

propaganda, censorship and criticism—all this is brilliantly illustrated. 'The movie heroine never has more than one child and that child never has to be washed or dressed or punished or got ready for school'. 'The young people who go to these displays of sex excitement may not be aware of all the education they are getting but they do go to the movies, many of them quite deliberately, to learn social techniques'. 'They were interested in the film (*Confessions of a Nazi Spy*) but they were not particularly excited about it. A good picture, they said, but of course all that spy stuff is not true; it's just a movie'.

*The Factual Film*, on the other hand, is exclusively concerned with the cinema as a medium for purposes other than entertainment. It represents the second of four reports to be presented by the Dartington Hall Trustees on the Visual Arts, the Factual Film, Music, and the Theatre. Chapters on the Documentary Film (which is the outstanding British contribution to the cinema) are followed by sections on the use of the film in education, news films, and films for historical and sociological record. A chapter on 'Films and the Public' deals with general questions of policy—the work of film societies, films for children, religious films, film criticism and the British Film Institute.

This report is full of accurate information, and behind the official phrases of the careful survey one discerns a lively appreciation of the importance of the film in our social life, and a determination that its use as an instrument of education and information shall not be swamped by the financial interests of the feature film. Of the four recommendations made by the (anonymous) writers, three have already been implemented, viz., the continuance of the Films Division of the Ministry of Information, the development of an educational film policy by the Ministry of Education and the establishment of a film department within UNESCO. These proposals, good in themselves, will need careful watching, and the Christian contribution, one may add, lies not only in the field of moral judgment in the narrow sense. The potentialities, for good or evil, of the cinema are unimaginably great, and the fact that up to now the public opinion of religious bodies has concentrated on the regulation of the outrageous has obscured the real function of the Christian critic. In films, as in much else besides, reform must be related to society as a whole: it is idle to complain of the false standards of the usual Hollywood musical unless one realises *why* such a film is made at all, and, still more important, *why* it is liked.

Enough has been said to show how valuable these studies should be to anyone who is aware of the serious social problem presented by the modern cinema and who, by a discriminating understanding, may hope to assist in its solution.

ILLTUD EVANS, O.P.

SCIENCE AND THE MEANINGS OF TRUTH. By Martin Johnson. (Faber; 12s. 6d.)

In the first part of his latest book Mr Johnson gives a not specifically new but brilliantly expounded account of scientific method first

as conceived in the Newton-Einstein period, then in that after Einstein. One welcomes the repetition of such accounts, for the popular mind is by no means yet disabused of the idea that to verify deductions from a hypothesis is to verify that hypothesis, nor of the companion idea that the greater the number of verified deductions drawn from a hypothesis, so much the more certainly is that hypothesis proved to be the true and only explanation of its field. The author goes further than pointing out these two variants of the fallacy of the consequent. He explains in a way that can be not too hardly apprehended by those without a working experience of modern physics how the old ideal sequence of hypothesis, verified predictions, and the consequent promotion of the former to the status of more or less probable Law of Nature has had to yield to abstractions of invariant relations described in terms of mathematical functions. The minimal ingredients of physical objects are *in principle* untreatable by the old method of applying mechanical laws such as led successfully to verified predictions about the behaviour of entities as large as gas molecules. The precise establishment of the position of an electron destroys the possibility of establishing its momentum with equal exactitude and *vice versa*, hence the coordinates necessary for the old method are lacking. Instead, the new formulae admit of transformations; to suit many conditions and observers. They describe the most constant invariances with the maximum of variability. The author notes that geometrical descriptions of physical events and states are out of favour. Yet one cannot but reflect that such mathematical descriptions are a return in method to the pre-Newtonian astronomical theories which described their subject-matter without explaining, in the sense of giving a reason for it.

In spite of the contrast thus clearly established, it does not seem that the logical status of the new formulae differs from that of the old mechanical hypotheses. They still form a basis for deductive prediction, and the success of this last still increases their probability value without any possibility of proving them to be the only truth. 'When a theory fits the facts, we can never be sure that other theories will not fit them equally well.' It is, however, an overstatement to say that, 'The relation connecting the external world with perception is of the type Many-to-One and not One-to-One'. The Many-to-One relation which remains logically not impossible is rather between coherent intellectual constructs and perceived facts. But if any such statement be allowed, a caution would seem to be necessary when the author speaks of the modern scientist as 'apprehending Form'. The phrase might easily be supposed to signify a grasp of Form in Matter. This cannot be if the form is only seen as one of many possible forms, none of which are finally known to be actual. On the contrary, the form is apprehended in the universe of mathematics, not in that of physical objects. The author is concerned to vindicate the perfect objectivity of science; to that a merely mathematical objectivity is no objection. It is, all the same, in perfect

logical accordance, both with his championship of the new conceptions against the older 'mechanical model' method, as well as with this implication that the objectivity he seeks cannot be apprehended as definitely representative of the physical world, that he proceeds to develop a Coherence theory of scientific truth. 'All this contributes to a notion of physics as a pattern of logical relations, the truth criteria being recognition of the orderliness within the pattern.'

Analogous to this theory of scientific truth is sketched one of artistic and ethical truth in which the criteria are again coherence or harmony of feelings in art, of intentions and actions in ethics. At the close of such a masterly study in coherence, a notable example of its own subject-matter, it is with genuine disappointment that one finds the metaphysical and epistemological poverty of the system showing itself. 'Poet, lover, and worshipper . . . are the only ones among us to realise Aeternitas in our own time; but they must not expect a logical as well as an imaginative triumph. There is not to be a science of theology . . . in the sense in which I have been investigating the possible meanings of scientific truth.' Faith is relegated to 'a disciplined and controlled imagination'. Even the fallacy of the consequent is allowed to peep out when it is suggested that a logical demonstration of the existence of its truths is possible for science.

IVO THOMAS, O.P.

THE TIMELESS MOMENT. By Warner Allen. (Faber; 10s. 6d.)

It is sad that a review of this serious and intelligent attempt to interpret a moment of strong contemplative intuition of Being, so strong that it transformed the seer's life and thought, should have to be taken up mainly with criticism and disagreement. It is a sign not only of the spiritual disorder of our times but also of some degree of failure on our own part when a man so sincere and unprejudiced as Mr Warner Allen, setting out to interpret his moment of experience, dismisses so lightly, as impossible to accept, the greater part of the traditional wisdom of Christendom, and, though he will read the Catholic mystics, out of their context of the Faith, does not seem to think that the Catholic theologians and philosophers can be of service to him in his search. It is all the more regrettable because he has the intelligence to see that the Oriental traditions (though he rightly regards them with respect) will not give him the guidance he seeks, and to turn to Plotinus as his principal authority. Plotinus, though by no means a Christian, is the nearest to the Truth of all the pagans who prepared the *Philosophia Perennis*, and, in the present reviewer's opinion, if Mr Warner Allen had interpreted the thought of Plotinus more accurately and followed it more closely he would not have gone as far as he has out of the way. For in spite of his sincerity and intelligence, his clear recognition of eternal spiritual being and his attempts to make use of parts of the Catholic tradition, the author has arrived at some very false conclusions; and it is the duty of a Catholic reviewer to point them out because they are to be found in a number of other modern mystical writings and there seems to be in process