounts to. (1991c: 12)

Dummett's approach is intended to remedy this: the metaphysical disputes are recast as disputes about "the correct model of meaning for statements of the disputed class," thus giving the debates some non-metaphorical content, and enabling the disputes to be resolved within the theory of meaning.

What does it mean to say that the truth-conditions of a range of sentences are "realist"? In short, Dummett's answer is as follows: to say that a range of sentences have realist truth-conditions is to say that those truth-conditions are potentially *verification-transcendent*. To say that a truth-condition is potentially verification-transcendent is to say that we may be incapable, even in principle, of determining whether or not it obtains. Thus, consider discourse about the past: intuitively, the sentence "James II suffered a migraine in 1665, on the afternoon of his 32nd birthday" has a truth-condition – James's suffering a migraine on the afternoon in question – and we can say that this condition either obtained or it did not, even though we may have no way, even in principle (because all the evidence appears to have vanished and time-travel is impossible) of determining which of these was the case (cf. ANSCOMBE). Thus, "James II had a migraine on the afternoon of his 32nd birthday" has a truth-condition, and we may be incapable of determining, even in principle, whether that condition obtained or not: it is potentially verification-transcendent. Likewise, consider arithmetical discourse. Goldbach's conjecture, that every even number greater than

two is the sum of two primes, has a potentially verification-transcendent truth-condition: it has a determinate truth-value even though we are incapable of determining what this truth-value is, since we have no guarantee either that a proof of the conjecture will be constructed or that a counterexample – an even number which is not the sum of two primes – will be found.

Thus, sentences about the past and about arithmetic have potentially verification-transcendent truth-conditions: in this sense, Dummett will claim, their truth-conditions are realist. Now, why is the claim that the sentences of a discourse are potentially verification-transcendent a way of cashing out realism about the subject matter of that discourse? In order to see this we have to recall – from the first section – that the *Sinn*, or sense, of a sentence is given by its truth-conditions, and that understanding a sentence consists in grasping its sense. Thus, understanding a sentence consists in grasping its truth-conditions. Any thesis about the truth-conditions of a set of sentences is *inter alia* a thesis about what our understanding of those sentences consists in. In a slogan, a *theory of meaning is also a theory of understanding*. Thus, someone who accepts that the truth-conditions of a region of discourse are potentially verification-transcendent also accepts that our understanding of the sentences of that discourse consists in our grasp of potentially verification-transcendent truth-conditions. And now the connection with realism about that discourse is relatively easy to see. As Crispin Wright, another important British philosopher who has done more than anyone to further Dummett's agenda, puts it:

To conceive that our understanding of statements in a certain discourse is fixed . . . by assigning them conditions of potentially [verification]-transcendent truth is to grant that, if the world co-operates, the truth or falsity of any such statement may be settled beyond our ken. So we are forced to recognise a distinction between the kind of state of affairs which makes such a statement acceptable, in the light of whatever standards inform our practice of the discourse to which it belongs, and what makes it actually true. The truth of such a statement is bestowed on it independently of any standard we do or can apply; acceptability by our standards is, for such statements, at best merely congruent with truth. Realism in Dummett's sense is thus one way of laying the essential semantic groundwork for the idea that our thought aspires to reflect a reality whose character is entirely independent of us and our cognitive operations. (1992: 4)

In a large class of cases, we can thus conceive of the metaphysical debate between realists and their opponents – anti-realists – in a particular region of discourse D as concerning whether the sentences of D can plausibly be viewed as possessing potentially verification-transcendent truth-conditions.

Realism: the sentences of D have truth-conditions and these truth-conditions are potentially verification-transcendent.

Anti-Realism: the sentences of D have truth-conditions but those truth-conditions are not potentially verification-transcendent.

Note 1: The above cannot be used to characterize all types of debate between realists and their opponents. One characteristic form of opposition to realism about a region of discourse D is the denial (by non-cognitivists, expressivists, or non-factualists) that the sentences in question *have* truth-conditions, whether potentially verification-

transcendent or not. Dummett has admitted that this style of debate between realism and its opponents is prior to that which turns on the possibility of verification-transcendent truth (1993b: 467). In addition, there are also some serious questions about whether the above characterization can adequately capture what is at issue in *ontological* disputes between realists and their (e.g. nominalist) opponents. (For illuminating discussion, see Hale 1997, esp. sect. 3. See also Michael Devitt 1993.)

Note 2: It is far from clear what it means to say that the truth of a sentence is not potentially verification-transcendent. Does this mean that the sentence can be verified by us as we actually are? By someone, somewhere, as they actually are? By someone, somewhere, given some suitable idealization of their present cognitive powers? And what is permissible as a “suitable idealization”? And how can the notion of effective decidability (see below) be extended from the mathematical case to the empirical domain? These questions must be answered if anti-realism is to have any determinate content. (See Wright 1986: 32.)

Note 3: This characterization of realism makes essential use of Frege’s idea that understanding a sentence consists in grasping its truth-conditions. It is plausible that Frege himself was a realist in the sense thus characterized. He writes: “A thinker does not create [thoughts] but must take them as they are. They can be true without being grasped by a thinker” (1967: 30).

If a thought – the sense of a sentence – can be determinately true or false even though that thought is not even grasped by a thinker, then the sentence in question can be true or false even though thinkers are incapable, even in principle, of determining its truth-value.

Dummett now suggests that Frege’s realism is seriously challenged when we add to his theory of meaning the insights about linguistic understanding to be found in Ludwig Wittgenstein’s *Philosophical Investigations*.

Frege and Wittgenstein on the objectivity of sense

The interpretation of Wittgenstein’s views on meaning and understanding is a complex and subtle matter: here we can give but the briefest sketch of one of the facets of Wittgenstein’s position that Dummett relies on in challenging our intuitively realist picture of the world. (For a more comprehensive treatment, see Miller 1998: chs 5 and 6.) In fact, the Wittgensteinian view about linguistic understanding that features in Dummett’s challenge to realism is a development of another insight of Frege’s: that sense is, in a way to be explained, objective. According to Dummett, if Frege had followed this insight through to its logical conclusion, he would have seen that it challenges seriously his commitment to realism (1993b: essay 2, §6).

Recall that the sense of a sentence is a thought, and that according to Frege thoughts are in some sense objective, as opposed to subjective or psychological. This is an extremely important part of Frege’s position. Indeed, in the introduction to *The Foundations of Arithmetic*, he states the following as the first of his three “fundamental principles”: “Always to separate sharply the psychological from the logical, the subjective from the objective” (1953: x).

This applies not only to the senses of sentences, but to the senses of expressions generally. But what exactly does it mean to say that sense is objective and not subjec-

tive? One thing that it means is that grasping a sense – understanding an expression – is not a matter of associating that expression with some subjective item like a *mental image, picture, or idea*. Frege is quite explicit about the need to distinguish senses, which are objective, from ideas, which are subjective:

The reference [*Bedeutung*] and sense of a sign are to be distinguished from the associated idea . . . The reference of a proper name is the object itself which we designate by using it: the idea which we have in that case is wholly subjective; in between lies the sense, which is indeed no longer subjective like the idea, but is yet not the object itself. (Frege 1960: 60–1)

The view that understanding an expression consists in the possession of some associated idea or image is one that has a long list of adherents in the history of philosophy. In distinguishing the sense of an expression from any associated idea, Frege was directly attacking this tradition. The classic example of this view of sense can be found in Book III of John Locke's *An Essay Concerning Human Understanding*.

Some creatures who utter, for example, the word “cube” *understand* that word, and some don't. A parrot can say the word, but unlike a normal human speaker of English, the parrot possesses no understanding of what is said. In Fregean terminology, the human speaker grasps the sense of “cube,” whereas the parrot does not. But what does this difference consist in? Locke's suggestion is that the word “cube” is, in the case of the competent human speaker, associated with an *idea of a cube* in that speaker's mind, while in the case of the parrot there is no such idea and so no such association. Locke is thus led to the view that understanding an expression consists in associating it with some idea: “Words, in their primary or immediate signification, stand for nothing but the ideas in the mind of him that uses them” (1975: III, ii, 2).

Locke takes ideas to be mental images or pictures: an idea of a cube is taken to be a mental image or inner picture of a cube. This is clear from the way Locke speaks throughout the *Essay*. For example, in his account of memory the talk of ideas is explicitly cashed out in terms of picturing and imagery:

The ideas, as well as children of our youth often die before us. And our minds represent to us those tombs to which we are approaching; where though the brass and marble remain, yet the inscriptions are effaced by time, and the imagery moulders away. The pictures drawn in our minds are laid in fading colours. (1975: II, x, 5.1)

We could thus sum up Locke's view of sense as follows (where the sense of “cube” determines that it refers to, precisely, *cubes*): a speaker grasps the sense of “cube” if and only if he is disposed to have a mental image of a cube whenever he hears or utters the word. Why does Frege object to this account of sense? Locke's account leads to a tension between the *public* nature of meaningful language, and the *private* nature of ideas and mental images. On the one hand, language is public in that different speakers can attach the *same* sense to their words, and one speaker can *know* what another speaker means by his words. Different speakers can *communicate* with each other in virtue of the common senses that they have attached to their words. On

the other hand, ideas are private. As Locke himself puts it, a man's ideas are "all within his own breast, invisible, and hidden from others, nor can of themselves be made to appear." Also, my ideas, my "internal conceptions," are visible only to my consciousness, and likewise your ideas, your "internal conceptions," are visible only to your consciousness. But we are attempting to give an account of sense, an account that should help explain how we are able to communicate with each other via the use of language; and how can a theory which construes grasp of sense in terms of the possession of private inner items help explain our ability to use language in successful public communication?

Dummett sees Frege's anti-Lockean argument for the objectivity of sense as vitiated by an erroneous construal of mental images as necessarily private, but nevertheless agrees with its upshot (1973: 157–9). But, Dummett suggests, in order to allow for the objectivity of sense, we need to go further than merely denying that grasp of sense is subjective in the manner just outlined: we need, in addition, to construe grasp of sense in terms of *use*.

Frege's thesis that sense is objective is . . . implicitly an anticipation (in respect of that aspect of meaning which constitutes sense) of Wittgenstein's doctrine that meaning is use . . . yet Frege never drew the consequences of this for the form which the sense of a word may take. (1993b: 91)

In order to allow for the objectivity and communicability of the sense of an expression, grasp of its sense has to be construed in terms of possession of an ability to use it in certain public and observable circumstances. It follows that if speakers possess a piece of knowledge which is constitutive of linguistic understanding, then that knowledge should be *manifested* in speakers' use of the language, that is, in their exercise of the practical abilities that constitute linguistic understanding.

We'll now see how Dummett attempts to challenge realism, by incorporating the Wittgensteinian insight about understanding within the Fregean theory of meaning.

Dummett's challenges to realism

According to Dummett, the debate between realism and anti-realism about a region of discourse is a debate about the nature of the truth-conditions possessed by the sentences of that discourse. Any account of the truth-conditions of a range of sentences will be unacceptable if it cannot cohere with a plausible account of what our *understanding* of those sentences consists in. Dummett's strategy is to argue that the account of linguistic understanding which realism leads to faces serious problems. The metaphysical debate concerning the plausibility of realism boils down to a debate within the philosophy of language.

Why, then, does Dummett think that there are problems with the realistic construal of linguistic understanding as grasp of potentially verification-transcendent truth-conditions? There are two main challenges: the *acquisition* challenge, and the *manifestation* challenge. (For the canonical statement of the former, see 1978: essay 1; for the latter, see essay 14; for a state-of-the-art exposition of both, and of other challenges to realism as conceived by Dummett, see the Introduction to Wright 1986).

Dummett's acquisition challenge

Suppose that we are considering some region of discourse D, the sentences of which we intuitively understand. Suppose, for reductio, that the sentences of D have potentially verification-transcendent truth-conditions. Thus,

- 1 We understand the sentences of D.
- 2 The sentences of D have verification-transcendent truth-conditions.

Now, from (1) together with the Fregean thesis that to understand a sentence is to grasp its sense or know its truth-conditions, we have

- 3 We grasp the senses of the sentences of D: i.e. we know their truth-conditions.

We now add the apparently reasonable constraint on ascriptions of knowledge:

- 4 If a piece of knowledge is ascribed to a speaker, then it must be at least in principle possible for that speaker to have *acquired* that knowledge.

So

- 5 It must be at least in principle possible for us to have acquired knowledge of the verification-transcendent truth-conditions of D.

But

- 6 There is no plausible story to be told about how we could have acquired knowledge of verification-transcendent truth-conditions.

So, by reductio, we reject (2) to get:

- 7 The sentences of D do not have verification-transcendent truth-conditions, so realism about the subject matter of D must be rejected.

The crucial premise here is obviously (6). Wright puts the point as follows:

How are we supposed to be able to *form* any understanding of what it is for a particular statement to be true if the kind of state of affairs which it would take to make it true is conceived, *ex hypothesi*, as something beyond our experience, something which we cannot confirm and which is insulated from any distinctive impact on our consciousness? (1986: 13)

However, as Wright notes, this argument is at best inconclusive. It really only presents the realist with a challenge:

In order to be more than a challenge, [it] would need the backing of a proven theory of concept-formation of a broadly empiricist sort. [And] the traditional theories of that sort have long been recognized to be inadequate. (1986: 15)

The challenge to the realist is thus: give some plausible account of how the knowledge of verification-transcendent truth-conditions which you impute to speakers could have been acquired. Whether or not this challenge can be met by the realist is very much an open question, in the absence of a proven theory of concept acquisition.

Dummett's manifestation argument

Suppose that we are considering region of discourse D as before. Then:

- 1 We understand the sentences of D.

Suppose, for reductio, that

- 2 The sentences of D have verification-transcendent truth-conditions.

From (1) and the Fregean thesis that to understand a sentence is to grasp its sense or know its truth-conditions, we have:

- 3 We grasp the senses of the sentences of D; that is, we know their truth-conditions.

We then add the following premise, which stems from the Wittgensteinian insight that understanding does not consist in the possession of an inner state, but rather in the possession of some practical ability (see the section "Frege and Wittgenstein on the Objectivity of Sense," above):

- 4 If speakers possess a piece of knowledge which is constitutive of linguistic understanding, then that knowledge should be *manifested* in speakers' use of the language, that is, in their exercise of the practical abilities that constitute linguistic understanding.

It now follows from (1), (2) and (3) that:

- 5 Our knowledge of the verification-transcendent truth-conditions of the sentences of D should be manifested in our use of those sentences, that is, in our exercise of the practical abilities which constitute our understanding of D.

Since

- 6 Such knowledge is never manifested in the exercise of the practical abilities which constitute our understanding of D,

it follows that

- 7 We do not possess knowledge of the truth-conditions of D.

(7) and (3) together give us a contradiction, whence, by reductio, we reject (2) to obtain:

- 8 The sentences of D do not have verification-transcendent truth-conditions, so realism about the subject matter of D must be rejected.

The basic point is that, so far as an account of speakers' understanding goes, the ascription of knowledge of verification-transcendent truth-conditions is simply *redundant*: there is no good reason for ascribing it. Consider one of the sentences we considered earlier as candidates for possessing verification-transcendent truth-conditions, "James II had a migraine on the afternoon of his 32nd birthday" or "Every even number greater than two is the sum of two primes." The realist account views our understanding of these sentences as consisting in our knowledge of a potentially verification-transcendent truth-condition. But, in Wright's words:

How can that account be viewed as a description of any *practical* ability of use? No doubt someone who understands such a statement can be expected to have many relevant practical abilities. He will be able to appraise evidence for or against it, should any be available, or to recognize that no information in his possession bears on it. He will be able to recognize at least some of its logical consequences, and to identify beliefs from which commitment to it would follow. And he will, presumably, show himself sensitive to conditions under which it is appropriate to ascribe propositional attitudes embedding the statement to himself and to others, and sensitive to the explanatory significance of such ascriptions. In short: in these and perhaps other important respects, he will show himself competent to use the sentence. But the headings under which his practical abilities fall so far involve no mention of evidence-transcendent truth-conditions. (Wright 1986: 17)

This establishes (6), and the conclusion follows swiftly. A detailed assessment of the plausibility of this argument is impossible here: but we should note that premise (4) depends upon an interpretation of Wittgenstein's work on rule-following and understanding (see WITTEGENSTEIN), and that this is an extremely controversial matter (see Miller 1998: chs 5 and 6). In particular, one issue that needs to be addressed is whether the interpretation of premise (4) required by Dummett for the anti-realist argument is left intact by John McDowell's interpretation of Wittgenstein, according to which understanding can harmlessly be construed as a state of mind (see McDowell 1998b: essays 11–14). On Dummett's anti-realist arguments generally, see McDowell 1998a: essays 1, 4, 5, 14, 15, 16. For an excellent survey of possible realist responses to both the acquisition and manifestation challenges, see Hale 1997.

Anti-realism

(1) A sentence is said to be *effectively decidable* if there is some procedure which we can in principle apply and which will guarantee an answer to the question whether or not the sentence is true. Thus, " $2 + 2 = 4$ " and "The Queen had cornflakes for breakfast yesterday" are both effectively decidable: we can carry out an elementary arithmetical calculation in the first case, and we can gather the obvious sorts of evidence in the second case, in order to determine the truth-values of the respective sentences. But "James II had a migraine on the afternoon of his 32nd birthday" and "Every even number greater than two is the sum of two primes" are *not known to be decidable*: in neither case do we know a procedure which we can apply to determine whether or not they are true. Now intuitively, we think that even though these sentences are not known to be decidable, we can nevertheless still assert that they are either true or false: "Every even number greater than two is the sum of two primes" has a determinate truth-value, it's just that we cannot work out what this truth-value is. In other words, even though the sentence is not known to be decidable, we still think that the *principle of bivalence*, that every (non-vague) sentence is determinately either true or false, applies to it. Now this is an idea that is put under pressure by the conclusion of the anti-realist arguments of Dummett's we have been considering. If truth is not verification-transcendent, it is *epistemically constrained*. One way to spell out what it means to say that truth is epistemically constrained is to say that it must be construed in terms of some notion like *correct* or *warranted assertability*: to say that a sentence is true is to say that there is a warrant to assert it, or that it possesses some other prop-

erty that is constructed out of warranted assertability. (This is greatly oversimplified: for more detail, see Wright 1986: §v and 1992: ch. 2, where he suggests that for certain discourses, truth may be modelled on “superassertibility.” For another attempt to construe truth as essentially epistemically constrained, see Putnam 1981 (see PUTNAM). See also Tennant 1987, 1997.) Now given that truth is thus epistemically constrained, what can we say about “Every even number greater than two is the sum of two primes”? We do not have a warrant to assert this – since no one has yet been able to construct a mathematical proof of it – nor do we have a warrant to assert its negation – since no one has yet produced a counterexample to it, or established that such a counterexample must exist. Given this, and given that truth is to be construed in terms of warranted assertability, we cannot assert that the sentence “Every even number is the sum of two primes” is either true or false. That is to say, *we cannot assert a priori the principle of bivalence for sentences that are not known to be decidable*: we cannot assert, a priori, that they are either true or false.

(2) Note that we have here characterized realism as the view that truth is not essentially epistemically constrained, and derived the realist’s attitude to the principle of bivalence as a consequence. Dummett himself prefers to characterize realism *directly* in terms of adherence to the unrestricted principle of bivalence (see e.g. 1993b: 230), so that *any* denial of that principle must be seen as inclining one in the direction of anti-realism. But this seems to be a mistake. There are many reasons why the principle of bivalence might fail for a particular region of discourse: because the relevant sentences contain empty names, have false presuppositions, contain vague predicates applied to borderline cases; none of these seem to concern the issue of realism versus anti-realism. So the rejection of bivalence is a symptom of anti-realism, which may or may not signal the rejection of realism depending on whether or not the failure of the principle of bivalence stems from the rejection of truth as essentially epistemically unconstrained. So it is better to characterize realism directly in terms of epistemic constraints on truth, and view issues about bivalence as having only secondary, derivative significance. For an excellent discussion of this point, see Rosen 1995.

(3) Note that if we characterize meaning in terms of an epistemically constrained notion of truth – perhaps in terms of conditions of warranted assertability – we thereby avoid the problems raised by the manifestation challenge for the realist conception of linguistic understanding. Because the conditions whose grasp constitutes understanding are conditions which, by their very nature, are in principle capable of being recognized whenever they obtain, we can identify grasp of a sentence with a practical ability. This is the ability to discriminate between those recognizable circumstances in which the sentence is true and those which it is not. So that the manifestation challenge has a simple answer when directed at the anti-realist conception of understanding. Likewise for Dummett’s acquisition challenge.

(4) Dummett’s anti-realist claims that we cannot assert a priori the principle of bivalence, at least as applied to sentences that are not known to be decidable. Now the principle of bivalence – that every (non-vague) sentence is determinately either true or false – is closely associated with the principle of classical logic known as *the law of*

excluded middle: $\vdash P \vee \sim P$. Refusing to assert a priori the principle of bivalence, as the anti-realist proposes, thus appears to threaten the law of excluded middle, and the classical system of logic which is founded upon it. There is much debate among anti-realists about whether anti-realism implies *revisionism* about classical logic: Dummett has argued that anti-realism implies that classical logic must be given up in favor of some form of *intuitionistic* logic which does not have the law of excluded middle as a theorem. (The issues here are complex. For Dummett's own examination of intuitionism see his *Elements of Intuitionism*; for discussion of the alleged revisionary aspects of Dummettian anti-realism, see Wright 1986, and 1992, ch. 2).

(5) It is important to be clear that although the anti-realist claims that we cannot assert that sentences not known to be decidable are either true or false, he is *not* claiming that we *can* assert that they are *neither* true nor false. Dummett is explicit that although the anti-realist does not wish to assert a priori the principle of bivalence, he does not reject the principle of *tertium non datur*, that there is no third truth-value ("neither true nor false") standing between truth and falsity. This might seem puzzling. Suppose that the principle of bivalence corresponds to the law of excluded middle: $\vdash P \vee \sim P$, and that the principle of *tertium non datur* corresponds to $\vdash \sim \sim (P \vee \sim P)$ (is not the case that neither P nor not-P). Since it is a logically valid sequent that $\sim \sim P \vdash P$, doesn't it follow that rejecting $\vdash P \vee \sim P$ entails the rejection of $\vdash \sim \sim (P \vee \sim P)$, that rejection of the principle of bivalence entails rejection of the principle of *tertium non datur*? The crucial point is that the sequent $\sim \sim P \vdash P$ that licenses this entailment is valid in classical logic *but not valid in intuitionistic logic*. Rejection of bivalence entails rejection of *tertium non datur* only given classical logic; but the Dummett-style anti-realist *rejects* classical logic, and so can reject bivalence whilst holding on to *tertium non datur*. (See Dummett 1978).

(6) Finally, note that the anti-realist attitude to sentences which are not known to be decidable is completely different from the logical positivist attitude to sentences which are not in principle verifiable. Whereas a logical positivist such as A. J. Ayer in *Language, Truth, and Logic* claims that such sentences – because they are in principle unverifiable – are literally meaningless, Dummett's anti-realist claim is that sentences that are not known to be decidable *are* meaningful but their meanings have to be construed in terms of an epistemically constrained notion of truth (see AYER).

Limitations and prospects

According to Dummett, to oppose realism, to espouse anti-realism, is to deny that truth is potentially verification-transcendent and to argue that truth must be viewed as epistemically constrained. But is this the best way of cashing out the metaphysical debates between realists and their opponents? We have already mentioned some of the limitations of this approach in the section 'Realism.' But even waiving these problems, there are others. For example, although Dummett's way of characterizing the metaphysical debate seems to be appropriate in some cases (e.g. mathematics, statements about the past, statements about the external world) there are other cases where it simply seems besides the point. Consider discourse about, for instance, morals or comedy. It seems

that in these cases a moral realist would not have to claim that the truth-conditions of the relevant sentences are potentially verification-transcendent and that both the moral realist and the moral anti-realist can *agree* that statements about comedy or moral value do not have verification-transcendent truth-conditions. As Wright puts it:

There are, no doubt, kinds of moral realism [or realism about comedy] which do have the consequence that moral [or comic] reality may transcend all possibility of detection. But it is surely not essential to any view worth regarding as realist about morals [or comedy] that it incorporate a commitment to that idea. (1992: 9)

Intuitively, a sensible version of realism about “That remark was funny” or “That deed was wrong” does not have to view facts about funniness or wrongness as potentially verification-transcendent. So although construing realist truth-conditions as verification-transcendent truth-conditions may be useful for characterizing realism about *some* areas of discourse, there are other areas for which this is not a useful characterization. The upshot of this is that we need *other* ways of fleshing out the notion of a realist truth-condition. The most important recent work on the philosophical agenda initiated by Dummett has consisted of attempts to do just this.

In *Truth and Objectivity*, Crispin Wright argues that non-cognitivism – the denial that the sentences of a discourse are truth-apt or even possess truth-conditions – does not provide a useful way of formulating opposition to realism. The debate between realism and anti-realism about a discourse takes place only *after* it has been granted that the sentences of that discourse are truth-apt. There are two main parts to Wright’s sketch of the shape of the debates. First, he develops a version of *minimalism about truth-aptness*, according to which all of the discourses, including morals, comedy, the external world, mathematics, the past, and so on, do turn out to be truth-apt. Wright’s approach is thus superior to Dummett’s, insofar as he is not content simply to ignore the debate between cognitivism and non-cognitivism about a region of discourse. Second, he develops a *number* of ways of characterizing realism and anti-realism about discourses whose truth-aptness has already been granted – that is, a number of different ways in which truth-conditions can be more or less realist. It turns out that viewing the sentences of a discourse as having potentially verification-transcendent truth-conditions is only one of a number of ways of characterizing realism. Wright’s approach is thus superior to Dummett’s insofar as it does not involve saddling the moral realist with claims about potential verification-transcendence that any sensible moral realist would balk at. Both parts of Wright’s program have been widely discussed in the literature, and are the point of departure for philosophers wishing to follow up the debate started by Dummett. For more, see Hale 1997 and Miller 1998: ch. 9.

Other work

In the above, I have touched briefly only on those aspects of Dummett’s work that I take to be his most important contribution to analytic philosophy. There are many other aspects which lack of space has prevented me from discussing, and I can mention only a few of these here. *Frege: Philosophy of Mathematics*, is Dummett’s study of Frege’s Platonist and logicist views on arithmetic. Much of the book is critical of the attempts

of Wright and Hale to develop a “neo-Fregean” view of arithmetic in, respectively, *Frege’s Conception of Numbers as Objects*, and *Abstract Objects*. For some neo-Fregean responses to Dummett’s criticisms, see Hale 1994 and Wright 1994. Dummett’s writings on the philosophy of mathematics cannot easily be disentangled from his writings on the philosophy of language, but key papers are 1978: essays 11 and 12 and 1993b: essay 18. For Dummett’s introductory survey of the area, see his 1998 paper “Philosophy of Mathematics.” Dummett has also done important work on vagueness (1978: essay 15) and causation (1978: essays 18 and 19, 1993b: essay 15).

Bibliography

Works by Dummett

- 1973: *Frege: Philosophy of Language*, London: Duckworth.
 1977: *Elements of Intuitionism*, Oxford: Clarendon Press.
 1978: *Truth and Other Enigmas*, London: Duckworth.
 1981: *The Interpretation of Frege’s Philosophy*, London: Duckworth.
 1991a: *Frege and Other Philosophers*, Oxford: Clarendon Press.
 1991b: *Frege: Philosophy of Mathematics*, Cambridge, MA: Harvard University Press.
 1991c: *The Logical Basis of Metaphysics*, Cambridge, MA: Harvard University Press.
 1993a: *Origins of Analytical Philosophy*, Cambridge, MA: Harvard University Press.
 1993b: *The Seas of Language*, Oxford: Clarendon Press.
 1998: “Philosophy of Mathematics,” in *Philosophy 2*, ed. A. Grayling, Oxford: Oxford University Press.

Works by other authors

- Ayer, A. J. (1946) *Language, Truth, and Logic*, New York: Dover Press.
 Devitt, M. (1993) *Realism and Truth*, Princeton, NJ: Princeton University Press.
 Evans, G. (1982) *The Varieties of Reference*, Oxford: Oxford University Press.
 Frege, G. (1953) *The Foundations of Arithmetic*, Evanston, IL: Northwestern University Press.
 — (1960) “On Sense and Meaning,” in *Translations from the Philosophical Works of Gottlob Frege*, ed. P. Geach and M. Black, Oxford: Oxford University Press, pp. 56–78.
 — (1967) “The Thought,” in *Philosophical Logic*, ed. P. Strawson, Oxford: Oxford University Press.
 Hale, B. (1987) *Abstract Objects*, Oxford: Blackwell Publishers.
 — (1994) “Dummett’s Critique of Wright’s Attempt to Resuscitate Frege,” *Philosophia Mathematica* 3/2, pp. 122–47.
 — (1997) “Realism and its Oppositions,” in *The Blackwell Companion to the Philosophy of Language*, ed. B. Hale and C. Wright, Oxford: Blackwell Publishers, pp. 271–308.
 Locke, J. (1975) *An Essay Concerning Human Understanding*, ed. P. Nidditch, Oxford: Oxford University Press.
 McDowell, J. (1998a) *Meaning, Knowledge and Reality*, Cambridge, MA: Harvard University Press.
 — (1998b) *Mind, Value, and Reality*, Cambridge, MA: Harvard University Press.
 Miller, A. (1998) *Philosophy of Language*, London: UCL Press.
 Putnam, H. (1981) *Realism, Truth, and History*, Cambridge: Cambridge University Press.
 Rosen, G. (1995) “The Shoals of Language,” *Mind* 104, pp. 599–609.
 Tennant, N. (1987) *Anti-Realism and Logic*, Oxford: Clarendon Press.
 — (1997) *The Taming of the True*, Oxford: Clarendon Press.

ALEXANDER MILLER

Wittgenstein, L. (1974) *Philosophical Investigations*, Oxford: Blackwell Publishers.

Wright, C. (1983) *Frege's Conception of Numbers as Objects*, Aberdeen: Aberdeen University Press.

— (1986) *Realism, Meaning, and Truth*, Oxford: Blackwell Publishers.

— (1992) *Truth and Objectivity*, Cambridge, MA: Harvard University Press.

— (1994) "Critical Notice of Dummett's *Frege: Philosophy of Mathematics*," *Philosophical Books* 35, pp. 89–102.