or the other is vain. Finally he expresses this basic complementarity in terms of Buber's antithesis between the worlds of *I-Thou* and *I-it*, and shows that though science merely shows an *it*, the true scientist can achieve a relationship with nature which is genuinely *I-thou*.

Ultimately I suppose it must be experiment which decides whether nature is determined or not. Despite the extremely valuable points Dr Pollard makes, he fails to convince me. As a matter of historical fact, the idea of a determined nature is not the creation of mechanistic science, but derives from the common sense of Greek thought given classical form by Aristotle and fully accepted by the Christian middle ages (though never so as to exclude having to qualify with words like 'for the most part'). And the idea can be reconciled with the Semitic notion of the absolute providence of God not merely by reconsidering what we mean by 'cause' in nature (which is Dr Pollard's way, as it was Berkeley's), but by asking what we mean by calling God a cause, and showing that the word may be taken in such a sense that no rivalry with natural causes is possible (this is St Thomas's). I am not going to argue this alternative in detail. I prefer to end by warmly recommending this most interesting book.

LAURENCE BRIGHT, O.P.

SCIENCE AND METAPHYSICS. By J. Russell, S.J. (Newman Philosophy of Science Series, 1. Sheed and Ward; 2s. 6d.)

LIFE AND ITS ORIGIN. By P. G. Fothergill. (Newman Philosophy of Science Series, 2. Sheed and Ward; 3s. 6d.)

WHITEHEAD'S PHILOSOPHY OF PHYSICS. By L. Bright, O.P. (Newman Philosophy of Science Series, 3. Sheed and Ward; 2s. 6d.)

These are introductory essays intended for the scientist-philosopher. The first essay draws a comparison between science and metaphysics from the point of view of their respective method, object and conclusions, adding a summary note on the nature of metaphysics. The second outlines the principal scientific findings on the nature of life, and evaluates various interpretations of these findings in terms of the problem of the origin of living things. The third essay is an introduction to the neglected but by no means negligible contribution of Whitehead to a philosophy of physical science. Each essay contains a suitable bibliography to guide the reader in pursuing the investigation further.

Time was when metaphysics was granted pre-eminence over all the natural sciences. That the position is now reversed is no mere freak of history. It is the inevitable consequence of two vastly different methods of enquiry into the meaning of the universe. The exact, progressive, objectively controllable method peculiar to positive science lends itself to achieve a conformity of opinion on its conclusions and the practical

harnessing of the forces of nature. The rational procedure of philosophy, on the other hand, flouts experimental tests of verification and produces in effect a host of irreconcilable and seemingly sterile generalities. Still, philosophize we must; otherwise we have but a truncated vision of reality. Science replaces global natural perspectives with analysis and precision: it measures analytically the constant relationships among physical phenomena. But such an artificial breaking-down can tell only part of the story. The real is impregnated with a meaning that surpasses the scope of mathematical measurement, and it is the task of metaphysics to gauge the nature and import of that meaning.

Whitehead's philosophy of physics was orientated in that direction. His criticism of the bifurcation theory of nature which admitted only primary qualities as real attributes of matter, his rejection of the classical conception of matter in simple location, his own philosophy of organism seen as a theory of continuous succession, all illustrate the tendency of his mind towards a synthetic philosophic comprehension of the universe. In his own field of speciality and within the general context of his whole philosophy, a synthesis of that kind may be possible. But when it comes to the more remote problem of origins, special difficulties arise. That is particularly so regarding living matter. Biochemical analysis has reduced to such an extent the number of properties characteristic of organic matter, that the dividing line between living and non-living is no longer distinguishable. In which case any scientific theory on the nature and origin of life becomes a challenge to the scientist-philosopher.

NICHOLAS FOLAN, O.P.

ATOMIC RADIATION AND LIFE. By Peter Alexander. (Penguin Books; 3s. 6d.)

This is a full account of our present knowledge about the biological effects of radiation, whether direct or by genetic inheritance. In this rapidly expanding subject it is essential that any popular account should come from an expert actually working in the field; only he can hope to assess the evidence and enter the necessary *caveats*. Dr Alexander has produced an authoritative book which can be recommended to everyone, and which must be read by those who are prepared to make moral decisions in matters relating to the subject.

L.B.

GÉOGRAPHIE DE LA TERRE SAINTE. By M. du Buit, O.P. (Cerf; 1,200 fr.)

The work of Père Abel, *Géographie de la Palestine*, I and II, still remains the best synthesis on the Holy Land as background and cradle of our Scriptures. Our present author makes this point, and has