ALFRED NORTH WHITEHEAD

ALFRED NORTH WHITEHEAD

1861–1947

ALFRED NORTH WHITEHEAD was one of that small number of thinkers whose influence is felt far beyond the bounds of their fellow specialists. He was never a popular thinker; but his work was shot through with passages of human and non-technical wisdom, so that the non-specialist reader could feel that great questions were being faced with intellectual courage, often illuminated by a vivid phrase. Whitehead's thought was generous and many sided, and this is one reason why it is difficult to appraise. He was constantly casting his ideas into fresh contexts, sometimes giving them a fresh terminology, and seeking to see how analogies drawn from one range of experience might throw light on another. He was convinced that philosophers should assume the obligation of trying to construct synoptic schemes in which all our main interests, scientific, religious, aesthetic, and social, should find an interpretation. At the same time he did not believe that any such scheme could be finally adequate to the rich complexity of the universe.

The many sidedness of Whitehead's interests, scientific and humane, was no doubt helped by his family background. He was born in 1861 in the Isle of Thanet, an East Kent man of generations of Kentish men, brought up in an environment in which it was possible to feel a strong sense of derivation from the past. His grandfather and father had been schoolmasters; his father later took orders in the Church of England, and was vicar of St. Peter's in Thanet.

My father [he writes] was not intellectual, but he possessed personality. Archbishop Tait had his summer residence in the parish, and he and his family were close friends of my parents. He and my father illustrated the survival of the better (and recessive) side of the eighteenth century throughout its successor. Thus, at the time unconsciously, I watched the history of England by my vision of grandfather, father, Archbishop Tait, Sir Moses Montefiore, the Pugin family, and others. When the Baptist minister in the parish was dying, it was my father who read the Bible to him. Such was England in those days, guided by local men with strong mutual antagonisms and intimate community of feeling. This vision was one source of my interest in history and education.[1]

[1] *Essays in Science and Philosophy*, p. 4 (Philosophical Library, New York).

Of his father he further tells us

He was an equal mixture of a High Churchman and a Broad Churchman. His favourite history was Gibbon's *Decline and Fall*. I do not think that any of Gibbon's chapters shocked him; for his robust common sense told him that the people of East Kent, with whom he was quite content, were really very unlike the early Christians. His favourite Biblical character was Abraham, who exhibits many features to endear him to the East Kent mentality.[1]

Whitehead went to school at Sherborne, and has written of education at a small public school in the 1870's in his essay *The Education of an Englishman*. Here again was an environment in which it was easy to feel a sense of the heritage of the past. The connexion of King Alfred with the school was mythical, but undoubted. The school had been a monastic foundation, and Whitehead himself in his last year had his study in what was said to have been the Abbot's cell.

At Sherborne he had the traditional classical education, taught mainly by schoolmasters 'who had read the classics with sufficient zeal to convert them to the principles of Athenian democracy and Roman tyrannicide'.[2] History and classics alike seem to have been taught strictly in the Whig tradition, conveying lessons in contemporary analogies and liberal principles. 'When the Bible said, "All these things happened unto them for ensamples", we did not need a higher critic to tell us what was meant or how it came to be written. It was just how we felt.'[3] The historical reflections in Whitehead's own work show that he preserved something of this spirit throughout life. His interest in history was not that of the scientific historian, as he was the first to admit; he was continually bringing forward illustrations from the past by way of comparison or contrast with contemporary ideas and ways of life. His interest was in the kind of history which has been called the 'practical past', the traditions which sustain ways of living and thinking. Historians reading his books should therefore accept his reflections and his suggested analogies in the spirit in which they are offered.

He was alive to the limitations of the classical education of the day.

We had no interest in foreign languages. It was Latin and Greek that we had to know. They were not foreign languages; they were just Latin and Greek; nothing of importance in the way of ideas could be presented in any other way. Thus we read the New Testament in

[1] *Essays in Science and Philosophy*, p. 48.

[2] Ibid., p. 33.

[3] Ibid., p. 34.

Greek. At school—except in chapel, which did not count—I never heard any one reading it in English. It would suggest an uncultivated religious state of mind. We were very religious, but with that moderation natural to people who take their religion in Greek.[1]

Nevertheless, for all its limitations, Whitehead commends this education for its combination of imaginative appeal and precise knowledge. In particular he thought it a training in political imagination, and in several of the addresses later collected and published under the title of *The Aims of Education* he shows how important it is to hold together these two aspects of education—the imaginative and the intellectual.

Besides classics, he was taught a good deal of mathematics, and when he went up to Trinity College, Cambridge, as a scholar in 1880 it was to read mathematics. He gained a first class in Part III of the Mathematical Tripos in 1884, and was elected to a fellowship and subsequently to a university lectureship in mathematics. His period at Cambridge from 1880 till he went to London in 1910 was one in which it was possible to enjoy leisurely and brilliant conversation. The 'Apostles Society', of which he was a member, counted among its senior members at this time Maitland, Verrall, Henry Jackson, Sidgwick, and men in positions of public life. Conversation was an art which Whitehead practised all through his life, and an art in which he was to find the perfect partner.

In December 1890 he married Evelyn Willoughby Wade, daughter of Captain A. Wade of the Seaforth Highlanders. He was greatly devoted to his wife, and in the autobiographical notes which he contributed to the volume *The Philosophy of Alfred North Whitehead* in 'The Library of Living Philosophers'[2] he spoke of her lifelong influence on his thought. 'Her vivid life has taught me that beauty, moral and aesthetic, is the aim of existence; and that kindness, and love, and artistic satisfaction are among its modes of attainment. Logic and Science are the disclosure of relevant patterns.'[3] Throughout their Cambridge time, in London, and in their later years in America, the Whiteheads kept open house, and must have delighted successive generations of pupils, colleagues, and visitors with their gracious hospitality and the wit and charm of their conversation.

They had three children, T. North Whitehead, now professor

[1] Ibid., pp. 36–7.

[2] Northern University, Evanston, and Chicago, 1941. This volume contains in an appendix a complete bibliography of Whitehead's works.

[3] *The Philosophy of Alfred North Whitehead*, p. 8.

in the Harvard School of Business Administration, Jessie Marie Whitehead, now a librarian in the Widener Library of Harvard, and Eric Alfred Whitehead, who was shot down and killed on active service in the Royal Flying Corps on 13 March 1918. Whitehead's book *The Principles of Natural Knowledge* has a beautiful dedication to the memory of his younger son. Mathematical ability has been carried on into the next generation of the family. J. H. C. Whitehead, the present Waynflete Professor of Pure Mathematics in Oxford, is the son of Whitehead's elder brother, the late Bishop of Madras.

During the first decade of the century Whitehead collaborated with Mr. Bertrand (now Earl) Russell on the logical foundations of mathematics, leading to the publication of the first three volumes of *Principia Mathematica*. (The fourth volume, which was to have been by Whitehead alone on the foundations of geometry, has never appeared.) Lord Russell has written about this collaboration in a note in *Mind* (April 1948), describing the way in which he and Whitehead divided the great labour of the *Principia Mathematica* between them. There is a fuller description of the work by Professor W. V. Quine in the volume in 'The Library of Living Philosophers'.

At this early period Whitehead was absorbed in the technical reconstruction of the foundations of logic and mathematics, following on the pioneer work of Peano and Frege. But his work in this period reveals certain general ideas which were to be developed in different terminologies in the philosophy of science and the metaphysics of his later periods. Such was, for instance, the view that mathematics is not a science of quantity or even of number, but of formal logical relationships. These formal schemes supply as it were blank cheques of possible modes of relationship, some of which may have 'values' assigned to them in empirical applications. From this is developed the conception of the possibility of a comprehensive formal scheme of complete generality underlying other formal schemes. The continuity of Whitehead's later philosophical with his earlier mathematical work has been traced by Dr. Lowe in his paper 'Whitehead's Philosophical Development' in the volume in 'The Library of Living Philosophers'. The close resemblance between Whitehead's view of schemes of mathematical postulates and the view he was later to come to hold of metaphysical schemes has been shown by Dr. Mays in a paper on Whitehead's account of speculative philosophy.[1] The first results of his researches were

[1] *Proceedings of the Aristotelian Society*, 1945–6.

published in the *Treatise on Universal Algebra*, in which he indicated the possibilities of a logic of algebra and of an algebraic method in logic. In the same year (1903) he was elected to the Royal Society.

In a paper called 'Mathematical Concepts of the Material World', submitted to the Royal Society in 1905, he suggested a unification of the fundamental concepts of Space and Matter. This suggestion was made independently of Einstein's General Theory of Relativity, which was not published until 1916. The classical conception employs three exclusive classes of entities, points of space, instants of time, and particles of matter. Hence there are held to be particles occupying a point of space at an instant of time. But how is the transition made from nature as spatially disposed at one instant to nature as spatially disposed at another? This problem is as old as Zeno's paradox of the moving arrow, and Whitehead held that it could not be solved in the classical concepts. Moreover, to postulate three mutually exclusive ultimate concepts is an example of what Whitehead was later to call 'incoherence'. So he suggests that the physical ultimates should be thought of as lines of forces with a direction, vector and not scalar or punctual. He also suggests that the one fundamental relation between them was the 'whole and part' relation which he was later to develop in terms of his theory of Extensive Connexion.

Dr. Lowe says that the three fundamental ideas derived from new developments in physics which were influencing Whitehead's thought at this stage were the development of vector physics, the development of theories of molecular and submolecular energetic vibration, and the notion of the energetic field. Whitehead speaks of the excitement with which as a young graduate he first heard the theory of the flux of energy expounded by Sir J. J. Thompson; that 'Energy has recognizable paths through space and time. Energy passes from particular occasion to particular occasion. At each point there is a flux with a quantitative flow and a definite direction'.[1] These were doctrines which were to appear many years later in new guises in his metaphysics.

In 1910 Whitehead moved to London, where he first lectured at University College, and subsequently held the chair of Applied Mathematics at the Imperial College of Science. His *Introduction to Mathematics*, published in 1911 for the Home University Library, shows his maturing concern for fundamental general

[1] *Adventures of Ideas*, p. 238 (C.U.P., 1933).

ideas. During part of his period in London (which lasted to 1924) he was Chairman of the Academic Council, and during the whole of it he was deeply concerned in the administrative and more widely educational work of the University of London, as well as in working out a philosophy of physical science which would embody the new logical and physical concepts. The philosophy of physical science was developed in a number of papers given to the Aristotelian Society during these years; and in three books, *The Principles of Natural Knowledge* (1919), *The Concept of Nature* (1920), *The Principle of Relativity* (1922). Professor Broad has written of the contribution made by these books, which may be called the '1920 books', in his commemorative notice of Whitehead in *Mind* (April 1948). They are also discussed in the essays by Professor Northrop and Professor McGilvary in the volume in 'The Library of Living Philosophers'.

The main general philosophical interest of these books lies in their concern with the relation between two sides of scientific and philosophical thought: the framing of deductive systems of precise concepts, and the proper relating of these to the crude data of experience. 'The question', Whitehead wrote, 'which I am inviting you to consider is this: How does exact thought apply to the fragmentary vague *continua* of experience? I am not saying that it does not apply: quite the contrary. But I want to know how it applies.'[1] The difficulty, he held, had been concealed by the influence of language, which foists exact concepts upon us as though they represented the immediate deliverances of experience; and by the 'sense data' type of empiricism which starts from too sophisticated a level, analysing experience into clearly defined visual and auditory data, neglecting the vaguer deliverances of organic sensation. We cannot, he says, insist too strongly on the unempirical character of the school which derives from Hume.

> There is a conventional view of experience . . . as a clear-cut knowledge of clear-cut items with clear-cut connections with each other . . . No notion could be further from the truth . . . In our own lives, and at any one moment, there is a focus of attention, a few items in clarity of awareness, but interconnected vaguely and yet insistently with other items in dim apprehension, and this dimness shading off imperceptibly into undiscriminated feeling. Further, the clarity cannot be segregated from the vagueness.[2]

[1] 'The Organization of Thought', *Aims of Education*, p. 158 (London, 1932).

[2] *The Function of Reason*, p. 62 (Princeton, 1929).

Whitehead's philosophy is throughout an attempt to hold together and relate these two sides: an interest in logical schemes, and an awareness of the massiveness and complexity of the concrete flow of experience. Our general principles need not be vague; intelligence in fact consists in the ability to form precise concepts which will enable us to organize thought concerning some interrelated aspects of the world. But wisdom consists in being conscious of what we have thereby omitted; of the vague background which is not penetrated and which limits the application of our principles. This double awareness made him both a constructor of theories and the critic of abstractions. In particular he was on his guard against what he called 'The Fallacy of Misplaced Concreteness', by which a theoretical concept is regarded as a thing in its own right, a fallacy of which he held popular scientific materialism to be an instance. Our basic experience is not the tidy world of scientific concepts, but a sense of *something going on*, with a qualitative character and spatio-temporal spread. Whitehead's Method of Extensive Abstraction was a device for extracting certain mathematical elements, such as points and lines, from perceptible relationships of sets of overlapping volumes. This relation of overlapping is one application of his general relation of Extensive Connexion. The world of which we are aware in perception can be described as a world made up of events, and events can be distinguished as extending over other events; for instance the event which consists in the reader's life history extends over the event of his reading this memoir, which extends over the event of his reading this sentence. In this way we can describe events of shorter and shorter duration as being common to a whole series of overlapping events; and the whole of 'nature at an instant' can thus be defined by such a series. This is an example from extension in time. Whitehead's notion of Extensive Connexion was also probably influenced by his interpretation of the field theory and what he called 'the denial of simple location'. According to this interpretation, the field of each electronic event extends throughout space-time, and each other event has its character affected by its relation to that event. Thus the constituents of nature can be looked on as fields superimposed on each other, and forming certain structures by their overlapping. In the three '1920 books' Whitehead was considering the general fact of relatedness in nature in terms of the relation of Extensive Connexion. This theory of the integration of perspectives from a standpoint formed a natural basis for a theory

of perception. In the earlier books perception is thought of almost entirely in terms of sense perception, and of the perspectives of nature thus disclosed. With *Science and the Modern World* (1926) and *Symbolism* (1928) he begins to consider perception also from the point of view of the activity of perceiving, and to give it an interpretation wider than conscious sense perception. Under the theory of 'prehensions', it covers any unification of aspects of the rest of nature from a given centre, and this unification is considered as a process which is itself a procedure of organization.

In a sense, *Science and the Modern World* marks the Rubicon. From now on Whitehead's books become overtly metaphysical in their intention; and he begins to call his work 'The Philosophy of Organism'. A reviewer of *Science and the Modern World* remarked that it seemed to have been written by Dr. Jekyll and Mr. Hyde, and when one of them began a chapter, it was never possible to be sure that the other would not finish it. In *Science and the Modern World*, and the books of Whitehead's last period which follow it, passages of non-technical human wisdom, containing reflections on the history of ideas and on civilization, are interleaved with passages where a logical and metaphysical idea is being expounded in a technical and often new phraseology. But the common reader will find in the non-technical passages the fruits of inspiration as well as of ripe wisdom. If he is sometimes tempted to skip Mr. Hyde's contributions, he may find comfort in the thought that Whitehead is reported to have said that he thought he himself was the only person who had really read the chapter on Abstraction in *Science and the Modern World*. (There are a few others who have done so, but they must be very few.) Throughout Whitehead's writings, the reader will find himself delighted by the vivid and often happy use of a biblical or poetic phrase to emphasize a point. Here are a few examples from many:

> A system of dogmas may be the ark within which the Church floats safely down the flood-tide of history. But the Church will perish unless it opens its windows and lets out the dove to search for an olive branch. Sometimes even it will do well to disembark on Mount Ararat and build a new altar to the divine Spirit—an altar neither in Mount Gerizim nor in Jerusalem.[1]

> The major advances in civilization are processes which all but wreck the societies in which they occur:—like unto an arrow in the hand of a child.[2]

[1] *Religion in the Making*, pp. 130–1 (C.U.P., 1927).

[2] *Symbolism*, p. 104 (C.U.P., 1928).

I will not go so far as to say that to construct a history of thought without profound study of the mathematical ideas of successive epochs is like omitting Hamlet from the play which is named after him. That would be claiming too much. But it is certainly analogous to cutting out the part of Ophelia. The simile is singularly exact. For Ophelia is quite essential to the play, she is very charming,—and a little mad.[1]

If men cannot live on bread alone, still less can they do so on disinfectants. [Of the concentration on purely critical philosophy.][2]

Encouragement to develop his interests in a comprehensive philosophy came in 1924, when Whitehead, near his retirement in the University of London, received an invitation to join the Department of Philosophy at Harvard University. He remained at Harvard for the rest of his life, as professor until 1937 and as professor emeritus from 1937 till his death on 30 December 1947. He returned to England for visits during the early part of this period; but during his last years, failing health and the Second World War prevented him from travelling. He maintained a keen interest in what was going on in his own country, and the English visitor who would talk to him about political, social, and academic developments at home was sure of welcome. But he gave himself with wholehearted affection to the country of his adoption. He found encouragement in the kindness and intellectual eagerness happily so widespread in America, and he believed strongly in the future of the great American universities. The graduate school of philosophy at Harvard in these years normally numbered some fifty members, drawn from colleges in all parts of the American Union, and indeed from all parts of the world. Whitehead and his wife were unfailing in their kindness to these students, being at home for one and often two evenings in every week, and charming them with conversation which ranged over reminiscences of Victorian England, descriptions of Liberal Party meetings in villages at the turn of the century, comparisons of English and American civilization, and reflections on literature, history, and religion, seen through a general philosophical interest.

An invitation to deliver the Gifford Lectures in the University of Edinburgh during the session of 1927–8 gave Whitehead the opportunity to present the comprehensive system of philosophy which was by then taking shape in his mind. *Process and Reality* is a very difficult book; and the audience at the Gifford Lectures,

[1] *Science and the Modern World*, p. 30 (C.U.P., 1926).
[2] Ibid., p. 84.

confronted at the outset by its eight Categories of Existence, twenty-seven Categories of Explanation, and nine Categorial Obligations, may well have found their powers of concentration stretched to the utmost. Most of Whitehead's books were originally given as lectures on special foundations: all of them need several readings, and presuppose some knowledge of previous discussions of similar themes in earlier books. But an audience at such a lecture would without doubt have felt that it was witnessing an adventure of intellectual exploration. 'A professor', Whitehead said, 'is an ignorant man thinking.' His own background of knowledge in mathematics, science, and the humanities was massive. But he was always able to convey his deep consciousness of the infinitude and complexity of the world, and of how little man's mind has as yet penetrated. Whitehead himself was not interested in trying to explain or defend his work to critics; his interest was, like that of an artist, concentrated on the productive work in which he was immediately engaged. What his audience or his critics might make of it was their concern.

In *Process and Reality* Whitehead brings together in a comprehensive system his two lifelong interests: his interest in theory-construction and his interest in describing the concrete flow of experience. The general design is thus a continuation of his earlier work, in which he had been concerned with the logical methods by which abstract schemes of precise scientific concepts could be derived from the fragmentary and vague, but at the same time qualitative and emotionally tinged, world of actual experience. In the earlier work he had been concerned to avoid the 'bifurcation of nature'; the cleavage between physical nature described in quantitative and mathematical terms on the one side, and man's mind, with its purposes, feelings, evaluations, and perhaps also the 'secondary qualities', on the other side. In *Process and Reality* we find a gigantic attempt to overcome the gaps, both between actual experience and cosmological theory and between man and nature, by deriving a general cosmological theory by generalization from the kind of structure he believes we find in our actual experience. He also carries further the criticism indicated in his earlier books of the type of empiricism derived from Hume. This empiricism, Whitehead held, had disregarded 'the superficiality of sense perception'. It had proceeded as though the primary deliverances of experience were sense data, in the form of colour patches or sounds, and had not seen that these were comparatively sophisticated simplifications

of more deep-seated organic sensations. 'Philosophers', he said, 'have disdained the information about the universe obtained through their visceral feelings, and have concentrated on visual feelings.'[1] An analysis of experience undertaken primarily in terms of organic sensations would, he thought, reveal as inescapable data the feeling of the causal efficacy of the environment in the development of the subject; the feeling of the subject's derivation of its present from its past and its anticipation of the future; and the fact that there is no experience devoid of qualitative and affective tone. By starting from these feelings as primitive data, Whitehead thought that a new approach could be made to some of the problems of empirical philosophy. From this analysis of experience he also thought that certain generalizations could be made as to its basic structure. These are summarized in his account of the Self in *Modes of Thought.*

> I find myself as essentially a unity of emotions, enjoyments, hopes, fears, regrets, valuations of alternatives, decisions—all of them subjective reactions to the environment as active in my nature. My unity—which is Descartes' 'I am'—is my process of shaping this welter of material into a consistent pattern of feelings. The individual enjoyment is what I am in my role of a natural activity, as I shape the activities of the environment into a new creation, which is myself at this moment; and yet, as being myself, it is a continuation of the antecedent world. If we stress the role of my immediate pattern of active enjoyment, this process is self-creation. If we stress the role of the conceptual anticipation of the future, whose existence is a necessity in the nature of the present, this process is the teleological aim at some ideal in the future.[2]

As an account of what we find ourselves to be, this could win wide acceptance. But when Whitehead stretched categories derived by generalization from what we find ourselves to be, and used them to describe the structure of whatever is actual throughout nature, many felt that he was avoiding 'bifurcation' between man and nature at too great a cost. Not only was he giving a Philosophy of Organism in which biology was becoming the science of the larger, and physics of the smaller organisms, but one in which a certain psychology of sentient experience seemed to be swallowing up biology and physics alike. Whitehead constantly insisted that consciousness is a late and rare factor in experience: that consciousness arises within experience and not experience within consciousness. But in spite of these *caveats*, it

[1] *Process and Reality*, p. 169 (C.U.P., 1929).
[2] *Modes of Thought*, p. 228 (C.U.P., 1938).

was hard not to feel that categories derived from sentient experience were being given a wider meaning than they would bear.

We have seen that Whitehead held that speculative metaphysics should start from the elements disclosed in immediate experience, should generalize them, and then frame a scheme showing how the different elements so generalized are related to one another. It should then be possible to approximate to a scheme of utmost generality exhibiting the logical structure of any possible process of becoming. His philosophy was in the last resort based on an analysis of experience as *process*. He has been claimed as a Platonist; indeed as 'the last and greatest of the Cambridge Platonists'.[1] Plato's thought, particularly in his later dialogues, held a fascination for Whitehead, and in a broad sense, as an attempt to 'find the forms in the facts', his work has a Platonic ring. But he gave no superior status to abstract forms, or 'eternal objects', over and above the concrete processes of becoming.

He did, however, seek to relate his interest in general formal schemes to what he held to be the religious intuition of 'permanence amid change'. This is the source of one aspect of that interest in natural theology which is so strong a feature of his later books. Another aspect of it lies in the way in which he spoke of an aim towards intensification of experience, as realized in finite individuals within the general conditions of the logical scheme. This tendency towards the intensification of experience runs counter to the general tendency in physical nature for any form of order to run down into a more disorganized and trivial state. To sustain the aim towards the realization of 'importance', as distinct from triviality, in experience, Whitehead saw as the main function of the religious spirit. This is the context within which the saying, so often quoted and so often misquoted, that 'Religion is what the individual does with his own solitariness'[2] should be understood. This saying has been taken to indicate an excessive individualism in Whitehead's views on religion. But in its context it is clear that he is saying that, while religion has to do with the realization of the worth of the individual for itself, this must be harmonized with the realization of the worth of other individuals, in loyalty to aims which transcend any merely personal satisfaction.

Whitehead wrote of religion in this sense in the closing chapters of his *Adventures of Ideas*. *Adventures of Ideas* (published in

[1] *The Times*, 31 Dec. 1947.

[2] *Religion in the Making*, p. 6 (C.U.P., 1927).

1933) is in some ways his happiest book. In *Process and Reality* he had discharged the obligation which he felt to produce a comprehensive scheme, and he could now reflect on the efficacy of certain general ideas in the making of civilization. The title itself is significant. Whitehead's enemy throughout his life was what he called 'inert ideas': ideas not tinged with any feeling for their interest or relevance. A polemic against 'inert ideas' occupies a considerable part of his essays in the *Aims of Education*. He himself could speak of ideas almost as though they were living things, seeking embodiment in the actual processes of the world. *Adventures of Ideas* contains much to interest the thoughtful non-specialist reader concerned with the fate of civilization in a time of transition and instability. Civilization is described as the attempt to embody the values described under the words 'Truth, Beauty, Adventure, Art, Peace', against the odds of 'senseless agencies'. By the latter Whitehead means such forces as the tendency in physical nature towards the dissipation of energy and degeneration ('Life is an offensive against the repetitious mechanism of the universe'); economic processes imperfectly understood; and our own unruly passions.

Whitehead's last book, *Modes of Thought*, was published in 1938. There was yet to appear *Essays in Science and Philosophy*, published in 1947, but this latter was a collection of essays written over a long period of years. *Modes of Thought* does not add to the fundamental ideas of the former work, but it brings out the strong aesthetic interest which is a factor throughout. It also shows the interdependence of the two notions of 'Matter of fact' and of 'Importance' in all our thinking about the world. It contains passages of fine writing and some of those flashes of inspiration and wit with which Whitehead could delight his readers.

Whitehead's greatness was readily recognized and he received high honours during his lifetime. He became F.R.S. in 1903 and F.B.A. in 1931. In 1945 he was awarded the Order of Merit. The universities of Manchester, St. Andrews, Harvard, Wisconsin, Yale, and Montreal gave him honorary doctorates. In his person he possessed a quality which might be described by one of his own terms—*massive simplicity*. His concentration on important themes gave him depth, and his sense of the greatness of the world gave him humility. He was modest, affectionate, and wise in his conversation. A definitive appraisal of his real contribution to philosophy has not been made, and may not be made in our generation. But perhaps (with some qualifications

concerning our intellectual tradition) we may say of him what he himself once said of Plato, that people will turn to him not for 'the systematic scheme of thought which scholars have doubtfully extracted from his writings', but 'for the wealth of general ideas scattered through them. His personal endowments, his wide opportunities for experience at a great period of civilization, his inheritance of an intellectual tradition not yet stiffened by excessive systematization, have made his writing an inexhaustible mine of suggestion.'[1]

DOROTHY EMMET

THE writer has been greatly helped by the comments of Professor T. North Whitehead and Dr. Karl Britton, who read the manuscript of this memoir.

[1] *Process and Reality*, p. 53.