

BOOK REVIEWS

Flying into Yesterday

Flights into Yesterday: The Story of Aerial Archaeology. By Leo Deuel. Pp. xvii+302+36 plates. (Macdonald: London, 1971.) £5.

THIS book is the first popular account of archaeological aerial photography to be written from a worldwide viewpoint: as such it is entirely successful. Dr Deuel sets out to tell the whole fascinating story of the development of aerial photography beginning with the exploits of the French balloonist, Nadar, over Paris in 1858 and ending with a look into the future. It was immediately before the First World War that the archaeological potential of the technique began to be realized but it was the war itself which was responsible for training a number of pilots in what was still a novel and largely unexplored approach to area surveying. Some of these men, returning after hostilities had ceased, were not slow to put their new found skills to archaeological use—men like Crawford in Britain, Wiegard working in Gaza and the Negeb, and Beazeley in Mesopotamia—these were the pioneers. But for sheer courage and vision few can compare with the exploits of Father Poidebard, a French Jesuit priest, who flew the Syrian Desert between 1924 and 1932 and published his results in a monumental work, *La trace de Rome dans le désert de Syrie*, two years later. This book is a model of its kind, showing with great clarity how an entire cultural landscape can be built up, painstakingly, from the air. Nor was Poidebard averse to landing his flimsy craft in the desert and taking out his spade to become a more conventional type of archaeologist.

All of these exploits Deuel lovingly describes, gradually extending the story to include chapters on more recent work in Italy and providing a substantial section on the fascinating and little appreciated aerial archaeology of America which owed much of its early impetus to the expeditions mounted by the famous pioneer flier Lindbergh. It is this American section which will be the most unfamiliar to British archaeologists, and will help to redress the Old World-centred view of aerial photography.

The author pays a just tribute to British archaeologists like O. G. S. Crawford, Major Allen and Dr St Joseph. Nowadays, with archaeological sites being destroyed without record at an alarmingly accelerating rate, it is little short of a national disgrace that Britain has no adequate centralized,

government-sponsored institute responsible for archaeological aerial recording. At present, Dr St Joseph's Committee for Aerial Photography at Cambridge and the valiant efforts of a seriously understaffed National Monuments Record, helped by the activities of amateur archaeologists, are all we can boast. Let us hope that Dr Deuel's book will be read by a few of our masters and shame them into a more responsible attitude towards Britain's rapidly disappearing heritage.

This book is clearly aimed at the general reader but its thorough treatment and broad approach will commend it to the specialist even though the writing is at times somewhat over expansive. B. W. CUNLIFFE

Theory in Science

Science as Metaphor: The Historical Role of Scientific Theories in Forming Western Culture. Edited by Richard Olson. Pp. xi+321. (Wadsworth: Belmont, California, 1971.) n.p.

IN recent years a number of attempts have been made to provide students of the history and philosophy of science with selections of readings from both primary and secondary sources. Some of these editions have been ill-conceived in both scope and depth, lacking unity of purpose, while exhibiting a poor selection of material, in spite, if not because, of their commercial possibilities.

The volume under present consideration, however, is to be recommended not only for the editor's intelligent choice of material but also because the scope of the work has been restricted to one of the most interesting and complex, yet poorly documented, aspects of the history of science. The central theme of this book is the influence of scientific theories on various other—often “extra-scientific”—disciplines. Several major scientific movements are considered and in each case readings are given to illustrate how parallel theories have been applied to such fields as law, theology, literature, social theory and so on. In discussing the influence of science on society, most writers take Social Darwinism as their paradigm, whereas this book is much wider and more exciting in its scope. The editor also avoids the pitfall of conflating technology with science.

Eight general subject areas are considered—the change in perspective accompanying the scientific revolution,

the mechanical philosophy, Newtonian philosophy, Darwinism, energetics, Freudian theory (a valuable inclusion), positivism and behaviourism, and twentieth century physics. In the introduction to each section the editor presents a perspective of the subject under discussion. The readings themselves, varying in number from two to four, are reprints of short but substantial articles, often *in toto*, with footnotes omitted. The diversity of this selection is a further recommendation for the book, for example, Robert Lenoble's interesting piece on Mer-senne's view of God as the Divine Engineer, Emile Zola's theory of the experimental novel, and an article on historical relativity. On the whole this is an admirable selection showing not only how scientific theories and methodologies have been applied in other contexts, but also how they have been misapplied.

The editor has contributed three original essays to this volume. In an introductory essay he stresses that scientific theories have an important place in the development of Western culture—Snow and Leavis please note. He then suggests it is by analogy that scientific theories are adopted for “extra-scientific” use. This discussion of the role of analogy is rather weak compared with the forceful views on methodology stated in some of the subsequent articles. The question of what may legitimately be viewed as the direct influence of science on other disciplines has not yet been satisfactorily answered. This important link is a methodological one, and something stronger than analogy is called for.

The volume concludes with a useful bibliographical essay which is preceded by the editor's analysis of what he considers to be a contemporary cultural lacuna, the reaction of certain “radical” groups against science. This is a fairly sympathetic although limited account of the “alienation” accompanying modern science.

In the preface Dr Olson states that the idea for the book grew out of an interdisciplinary course taught by himself and several other specialists at Crown College in California. This book should help the (intelligent) student, together with the scientist and the “literary intellectual” (to use Snow's pompous term), to appreciate not only that science is an integral part of our culture but also that scientific theories and scientific methodology have profoundly influenced other fields of human endeavour. G. N. CANTOR