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PHILOSOPHICAL PAPERS

F. P. RAMSEY

EDITED BY
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PREFACE

The papers in this volume have all been published before: details are given in the Bibliography. But only the following were prepared for publication by Ramsey himself: Chapter 2, 'Universals', and its Postscript, 'Note on the Preceding Paper' (part of 'Universals and the "Method of Analysis"'); Chapter 3, 'Facts and Propositions'; Chapter 8, 'The Foundations of Mathematics'; and Chapter 9, 'Mathematical Logic'.

All but one of the other papers were first prepared for publication after Ramsey's death in 1930 by his friend and editor R. B. Braithwaite, who included them in *The Foundations of Mathematics and other Logical Essays* (hereafter *FM*), the collection of Ramsey's papers published in 1931. The most finished of these is Chapter 4, 'Truth and Probability', written at the end of 1926. Braithwaite says in his introduction to *FM* that Ramsey once contemplated publishing this paper separately, and it lacks only an intended but unwritten final section on probability in science. The Postscript to this chapter comprises three notes, 'Reasonable Degree of Belief', 'Statistics' and 'Chance', written in the spring of 1928, and one, 'Probability and Partial Belief', written in the summer of 1929.

The other notes and papers first published in *FM* were also, with one exception, written in the summer of 1929. The exception is Chapter 10, *FM*'s 'Epilogue', a paper read in 1925 to a Cambridge discussion society (the so-called Apostles). Of the others, 'Causal Qualities' is really a postscript to 'Theories', the present Chapter 6, to which

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I have therefore appended it. The note on 'Philosophy' is reprinted here as an introductory Chapter 1.

The other paper first published in *FM*, 'General Propositions and Causality', refers to a paper, 'Universals of Law and of Fact', written in the spring of 1928, and not published in *FM*. When, after *FM* went out of print, I edited a new collection of Ramsey's papers, *Foundations: Essays in Philosophy, Logic, Mathematics and Economics*, published in 1978, I put these two papers together into a chapter on 'Law and Causality', which is reprinted here as Chapter 7.

The other differences between *Foundations* and *FM* were: the inclusion of Ramsey's two major papers on economics, 'A Contribution to the Theory of Taxation' and 'A Mathematical Theory of Saving'; and the omission of G. E. Moore's Preface, Braithwaite's Introduction and Note on Symbolism, Ramsey's review of Wittgenstein's *Tractatus Logico-Philosophicus*, Parts II-IV of 'On a Problem of Formal Logic', and the notes reprinted here as Postscripts to Chapters 2, 4 and 6.

Now that *Foundations* is also out of print, this third collection of Ramsey's papers has been edited with the specific aim of making his previously published work on philosophy more accessible to practitioners and students of that subject. The work on economics and mathematics has therefore been discarded, and the philosophical papers published in *FM* but omitted from *Foundations* have been restored, together with the Note on Symbolism. All these papers are here reprinted in their original form, with no changes except those entailed by their reordering and by the correction of a few typographical errors.

In preparing and introducing this new collection I have received valuable encouragement and advice from Professors Braithwaite, Richard Jeffrey of Princeton University, and Isaac Levi of Columbia University, Dr. Nils-Eric Sahlin of

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Lund University and my colleague Professor T. J. Smiley. I remain indebted also to Professors L. Mirsky's and Richard Stone's introductions to Ramsey's mathematics and economics in *Foundations*, and to the contributions of Professor Braithwaite and others to my (1978) radio portrait of Ramsey, on which I have drawn in the introduction that follows. Finally, thanks are due to Messrs. Routledge & Kegan Paul, the publishers of *FM* and of *Foundations*, for agreeing to this publication, to Cambridge University Press for undertaking it, and to Jamie Whyte for compiling the new Index.

D. H. M.

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In the first three decades of this century Cambridge University contained several remarkable philosophers, of whom G. E. Moore, Bertrand Russell, A. N. Whitehead and Ludwig Wittgenstein are now perhaps the best known, together with John Maynard Keynes, who was a philosopher of probability as well as an economist. But they were not the only notable philosophers in Cambridge at that time: there were also, among others, J. E. McTaggart, W. E. Johnson, C. D. Broad, and R. B. Braithwaite. And above all, there was Frank Plumpton Ramsey, Fellow of King's College and University Lecturer in Mathematics. He was born on 22nd February, 1903, and so was only 26 when he died on 19th January, 1930; yet in his short life he produced the most profound and original work, in logic, mathematics and economics, as well as in philosophy: work that is still extraordinarily, and increasingly, influential.

It is not feasible within the confines of this Introduction to describe in detail either Ramsey's work or its major and manifold effects on the subjects it deals with. For an introduction to the work itself, readers may refer to Nils-Eric Sahlin's *The Philosophy of F. P. Ramsey* (1990); and for some recent evidence of its impact on philosophy, to *Prospects for Pragmatism: Essays in Memory of F. P. Ramsey* (1980), a collection which I edited for the fiftieth anniversary of Ramsey's death.

The papers that follow may indeed seem to need no introduction, so clearly does Ramsey express himself even in his least finished notes. But his clarity can deceive, because his

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seemingly simple formulations are apt to conceal the depth and precision of his thought. Sometimes also, as G. E. Moore remarked in his preface to *FM*, Ramsey 'fails to explain things as clearly as he could have done, simply because he does not see that any explanation is needed: he does not realise that what to him seems perfectly clear and straightforward may to others, less gifted, offer many puzzles'.

For both these reasons some introduction is called for, if only to remind readers how much Ramsey repays close and repeated reading. It may also be desirable to indicate something of the present interest and influence of Ramsey's work. And although this volume is confined to his philosophy, its readers may well wish to learn something about his achievements in other fields, as well as about him, and about his attitudes to philosophy and to life. Hence the scope and form of this Introduction, and the inclusion of Ramsey's note on 'Philosophy' as Chapter 1, and of the Epilogue—of which Braithwaite said in his Introduction to *FM* that 'Ramsey did not change the attitude towards life that he has so happily and characteristically expressed in it'.

Ramsey came of a distinguished Cambridge family. His father, A. S. Ramsey, was also a professional mathematician and the President (i.e. Vice-Master) of Magdalene College, and his younger brother Michael went on to become Archbishop of Canterbury. It was through his family, and his befriending of such Fellows of Magdalene as C. K. Ogden and I. A. Richards, that while, and even before, he was an undergraduate reading mathematics at Trinity College, the young Ramsey began to meet the thinkers who stimulated his later work.

It was Russell and Wittgenstein who gave the first impetus to Ramsey's early metaphysics, logic and philosophy of mathematics. In 1925, two years after graduating in mathematics with the highest marks in his year, Ramsey produced 'The Foundations of Mathematics' (Chapter 8). This paper

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is the culmination of the logicist programme of reducing mathematics to logic undertaken in Russell's and Whitehead's *Principia Mathematica* (1913). It is, as Braithwaite's Introduction to *FM* puts it, 'an attempt to reconstruct the system of *Principia Mathematica* so that its blemishes may be avoided but its excellencies retained'. In particular, it improves Russell's weak definition of mathematical propositions as purely general ones by requiring them also to be tautologies in the sense of Wittgenstein's *Tractatus Logico-Philosophicus* (1922); and it simplifies Russell's complex theory of types by drawing the now standard distinction between the logical and the semantic paradoxes and dealing with them separately.

In the next year, 1926, Ramsey followed up this remarkable work by producing 'Mathematical Logic' (Chapter 9), a paper which defends Russell's logicist view of mathematics in more general terms 'against the formalism of Hilbert and the intuitionism of Brouwer'. And although that view has since lost favour, the version of it developed in Ramsey's 'Foundations of Mathematics' is still of much more than merely historical interest (see Chihara 1980).

Ramsey's other paper on mathematical logic, 'On a Problem of Formal Logic', published in 1928, solves a special case of the decision problem for first-order predicate calculus with equality. This paper was intended to further the solution of the general decision problem, but that problem was later shown to be insoluble (see Church 1956), and although Ramsey's solution of his special case is still of interest, it is really too technical to be worth reproducing in this collection.

It is however worth remarking how fruitful in other ways the mathematics of this paper has turned out to be. According to L. Mirsky's part of the Introduction to *Foundations*, it made 'a contribution of the first magnitude

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to, and probably lasting significance for, mathematical research'. But this fact was not recognised at the time: as Mirsky says, the two mathematical results Ramsey proves in this paper—both now called Ramsey's theorem—'only began to enter the consciousness of the general mathematical community during the last [two decades] when they became the source of inspiration of hundreds of papers constituting a body of work now known as "Ramsey theory"'.

All this is remarkable enough, but the genesis of Ramsey theory is even more so. It is not of course remarkable that Ramsey should publish work in mathematics, since he was a mathematician by trade as well as by training: becoming in 1926 a University lecturer in mathematics, a post he held until his death four years later. But his lectures in the Cambridge Faculty of Mathematics were mostly on the foundations of mathematics, not on mathematics itself. On mathematics, as opposed to its foundations, he only published nine pages: the first nine pages of 'On a Problem of Formal Logic'.

If Ramsey's work on logic and mathematics was prompted initially by Russell and Wittgenstein, his work on probability and economics was prompted by another Cambridge friend, Maynard Keynes. Keynes' *A Treatise on Probability* (1921), which is still influential, treats that subject as an extension of deductive logic, the logic of conclusive inference, to inductive logic, the logic of reasonable inconclusive inference. It does so by appealing to a primitive logical relation of partial entailment between propositions: a relation which, when measurable, enables a probability measure, knowable *a priori*, to say how strong an inference from one proposition to another would be. But in his 1922 review of the *Treatise*, and in his 1926 paper 'Truth and Probability' (Chapter 4), Ramsey criticised the idea of partial entailment, and the theory based on it, so effectively that Keynes himself abandoned it; and when Carnap (e.g. 1950) and his followers revived it, they

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improved it greatly by using Ramsey's probability measure of the strength of the beliefs inferred to measure the partial entailment relation used to infer them.

The fact that Keynes did not resent Ramsey's demolition of his theory of probability is shown by his getting Ramsey a Fellowship at King's College Cambridge in 1924 at the ripe age of 21, and then encouraging him to work on problems in economics. There resulted two papers on economics, 'A Contribution to the Theory of Taxation' and 'A Mathematical Theory of Saving', which appeared in *The Economic Journal* in 1927 and 1928 respectively. The latter deals with how much of its income a nation should save; the former with the relative rates at which purchases of different commodities should be taxed in order to raise a given revenue with the least disutility to the consumer.

These economics papers are of no great philosophical interest, and for that reason they too have been omitted from this volume. But that is not to deny their importance in economics. Keynes, in his obituary of Ramsey in *The Economic Journal* for March 1930, called the paper on saving 'one of the most remarkable contributions to mathematical economics ever made', and Richard Stone's introduction to them in *Foundations* describes them as 'generally recognised as the starting points of two flourishing branches of economics: optimal taxation and optimal accumulation'.

But this recognition of Ramsey's work was a long time coming in economics, as it was in mathematics. As Stone remarks, Ramsey's ideas on saving did not catch on until 1960, and his work on taxation not until 1970. And as with his economics and his mathematics, so indeed with most of Ramsey's work. It is remarkable how long most of it has taken to be caught up with and developed by others, and it is worth asking why.

The first and most obvious reason is that much of Ramsey's

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work was hard to take in at first because it was so profound and so original. Then there are the factors noted earlier: Ramsey's failure to explain things that, although by no means clear to others, were clear enough to him; and his deceptively light and simple style, which makes his arguments look easy until one tries to think them through oneself. Compare for example the *Tractatus*' portentous 'Whereof one cannot speak, thereof one must be silent' with Ramsey's 'But what we can't say we can't say, and we can't whistle it either'. Ramsey's comment seems almost flippant, until we see that it sums up a deep objection to the whole of the *Tractatus*, whose approach Ramsey was instrumental in persuading Wittgenstein to abandon.

Something else that inhibited a proper and widespread appreciation of Ramsey's work was the fact that he himself never pushed it. As I. A. Richards, his friend and early mentor at Magdalene, put it in a radio programme about Ramsey (Mellor 1978): 'He never was a showman at all, not the faintest trace of trying to make a figure of himself. Very modest, gentle, and on the whole he refrained almost entirely from argumentative controversy . . . He felt too clear in his own mind, I think, to want to refute other people'; a fact confirmed by Mrs Lettice Ramsey, his widow, by Braithwaite and by other friends.

It is not really surprising therefore that, after Ramsey died, more forceful figures should have overshadowed his reputation, and distracted attention from his work. That certainly happened in philosophy, which in the nineteen-thirties and forties in Cambridge was dominated by Wittgenstein. Braithwaite admitted as much in the broadcast mentioned above: 'Now with regard to why his views of probability weren't accepted more, I'm sorry, I think I am myself to blame to a certain extent: because I edited the works and I thought they were very interesting; but this was the moment

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when Wittgenstein had descended on Cambridge, and all of us took the next ten years trying to digest Wittgenstein.' With the benefit of hindsight, one might well feel that Cambridge in the thirties, indeed the whole philosophical community, would have been at least as well employed trying to digest Ramsey; and indeed that, but for Ramsey's early death, Wittgenstein's own work, on which Ramsey had a strong influence, would have developed more profitably than it did and been digested less uncritically than it was.

Whatever the reason, the fact remains that most of Ramsey's work was not picked up at once, and only much later was most of it rediscovered. Take the problem, tackled in 'Truth and Probability', of how to use our actions to measure the strength of our beliefs. The problem is that actions are caused not by beliefs alone, but by combinations of beliefs and desires, and any action can be caused by more than one such combination. But how then can any action be used to measure any one particular belief? Ramsey's paper shows how, by showing how our choices between gambles can be made to yield measures both of our desires (subjective utilities) and of our beliefs (subjective probabilities): thus laying foundations for the serious use of these quantitative concepts in economics and statistics as well as in philosophy.

This paper was written in 1926 and published in *FM* in 1931. But utility theory only really caught on after its rediscovery by Von Neumann and Morgenstern in their 1944 book *The Theory of Games and Economic Behavior*; and not for years was it realised how much of their work had been anticipated, and in some ways bettered, by Ramsey. And as with utility, so with subjective probability: not until some of Ramsey's ideas were rediscovered by L. J. Savage in his book, *The Foundations of Statistics*, published in 1954, did statisticians begin to take them seriously.

Unfortunately, taking Ramsey's ideas seriously doesn't

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always mean getting them right. A striking example is the common assumption that 'Truth and Probability', like modern Bayesian decision theory (e.g. Jeffrey's *The Logic of Decision* 1965), tells us to 'act in the way we think most likely to realize the objects of our desires' whether or not those thoughts and desires are either reasonable or right. It does no such thing: it claims only that the psychological theory which says that we do in fact act in this way is 'a useful approximation to the truth'. Ramsey's claim is purely descriptive, the appearance of prescription arising only from misreading his first-person 'should' in sentences like 'the more confident I am . . . the less distance I should be willing to go . . . to check my opinion' as 'ought to' instead of 'would'.

What Ramsey really anticipates are not the subjective and amoral prescriptions of modern decision theory, but modern functionalist views of the mind (see Block 1980), which take beliefs, desires and other such attitudes to be definable by their effects on our actions, by their causes (e.g. our perceptions), and by their interactions (e.g. the belief that p satisfying the desire that p). Ramsey's theory of degrees of belief in 'Truth and Probability' is a very—and a very early—paradigm of a functionalist account of an aspect of the mind.

In his 1927 paper on 'Facts and Propositions', moreover, Ramsey also suggests a solution to a different problem about belief, which still plagues functionalism: namely, how to define the contents of beliefs, conceived as their truth conditions. The problem here is that the conditions in which a belief is true cannot be defined by how, combined with various desires, it makes us act, since that will be the same whether it is true or not. But what a belief's truth will affect is whether the actions which it combines with our desires to cause will succeed: i.e. whether they will realise the objects of those desires. In short, a belief's truth conditions are the conditions

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in which every action A that it would combine with some desire to cause would succeed in realising that desire's object. Or, as Ramsey puts it, 'any set of actions $[(A)]$ for whose utility ϕ is a necessary and sufficient condition might be called a belief that ϕ , and so would be true if ϕ , i.e. if they [the actions] are useful'.

Ramsey devotes most of 'Facts and Propositions' to sketching what he calls a 'pragmatist' (i.e. functionalist) account of what he says 'may be called by any of the terms judgment, belief, or assertion'. But this paper is now better known for its denial that truth presents a separate problem: because, for example "He is always right" could be expressed by "For all a, R, b , if he asserts aRb , then aRb ", to which "is true" would be an obviously superfluous addition'. Many have tried since to refute this redundancy theory of truth, but Ramsey is really only echoing Aristotle: to assert truly is just to assert of what is, that it is. And if something like Tarski's later semantic theory of truth (e.g. Tarski 1944) fails to follow, that is only because Ramsey ascribes truth primarily to beliefs, not to sentences. For, as Ramsey says, what we need to explain is not the truth of the belief that aRb —let alone that of the unasserted sentence ' aRb '—but what it is to have such beliefs, and what in particular gives them their contents and hence their truth conditions: an issue that is still very much alive (see e.g. Loar's *Mind and Meaning* 1981).

An earlier work of Ramsey's which is even more sadly neglected is his 1925 paper on 'Universals' (Chapter 2). In this he disputes the 'fundamental division of objects into two classes, particular and universal', a division that is usually denied only by nominalists, and then only by denying that there are any universals. Ramsey has a deeper point, and his ground for it is his argument that there is no essential difference, in an atomic proposition ϕa , between the incompleteness of a and that of ϕ . Again, attempts have since

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been made to refute this contention (e.g. by Dummett in *Frege*, 1973, ch. 4); but most of the recently revived work on universals (e.g. Armstrong's *Nominalism & Realism* 1978) has just ignored it. Yet Ramsey's account alone answers such basic questions as: why we quantify over particulars first (Ramsey: because that's what makes them particulars); how particulars and universals can combine, without vicious regress, to form atomic facts; and why it takes at least one of each to do so. So provided the metaphysics of universals continues to recover from its long and emasculating subjection to semantics, I predict that this paper too will eventually come into its own.

A late work of Ramsey's that has also had less impact than it should is his 1929 note on 'Theories' (Chapter 6), which treats a theory's theoretical terms as existentially bound variables, thus generating what is now called its 'Ramsey sentence'. But although this account of theories has been noted with approval (e.g. by Carnap 1966, ch. 26), the explanations it provides of several otherwise puzzling features of them have not. For example, on Ramsey's account, parts of a theory, containing theoretical variables within the scope of its quantifiers, are not 'strictly propositions by themselves', and their meaning 'can only be given when we know to what stock of "propositions" . . . [they] are to be added'. But this holism of theoretical meaning means, among other things, that rival theories of the same empirical phenomena may well be 'incommensurable': i.e. such that their 'adherents . . . could quite well dispute, although neither affirmed anything the other denied'. Yet not until Kuhn's *The Structure of Scientific Revolutions* (1962) did this phenomenon of theoretical incommensurability attract much attention. And since then, because Ramsey's simple explanation of it has been largely overlooked, it has been much overrated, both as a puzzle and in its supposed implications:

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e.g. for deductive accounts of theoretical explanation (Hempel 1965, ch. 12), which on Ramsey's account it doesn't affect at all—since, as he notes, it has no effect on reasoning within the scope of a single theory's quantifiers.

This is not of course to deny that incommensurability makes it harder to say which of two rival theories in science one should believe. And this and other difficulties of justifying belief in scientific theories have led Popper (e.g. 1972, ch. 3) and his followers to deny that knowledge entails belief. Not so Ramsey, who retains the more usual conception that, to be known, propositions must at least be believed. But his brisk and memorable note on 'Knowledge' (Chapter 5), written in 1929, does anticipate other recent writers (e.g. Nozick 1981, ch. 3) in severing the link between knowledge and justification, thus escaping the classic dilemma of having to admit either an endless regress of things known' or some self-justifying foundations for knowledge. For knowledge, according to Ramsey, is not justified true belief, but true belief 'obtained by a reliable process': in the crucial case of memory, the process being 'the causal process connecting what happens with my remembering it'.

So knowledge for Ramsey relies on causation: and causation relies on laws of nature, which are a species of generalisation. As to what generalisations are, Ramsey in 1927, in 'Facts and Propositions', followed Wittgenstein's *Tractatus* in equating 'For all x , fx ' with the conjunction of all instances of ' fx '; and gave a remarkable answer to the obvious objection that to get 'For all x , fx ' from (say) ' $fa&fb&fc$ ', one must add ' a, b, c are everything'. His answer was that this addition can be deleted, because, if true, it is a necessary truth: since if it is false then something, d , differs numerically from a , b and c , and 'numerical identity and difference are necessary relations'.

To the further question, of how laws differ from other true

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generalisations, Ramsey gave not one remarkable answer but two. 'Universals of Law and of Fact' (Chapter 7A) contains his earlier answer, which has recently been given renewed currency by Lewis (1973). This says that 'laws [are] consequences of those [general] propositions which we should take as axioms if we knew everything and organised it as simply as possible in a deductive system'. This account of laws enables a strong defence of a Humean view of them (see e.g. Armstrong 1983), and still has wide appeal: seeming, for example, to underlie the deference many philosophers pay to microphysics, as being the most likely source of axioms for Ramsey's system.

Ramsey himself, however, abandoned this account of laws within a year. His later theory, given in 'General Propositions and Causality' (Chapter 7B), is at once more subtle and less finished, and much less amenable to summary. But of all Ramsey's philosophical papers, I think this is the one from which we still have most to learn. Roughly, it distinguishes laws from merely accidentally true generalisations, not by their content but by their role, for example in our assessment of action. We cannot assess a man's action 'except by considering what would have happened if he had acted differently; and this kind of unfulfilled conditional cannot be interpreted as a material implication, but depends essentially on variable hypotheticals'. To differ over these conditionals is not to differ over the facts that make generalisations true or false. It is to differ over a general 'system with which the speaker meets the future', comprising those generalisations to which he gives this lawlike status. These 'variable hypotheticals are not judgments but rules for judging "If I meet a ϕ , I shall regard it as a ψ ". This cannot be *negated* but it can be *disagreed* with by one who does not adopt it.'

Such disagreement is of course objectively debatable: for instance, too many past ϕ s may have been known not to be ψ for

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this to be a sensible rule. But even apart from that, Ramsey sees the need for his theory ' to explain the peculiar importance and objectivity ascribed to causal laws ', and how in particular ' the deduction of effect from cause is conceived to be so radically different from that of cause from effect '. This asymmetry Ramsey explains by the temporal asymmetry of the cause-effect relation, and that in turn by the fact ' that any present volition of ours is (for us) irrelevant to any past event. To another (or to ourselves in the future) it can serve as a sign of the past, but to us now what we do affects only the probability of the future.' Thus our past is distinguished from our future as the region of space-time about which we can have knowledge that will never depend on our knowledge of our own present intentions. That distinction in turn determines the direction of time and of the cause-effect relation, and hence how we can use the generalisations we call causal laws to help us decide how to act ourselves, and how to assess the actions of others.

This theory of Ramsey's is of course only a starting point for progress towards an adequate account of the relations between time, knowledge, action, causation and laws of nature. Yet I am sure it is the right one, and from it some progress has been made (e.g. Dummett 1964, Mellor 1981). But we have a long way to go, even to catch up with all the implications of Ramsey's thought.

And as with Ramsey on causation, so with the rest of his work in philosophy. My object in republishing it now is not to enshrine it but, as Braithwaite said in his Introduction to *FM*, ' to stimulate others to think about the hardest things in the world with some of that singleness of mind which characterised Frank Ramsey '—and to help them to do so by giving them the inestimable benefit of Ramsey's own ideas.

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REFERENCES

- Armstrong, D. M. (1978) *Nominalism & Realism*, Cambridge University Press.
 (1983) *What is a Law of Nature*, Cambridge University Press.
- Block, N., ed. (1980) *Readings in Philosophy of Psychology Volume 1*, Methuen, London.
- Carnap, R. (1950) *Logical Foundations of Probability*, University of Chicago Press.
 (1966) *Philosophical Foundations of Physics*, Basic Books, New York.
- Chihara, C. S. (1980) 'Ramsey's Theory of Types: Suggestions for a Return to Fregean Sources', in D. H. Mellor, ed. (1980), pp. 21–47.
- Church, A. (1956), *Introduction to Mathematical Logic*, Princeton University Press.
- Dummett, M. (1964) 'Bringing About the Past', in his *Truth and Other Enigmas* (1978), Duckworth, London.
 (1973) *Frege: Philosophy of Language*, Duckworth, London.
- Hempel, C. G., (1965) *Aspects of Scientific Explanation*, Free Press, New York.
- Jeffrey, R. C. (1965), *The Logic of Decision*, University of Chicago Press.
- Keynes, J. M. (1921), *A Treatise on Probability*, Macmillan, London.
- Lewis, D. K. (1973), *Counterfactuals*, Blackwell, Oxford.
- Kuhn, T. S. (1962), *The Structure of Scientific Revolutions*, University of Chicago Press.
- Loar, B. (1981) *Mind and Meaning*, Cambridge University Press.
- Mellor, D. H. (1978), 'Better than the Stars', Broadcast on BBC Radio 3, 27th February, 1978.
 ed. (1980), *Prospects for Pragmatism*, Cambridge University Press.
 (1981), *Real Time*, Cambridge University Press.

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REFERENCES

- Nozick, R. (1981), *Philosophical Explanations*, Clarendon Press, Oxford.
- Popper, K. R. (1972), *Objective Knowledge*, Oxford University Press.
- Sahlin, N.-E. (1990), *The Philosophy of F. P. Ramsey*, Cambridge University Press.
- Savage, L. J. (1954), *Foundations of Statistics*, Wiley, New York.
- Tarski, A., (1944), 'The Semantic Conception of Truth', in *Readings in Philosophical Analysis*, ed. H. Feigl and W. Sellars (1949), Appleton-Century-Crofts, New York, pp. 52–84.
- von Neumann, J. and Morgenstern, O. (1944), *Theory of Games and Economic Behaviour*, Princeton University Press.
- Whitehead, A. N. and Russell, B. (1913) *Principia Mathematica*, Cambridge University Press.
- Wittgenstein, L. (1922), *Tractatus Logico-Philosophicus*, Routledge and Kegan Paul, London.

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NOTE ON SYMBOLISM

In some of these essays Ramsey uses the symbolism of A. N. Whitehead and Bertrand Russell's *Principia Mathematica*. Its most important features are:—

p, q, r used for *propositions*.

a, b, c used for *individuals*.

f, g, ϕ, χ, ψ used for *propositional functions*.

[These are sometimes written $\phi x, \psi(x, y, z)$, etc., to show how many arguments they take.]

Then ϕa [sometimes written $\phi(a)$], $\psi(a, b, c)$, etc., are propositions.

x, y, z used for *variables* in expressions like

$(x) . \phi x$ meaning *For every x , ϕx is true.*

$(\exists x) . \phi x$ meaning *There is an x for which ϕx is true.*

Logical constants:—

\sim meaning *not*.

\vee meaning *or*.

$.$ meaning *and*.

\supset meaning *implies* [\supset_x implies for every x].

\equiv meaning *is equivalent to* [\equiv_x is equivalent to for every x].

Other expressions sometimes used in this book:—

$\mathcal{A}(\phi x)$ meaning *the class of ϕ 's*.

ϵ meaning *is a member of the class*.

\subset meaning *is contained in* (relation between classes).

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NOTE ON SYMBOLISM

Nc meaning *the cardinal number of*.

$(\iota x)(\phi x)$ meaning *the one and only thing satisfying ϕ* .

$E! (\iota x) (\phi x)$ meaning *One and only one thing satisfies ϕ* .

Points, colons, etc., . : :: are used for bracketing.

Ramsey also uses the following symbols not used by Whitehead and Russell:—

A stroke - above the proposition or function to denote its contradictory [$\bar{p} = \sim p$].

(a) meaning *the class whose only member is a* .

Occasionally Ramsey uses ordinary mathematical notations [$m \equiv n \pmod{l}$ means *m and n when divided by l have the same remainder*], and in discussing probability J. M. Keynes' symbolism p/h meaning *the probability of proposition p given proposition h* .

R. B. B.