

# William Persehouse Delisle Wightman: 4 June 1899–15 January 1983

**W. A. Smeaton**

BORN in London, but of Scottish ancestry, William Wightman was educated at Eastbourne College before entering the Imperial College of Science and Technology, London, as a chemistry undergraduate in 1916. His course was interrupted by full-time service in the University of London Officer Training Corps and he graduated in 1922. He was appointed to the staff of Edinburgh Academy and eventually became head of the science department.

Like many science teachers Wightman was interested in the history and philosophy of science; unlike most he studied the subject seriously and, working alone as an external student, in 1927 he passed the examination for the recently introduced London M.Sc. degree in History, Methods and Principles of Science, as it was then called. He was convinced that the science of any period could not be properly studied in isolation from other branches of knowledge. This led him to spend several years preparing a remarkable thesis on 'Science and Monism', in which he examined the relation between philosophy and natural science from the Greeks to the twentieth century. It earned him his London Ph.D. in 1932 and was published as a book with the same title in 1934, the year he was elected a Fellow of the Royal Society of Edinburgh.

His monism led Wightman to dislike the usual division of school science into physics, chemistry and biology. At Edinburgh Academy he adopted a heuristic method of teaching, encouraging pupils to solve problems by experiment and, as far as possible within the constraints imposed by external examinations, he taught a fully integrated 'general science'. With his colleague A. O. Chesters he published an account of his course in *A Modern Introduction to Science* (4 parts, 1936–38). He did not believe that history of science should be taught as a separate subject in schools, but he included much historical material because it was pedagogically justifiable as 'the best corrective to that perilous attitude, now so prevalent, which regards science as a frozen system of unquestionable dogma'. To bring this message home to a far wider readership he wrote *The Growth of Scientific Ideas* (1950), a scholarly and eminently readable history of science addressed to anyone who 'has learnt enough general science at school to wish to continue the enquiry into the origin of our present-day scientific concepts and the part played by science in the creation of our culture'.

When that book was published the history of science was not properly

cultivated in any British university outside London, and, to a lesser extent, Oxford and Cambridge. In 1951 the Court of Aberdeen University, to its eternal credit, created a lectureship in the history and philosophy of science and appointed Wightman. He was promoted to reader in 1955 and remained at Aberdeen until his retirement in 1968. He lectured to science undergraduates and made it clear that 'no rigid demarcation will be made between the historical and philosophical aspects of the subject'. Though he firmly believed that the two aspects should be taught together, he admitted that sound research could be done in either and it is chiefly as a historian that he is remembered.

Mindful of his Scottish heritage Wightman studied many manuscripts concerning William Cullen and published a valuable account of his contributions to eighteenth-century chemistry (*Annals of Science*, 1957–58), but it was in the libraries of Aberdeen University that he found the source material and inspiration for his most important work. The university was founded in 1495 and possesses nearly eight hundred scientific books published in the sixteenth century. Volume 2 of his *Science and the Renaissance* (2 vols, 1962), containing Wightman's critical annotated bibliography of them, is not merely of value to scholars able to visit Aberdeen. Volume 1, which shows that he carefully studied the books as well as cataloguing them, is subtitled 'An introduction to the emergence of the sciences in the sixteenth century' and again demonstrates his monistic view of the world, for he describes the development of all branches of science in relation to the political, religious, artistic and economic changes of the time.

Before leaving Edinburgh Wightman had written *Science in Scotland* (1947), a booklet published by the Scottish Convention in which he reviewed the work of the Scottish Research Institutions—with characteristic thoroughness he visited them all—and recommended the foundation of a few new ones, notably for research into highland forestry and fish farming in the sea lochs. He began with the words: 'A new spirit is astir in Scotland. A spirit whose aim is to rid our land of those evils—doubt, want, squalor and apathy—which have driven so many of our folk to seek Fortune in other lands.' Wightman had reversed this trend by coming from England to make his career in the land of his ancestors, but after retiring in 1968 he moved to Yarnton, near Oxford, where he was near his family and also had access to the wealth of the Bodleian Library. In 1972 he published *Science in a Renaissance Society*, a very personal view of the development of science from about 1450 to 1620. He took as his point of departure the relation between science, art and other branches of learning in Italy, a country he loved and frequently visited with his wife Mildred, whose death sorely afflicted him. Still intellectually active, he returned to 'the golden age of Scottish culture,' as he called the eighteenth century, and edited and commented upon the more scientific parts of Adam Smith's *Essays on Philosophical Subjects* (1980).

A founder member of the British Society for the History of Science, Wightman was able to attend its meetings more frequently after his retirement and served as president from 1970 to 1972. Some London members had regularly met him while he was at Aberdeen, for during most of that time he was a valued member of the University of London's Board of Studies in the History and Philosophy of Science and the principal external examiner for its M.Sc. degree. His combination of integrity and knowledge earned him great respect and, to those able to penetrate his natural reserve, he was a very good friend.

Wightman was almost the last of that pioneering group of scientists who, mainly by self-instruction, became historians and philosophers of science. The quality of his work is unlikely to be surpassed by any of those who have had a more formal introduction to the subject.