Book Reviews

SCIENCE AND MODERN ART

Behind Appearance

A Study of the Relations between Painting and the Natural Sciences in this Century. By C. H. Waddington. Pp. x+256. (Edinburgh University Press: Edinburgh, March 1970.) 180s.

It is admirable to find a scientist of Professor Waddington's calibre writing about something which is to many people so chaotic, unsystematized and unclassifiable as modern painting of the past 50 years, and the making of valuable links between it and scientific attitudes and discoveries. In his preface he states the necessary limits that he has had to set, but broadly the book is concerned with "the ways in which painters and scientists have seen the character of the material world we inhabit". In his last chapter he suggests that art and science are in true communication at the level of creativity and he makes his journey through this chosen theme with lucidity, conciseness and wit. The section headings, the "Binocular Cyclops", the "Hybrid Argus", and "Sucklings of Diana of the Ephesians", give very much a flavour of the taste, and his naming of the cubists and constructivists as the "geometricizers", and the surrealists as "the magicians", attempts new classifications which are both logical and illuminating. The scientific precision of his descriptions of individual paintings, styles and movements is refreshing, and it is good to be able to share his personal summing-up of painters; his particular attitude to his theme in many cases adds to our knowledge of the painters he is discussing. He is especially good with the cubists and di Chirico, Mondrian, Kandinsky and Max Bill. He has unearthed a wealth of documented material, much of it the work of the painters and scientists themselves.

It would need the lifelong affection for, and knowledge of, science that Professor Waddington shows for art to be able to comment, with any authority, on the scientific side of this book, but one might record again with gratitude his clarity in description of very involved processes and pleasure in his account of wrangles between leaders of various scientific attitudes, such as Heisenberg and Schrödinger, one who proclaimed the active involvement of the researcher, and the other complete detachment from it. There may well be a parallel with the total involvement of the painter in his work and some recent questioning of the validity of producing artefacts. On Wittgenstein and Whitehead, and on the different attitudes of physicists and biologists to their basic problems, he is fascinating. One important and heartening thing about this book is the comparable weight of achievement given to some of the discoveries of painters to that of scientists, an idea which would seem not generally held. It is a beautifully produced book, and great trouble has been taken over the illustrations. There are many surprises, and the works chosen for reproduction are by no means ordinary or hackneyed. It is a pity that the colour plates must be pasted in—this always gives a slightly scrapbook air. One would hope that because of its importance to a clearer understanding of some of the prime movers of modern painting, it might at some time be metamorphosed into a paperback and reach a wider and still baffled public.

Professor Waddington has produced, in the ordinary use of the word, and perhaps particularly in Whitehead's technical sense, an "event" which, in spite of its set limits, suggests many fascinating lines of enquiry. He

makes it clear that this is a continuing process and that new developments and discoveries in science and art at different levels and at different intervals will continue to bump into each other. He has made a strong case that it will be to their mutual advantage and to ours.

KENNETH ROWNTREE

THE PILL PILLORIED

The Pill

A Shock Report from America. By Morton Mintz. Pp. 128. (Hodder Fawcett-Coronet Books: London, February 1970.) 5s.

THIS is probably the least academic book ever to receive a review in a scientific journal. It is a book to be sold on news stands and in railway stations, a collage of newspaper cuttings on the adverse effects of oral contraceptives put together by "a prize-winning journalist" mixed in with some suggestions of skullduggery by the pharmaceutical industry. Nevertheless, it deserves attention because it represents a very important influence in the family planning environment.

There can be no doubt that medical journalism is an important profession with heavy responsibilities. While it might be difficult to demonstrate that understanding Starling's law of the heart hastens recovery from a coronary thrombosis, there is no doubt that family planning gains enormously from having an informed public, and most paperbacks on family planning methods are to be welcomed. Unfortunately, it is easier to alarm people than to reassure them. One unbalanced book can do a great deal of harm, especially as it may deter those who most need the benefits of contraception without safeguarding those who may be at special risk from the adverse effects of contraception.

The Pill is unfortunate because of what it omits and because it falls into a naïve methodological trap. On the first page of the introduction the author states: "The bulk of my reporting about the Pill has been focused on whether or not the presumed safety of the Pill had been demonstrated in advance of mass use". The serious problem which faces those with a responsible interest in contraception centres on the intrinsic insolubility of this problem. The rare adverse side-effects of any drug will, by definition, only become apparent when a large number of people use that drug. Animal tests can be of help, but they will never involve sufficiently large numbers of animals, and species differences, which are especially important in reproduction, will always make it difficult to interpret the results obtained. The real problem was succinctly summarized by Sir Alan Parkes when he said: "It is always difficult to prove a negative, and impossible to do so in advance. In fact we face the dilemma that no woman should be kept on the Pill for 20 years until, in fact, a sufficient number have been kept on the Pill for 20 years".

It would be responsible to set out the predicament which faces a community using any new drug, but it is wrong to fail to describe the problem at all. The book exaggerates the relative risks of oral contraceptives with respect to other methods by underestimating the failure rate of mechanical methods of contraception, and fails to look on the total problem of family planning or to examine the practical alternatives facing a couple. The book makes unnecessary play with certain events in the history of the relationship between the drug industry and the FDA and with the past utterances of responsible physicians. At one time there was insufficient evidence to substantiate or refute the suggestion that oral contraceptives caused thrombosis. We now have information which demonstrates the causal relationship in Western women, but to pillory those who made a sensible judgment on the then available information would be rather like criticizing Isaac Newton for underestimating the distance of the nearest star. Morton Mintz's book reads rather like a second-rate