General introduction

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Alfred North Whitehead, a British-born philosopher who attained widespread fame in America in the first half of the twentieth century, is perhaps best known among the wider public for his famous saying that the European philosophical tradition ‘consists of a series of footnotes to Plato’.¹

A student of mathematics at Trinity College, Cambridge, in the 1880s, Whitehead was elected a Fellow of the College in 1884, where he mentored the mathematical studies of such notable figures as John Maynard Keynes and Bertrand Russell, and was also inducted as a member of one of the most elite societies in the English-speaking university world at the time, the famed ‘Cambridge Apostles’.

In 1910, Whitehead resigned his fellowship at Trinity College and moved to London, where (after a year spent in research and writing) he obtained a lectureship in mathematics at University College London. In 1914, he began lecturing at the newly organised Imperial College of Science and Technology (now Imperial College London) before being elected Dean of the Faculty of Science at the University of London in 1918 and Chairman of its Academic Council in 1920.²

While at the University of London, Whitehead successfully lobbied for a new history of science department, helped establish a bachelor of science degree in 1923, and made the school more accessible to less wealthy students. Finally, at the age of 63, Whitehead retired from his position at the University of London and sailed to America to accept a coveted chair at Harvard University, becoming a naturalised citizen and remaining an active and prolific scholar until his death on 30 December 1947 in Cambridge, Massachusetts.

At the beginning of the twentieth century, Whitehead began a collaboration with his student and protégé Lord Bertrand Russell that lasted well over a decade and resulted in the publication (in 1910, 1912 and 1913) of the three-volume *Principia Mathematica*, a monumental study intended to establish the foundations of mathematics in formal logic. Subsequently, in 1922, Whitehead himself concluded two decades of study of the geometry of space-time in *The Principle of Relativity*, a path-breaking work of theoretical cosmology explicitly intended to pose an alternative to Albert Einstein’s

1. Alfred North Whitehead, *Process and Reality* (1929) (New York: Free Press, 1979), p. 39.

2. Both University College London and the Imperial College of Science and Technology were member colleges of the University of London.

General Theory. Other works spanning Whitehead's academic career in England include *A Treatise on Universal Algebra* (1898), 'On mathematical concepts of the material world' (1906), *An Introduction to Mathematics* (1911), *The Organization of Thought* (1917), *An Enquiry Concerning the Principles of Natural Knowledge* (1919) and a significant work on the philosophy of science, *The Concept of Nature* (1920). These works cemented Whitehead's reputation as one of the leading figures in the early development of analytic philosophy, alongside Russell, G. E. Moore and Ludwig Wittgenstein.

Upon coming to the United States, however, and with inspiration allegedly derived from the uniquely American philosophy of 'experience' (particularly that of William James and John Dewey), Whitehead undertook a series of works on far broader philosophical themes. His later work encompasses the history and philosophy of science, the sociological development of civilisation, the philosophy of history, philosophical reflections on education and, most famously, an ambitious attempt to develop a descriptive metaphysical system commensurate with early twentieth-century relativistic cosmology and quantum mechanics, which scholars now commonly label 'process philosophy'. Works during this American period of his career include *Science and the Modern World* (1925), *Religion in the Making* (1926), *Symbolism* (1927), *The Function of Reason* (1929) and his best-known work, *Process and Reality* (1929), based upon his Gifford lectures at the University of Edinburgh delivered in June 1928. In addition to subsequent books, such as *Adventures of Ideas* (1933) and *Modes of Thought* (1938), Whitehead also published a number of lectures and essays on diverse topics during this period, many of which he later published in collections such as *The Aims of Education* (1929) and *Essays in Science and Philosophy* (1948).

Whitehead's stature as a pivotal figure in American philosophy, his significant contributions to the rise of analytic philosophy, and the recent and worldwide renewal of interest in the constructive contribution of his seminal ideas to a number of important contemporary metaphysical and cosmological problems in philosophy argue for the appropriateness and timeliness of a complete critical edition of his works – an edition intended to rank alongside critical collected editions already produced or in progress on the works of his eminent predecessors and contemporaries, including William James, John Dewey, Josiah Royce, George Santayana and C. S. Peirce, as well as Einstein, Russell and Wittgenstein.

The need for a complete critical edition of the unpublished and published manuscripts of Whitehead is compelling. Beginning around 2010, an enormous body of unpublished material steadily began to come to light, thus helping to dispel the myth that all of the Whiteheadian *Nachlass* had been lost or destroyed.¹ The new discoveries include substantive correspondence

1. Whitehead's grandson, George Whitehead, confirms the story that Alfred North's heirs did destroy his personal effects at his request. There is ongoing disagreement among scholars regarding exactly what was destroyed. What have been discovered are items that were saved by friends, colleagues and students, as well as some of Whitehead's papers that were unknown to his family at the time of his death.

with students and leading intellectual and political figures of the period, along with copious and detailed lecture notes taken by both students and faculty colleagues attending Whitehead's classes. These lecture notes were recorded by philosophers who became quite accomplished in their own right, and some of whom (such as W. V. A. Quine) are characterised by an eminent historian of philosophy, Professor Jerome B. Schneewind, as numbering among the most significant philosophical figures of the twentieth century.¹

Despite the fact that much of his work undertaken in America was written comparatively recently (mostly during the early part of the last century), scholars at present do not have a clear sense of what motivated Whitehead or what led to the development of his thought. Part of the reason for this has to do with the fact that his personal correspondence with colleagues – along with the lecture notes of his students which were not either discarded, donated or destroyed following his death – had been scattered in libraries and archives across the United States, Canada and the UK.

The editors and staff of the Whitehead Research Project have invested considerable time and effort locating, collecting and cataloguing a substantial body of these extant unpublished materials (many of which were mistakenly thought to have been lost to scholars forever). The newly discovered materials in particular shed considerable light on the factors influencing the development of Whitehead's later philosophy, and also often elucidate – in considerably greater detail than ever before – many of the principal concepts encompassed within that body of philosophical reflection (e.g. through the apparent use by Whitehead himself of illustrations, equations and blackboard diagrams in classroom settings which have never before been seen by contemporary scholars).

Whitehead's published works, meanwhile, remain in disarray: some are out of print, while others remain in print from multiple sources, replete with inconsistencies and extensive uncorrected typographical and textual errors. Many lack even a cursory index. Apart from a newly reprinted edition of Whitehead and Russell's *Principia Mathematica*, the sole exception was the re-issue (in 1978) of a so-called 'Corrected Edition' of *Process and Reality*. This proved to be a helpful interim work but it did not fully adhere to the rigorous protocols since established for scholarly editions generally.² Finally, while multiple copyrights for extant works are claimed by several publishers, in point of fact all of Whitehead's materials (published and unpublished) continue to remain legally in the sole possession of the Whitehead family estate, whose sole executor³ has granted full permission for the future publication of both unpublished and published works to the Whitehead Research Project.

1. J. B. Schneewind, Chair, Department of Philosophy, Johns Hopkins University (letter of reference to the National Endowment for the Humanities, 30 June 2012).

2. See for example Mary-Jo Kline and Susan Holbrook Perdue, *A Guide to Documentary Editing* (3rd edition) (Charlottesville: University of Virginia Press, 2008).

3. George W. Whitehead (a grandson).

When finally completed, the *Edinburgh Critical Edition of the Complete Works of Alfred North Whitehead* will encompass the entire collected works of the author, published and unpublished. Furthermore, by organising, archiving, digitising, transcribing, editing and indexing all of his writings, the full breadth and significance of Whitehead's diverse work will, perhaps for the first time, come fully into view. Not only will this make available materials that have never been published, but it will also improve the scholarly understanding of previously published items. Perhaps the most useful and exciting aspect of this project to many scholars, however (beyond the publication of newly discovered material), will be the creation of a fully searchable electronic archive of these primary source materials.¹ In these ways, this *Critical Edition* should facilitate and energise the scholarly study of one of the twentieth century's most original and influential intellectual figures.

Outline and methodology of the Harvard lectures

The *Critical Edition* begins with a series of volumes devoted to the considerable body of recently discovered and almost entirely unpublished lecture notes, followed by two volumes of correspondence. Upon completion of the publication of all of the hitherto unpublished materials, the *Critical Edition* will turn, in chronological sequence, to the re-issuing of critically edited volumes of published works, from *Universal Algebra* (1898) through to the later American works, up to the date of Whitehead's death in 1947.

Whitehead mainly taught three courses during his Harvard career: Phil 3b ('Philosophy of Science'),² Phil 20h ('Seminary in Metaphysics') and Phil 20i ('Seminary in Logic'). This might imply a tedious and repetitive chronology of the same or similar topics over time, but this is not how Whitehead worked. Unlike the majority of academics – who most often teach a repertoire of courses for students in a major or graduate programme while attempting to reserve their own time for original and publishable scholarly research – Whitehead carried out his original research in the classroom and in public lecture halls, in dialogue with the undergraduate and graduate students in his core classes and seminars, and changed the course content based on the focus of his research at the time.

These changes are reflected to some degree in the shifting sub-titles for his Phil 3/3b, which during his 13-year teaching career at Harvard was variously called 'Philosophical Presuppositions of Science', 'Cosmologies Ancient and Modern' and 'The Function of Reason', among other titles. But in fact, topics changed more frequently than even changes in sub-titles suggest; every year was different. Louise R. Heath, who took Whitehead's Phil 3b two years in

1. Digital scans of many items can be reviewed on site at the Whitehead Research Project (WRP) in Claremont, California. Finding aid information for all items can be obtained by contacting the WRP staff. Visit <http://whiteheadresearch.org> for more information.

2. A course that Whitehead taught during both semesters, it was later split into two courses: Phil 3b (fall semester) and Phil 3 (spring semester).

a row, wrote at the top of her notes for the second year: ‘Theoretically [this was the] same course as 1924, but I credited it because actually it was quite different’.¹ Whitehead did not tie himself to any particular set of topics from year to year, but simply taught his most current thought on whatever he was working on, often months before similar material would appear in print. Hence, the overriding significance of the materials included in these volumes of lectures is that they provide long-missing insight into the formation and development of Whitehead’s thought during this crucial period.

It has long been believed, for example (as the record of his formally published work seems to suggest), that Whitehead first developed a provisional metaphysical synthesis of and foundation for modern science (in his first published American work, *Science and the Modern World*, in 1925) that differed substantively from his ‘later’ and quite distinct reformulation of these foundations in *Process and Reality*. Volume I of this *Critical Edition* demonstrates that this widespread interpretation is inaccurate, inasmuch as his later mathematical and geometrical foundations (especially Part IV of *Process and Reality*) are presented largely intact in the Emerson Hall lectures of 1924–5, while a more general, historical and publicly accessible account of these (same) foundations is offered in the Radcliffe College lectures (nominally under the same course heading) delivered at the same time (which formed the basis of *Science and the Modern World*). Having found during that first year that the technical account was somewhat daunting for his students – even for Harvard graduate students – Whitehead proceeded to alter the focus of the ‘master course’ significantly during the next two years, taking a more historical and descriptive approach to the materials presented in class as his thinking about these issues continued to evolve.

The lecture notes over the ensuing two years thus reflect the origins of at least some of the several divisions, or ‘Parts’, that would come to compose the formal publication of *Process and Reality* in 1929. These lectures themselves lead up to the delivery of the Gifford lectures in Edinburgh toward the end of the academic term in June 1928 (during which Whitehead reported encountering similar difficulties with audience comprehension and developing the proper ‘pitch’ for his lectures). What these notes together reveal is that the alleged ‘transformation’ of his thought from an ‘early’ (1925) to a quite distinctive ‘later’ version (1929) cannot be sustained on the basis of this new evidence. Instead, what we see is a more subtle ‘evolution’ of concepts and theoretical foundations, captured in a decided transformation in public dissemination and style. Indeed, the textual evidence suggests that Whitehead encountered a problem similar to that described by Wittgenstein in his own post-*Tractatus* lectures, in which the methodology involves abandoning a straightforward sequential-logical approach for a somewhat less systematic piecemeal criss-cross of the same subject-terrain from alternative perspectives,

1. Louise R. Heath, Philosophy 3b notes, Victor Lowe Papers, Ms 284 Box 2.9, Special Collections, Sheridan Libraries, Johns Hopkins University.

utilising varying modes of expression in order to gain insight into the complex whole of the subject more adequately.

In Whitehead's case, these lecture notes also demonstrate how he used his teaching and public presentations as the portrait or drawing board upon which to sketch and re-sketch his evolving thought, searching for a proper mode of presentation and delivery that would succeed in capturing the whole of a metaphysical vision that he himself had described to his son, North, in 1924 as 'the right way of looking at things', lacking only the opportunity that his Harvard years finally presented to set it all out systematically. This was not an easy task, of course, nor was it accomplished in a single year, or in a single course. Instead, we witness the true 'compositional history' of Whitehead's thought not in some hypothetical reconstruction, but in his very own words, during his own presentations, as recorded meticulously by his own students, all wrestling together with the problem of a proper reformulation of the metaphysical picture of nature as presented in the varieties of discoveries constituting modern science at the dawn of the twentieth century.

The annual succession of lecture notes in these volumes thus supplies the long-absent background for understanding the development and maturation of Whitehead's thought. For anyone interested in Whitehead, in process philosophy specifically, or in the evolution of early twentieth-century Anglo-American philosophy generally, these notes are a discovery of extraordinary significance.