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IN MEMORIAM: MICHAEL DUMMETT
1925–2011

Sir Michael Dummett died in December 2011 at the age of 86 years. He had a long active life. His first major paper, *Truth*, published in 1959, took up a complex of metaphysical, logical, and meaning-theoretical issues, which continued to be a central theme in his philosophical writings, including his last two books, ***Truth and the Past*** from 2004 and ***Thought and Reality*** from 2006. The issues that he raised came to form a much debated topic within the philosophy of mathematics, logic, and language.

His range of activities was large. When he was knighted in 1999, it was in recognition of his "Services to Philosophy and to Racial Justice", which certainly names his two main fields. But he also made essential contributions to the theory of voting procedures, and passionately contributed to scholarly history of tarot cards and the card games played with them. More than half of the over two dozen books that he wrote were on non-philosophical themes such as immigration, voting, Catholicism, tarot, and English grammar and style.

Michael Dummett was Wykeham Professor of Logic at Oxford from 1979 until his retirement in 1992. Before that period he was for a long time Fellow at All Souls College and Reader in Philosophy of Mathematics at Oxford. He spent some years in the United States, in particular at Berkeley and Stanford, on different occasions, but he was based in Oxford during his whole professional life. He went there to begin university studies in 1947, taking Philosophy, Politics and Economics, and died there peacefully in his home shortly after Christmas 2011.

Dummett was a fellow of the British Academy and received many other honours such as the Lakatos Prize in 1994, the Rolf Schock Prize in Logic and Philosophy in 1995, and the Lauener Prize in 2010.

Among his works, there are some that fall strictly within the field of mathematical logic. He is known for his investigation of an intermediate logic between intuitionistic and classical propositional logic, obtained by adding $(p \supset q) \vee (q \supset p)$ to the intuitionistic axioms and usually referred to as *Dummett's system* (***JSL*** 24, 1959), and for a topological interpretation of modal systems between S4 and S5 in joint work with John Lemmon.

His main contributions to the areas of this Bulletin consist however not in technical works of this kind but in writings that fall within the philosophy

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of logic and mathematics. They were summarized in the citation when the Royal Swedish Academy of Sciences awarded him the Rolf Schock Prize in Logic and Philosophy: "for his penetrating studies of Frege's philosophy as well as for his contributions to the theory of meaning, among them his discussion of how the metaphysical controversy between realism and anti-realism relates to the meaning-theoretical question of the validity of the logical laws". This is far from an exhaustive description of his very extensive philosophical work, but it sums up what was considered his most outstanding, prize-worthy contributions in the field of logic and philosophy, to which I shall confine myself in the rest of this obituary.

Dummett's interest in Frege dates from 1950 when, as an undergraduate at Oxford, he read Austin's translation of ***Die Grundlagen der Arithmetik***. Dummett has told that he "was bowled over" by the book, and that he decided to read everything that Frege had written. This was a heroic decision in view of the fact that he knew only a little German and not enough of logic and mathematics. In 1964 most of a book about Frege that he had wanted to write was almost in a finished state, but then Dummett decided to involve himself actively in opposition to racism in England, which occupied virtually the whole of his spare time for many years. Not until the 70's, he returned to the book project. In 1973 his book ***Frege: Philosophy of Language*** appeared.

Frege is nowadays generally recognized as the initiator of modern logic, and rightly so, in Dummett's opinion, because of his account of multiple or nested generality. To understand Frege, Dummett says, one must grasp the magnitude of his discovery of the mechanism of quantifiers and bound variables, in terms of which the account was given, and by which a problem was resolved that had blocked progress in logic for centuries.

The title of Dummett's book reflects what he finds to be Frege's second great achievement, namely his work as a philosophical logician, which provided nothing less than the foundation of a theory of meaning. Frege's aim to attain rigour in the process of mathematical proof forced him to analyse the structure of the statements which make up a proof and to specify not only their syntax but also their meaning as determined from their internal structure, and this amounted to a genuine foundation of a new discipline.

Dummett's book is 700 pages long and is not an ordinary historical account, but to a great extent a discussion in modern terms of problems posed by Frege that have remained live issues. It was followed by three other books on Frege, one of which is ***Frege: Philosophy of Mathematics*** from 1995, intended originally to be a part of the book first planned on Frege. Our understanding of why Frege is rightly seen as the founder of modern logic and as a most important forerunner of analytical philosophy is partly due to Dummett's writings.

The complex of metaphysical, logical, and meaning-theoretical issues that Dummett took up in his early paper *Truth* and that was referred to in the citation quoted above gave rise to what may be described as a research program. Its starts from the fact that many discussions in metaphysics concern whether one should accept or reject a realist view of a subject matter, a typical example being the opposition between Platonism and constructivism in mathematics. In metaphysical terms, the opposition is between realists, who think that statements about the subject matter are true or false depending on a reality given independently of us, and objectors, labelled anti-realists by Dummett, who criticize realists for introducing mythical states of affairs, and give a different account of what it is for a statement to be true, for instance in terms of observations or proofs. The opposition has consequences for logic because the realist naturally accepts the principle of bivalence, saying that all the statements in question are either true or false, while the anti-realist may not be able to accept this principle for some statements, since there may be nothing that makes them true or false.

Dummett proposes that these disputes, which arise in many different contexts, have certain structural similarities, and that they should be approached not directly in metaphysical terms but by investigating to what extent one can devise a coherent meaning theory for the discourse in question that supports the principle of bivalence. For instance, in the case of the dispute between Platonists and constructivists or intuitionists in mathematics, the question is whether the understanding of mathematical sentences can coherently be explained as amounting to knowing their, possibly knowledge-transcendent, truth-conditions or should rather be explained as knowing how to use them in deductive contexts. Dummett discusses here an argument that leads to intuitionism in a way quite different from how this standpoint has traditionally been argued for. One of its main points is that our knowledge of the meaning of mathematical sentences must manifest itself in how we use them. Secondly, it is argued that a coherent meaning extracted from this use cannot support all classical principles that are applied in our common deductive practice, which requires a revision of this practice. The first point of this argument is inspired by Wittgenstein's philosophy, which exerted a great influence on him, although he was strongly critical of several other central ingredients in it.

A great deal of Dummett's writing is directly concerned with this research program. His paper *What is a theory of meaning? II* and his book ***The Logical Basis of Metaphysics*** are especially comprehensive in this respect. In the book ***Elements of Intuitionism***, Dummett deals among other things extensively with the application of this program to the discussion of the opposition between classical and intuitionistic logic and mathematics, and his last two books apply the program to questions of time.

These ideas have had a great impact on the last four decades of philosophical discussions, particularly within the theory of meaning and the philosophy of logic, where there has been lively discussion for and against Dummett's views. He says himself in the preface to a collection of his papers, ***Truth and Other Enigmas***: "If I have made any worthwhile contribution to philosophy, I think it must lie in having raised this [metaphysical] issue in these [meaning-theoretical] terms".

However, as Dummett noted in his valedictory lecture at Oxford in 1992, he has often been understood, not as proposing a research program, but as putting forward a general anti-realistic thesis. Although it is true, as Dummett says, that he has never sustained a specific thesis of such great generality, but has rather investigated possible arguments for and against various positions, it is quite natural that he has been understood as promoting a form of anti-realism, because an empathetic reader easily gets the feeling that Dummett's heart was on that side. What he certainly said was that the realist side had so far often won a too easy victory.

Dummett's discussions usually take the form of engaged, continuous dialogues without explicit disputants, in which questions are raised, preliminary answers are given, objected to, and then modified, new ideas are put forward from other angles, and so on. Many readers have found it difficult to follow his winding discussions. He once told me that he thought it is bad style in a philosophical paper to state definitions in italics and to space out a lot of theses, marked with numbers or letters; he refrains from the use of such devices, although they can facilitate reading. In my view, his writings are nevertheless very pedagogical because of his way of considering interesting objections to ideas put forward and of arriving gradually and elegantly at a great precision, not easily attained in philosophy. He was a very stimulating lecturer and writer because of the depth of his discussions and his engagement in the issues he took up, shown by the great drive and force in what he said and wrote.

As can be seen from the great number of references to Dummett in different contexts, the number of papers in which his ideas are discussed in detail, and the number of books entirely devoted to his philosophy—at present nine books at least, including a volume in the Library of Living Philosophers—many of us have been greatly inspired by him. It is sad that we shall see no more writings from his hand and shall not be able to discuss questions with him any further. There is though a consolation in the great treasure of his published works in which his philosophy lives on.

Dag Prawitz