

perception', which implies a theory, and commends the Thouless and Wiesner symbols.

He suggests that 'the Indian conception of the mind as a sort of refined matter would perhaps facilitate the understanding of psi cognition. . . . The Advaita, Vedanta conception of the mind as something fluid and capable of taking any form which is presented to it deserves attention and development' (pp. 74-5).

The book contains numerous references, and an index. The reviewer has read it with much enjoyment and profit.

C. C. L. GREGORY

FADS AND FALLACIES IN THE NAME OF SCIENCE. By M. Gardner. London, Constable, 1957.

In ESP research, the unpredictability of subjects, the unrepeatability of experiments, the variability of effects according to time, place and experimenter, allow great scope for self-deception and greater still for sceptical criticism. The ESP workers themselves, if they are healthy, must sometimes wonder if they are as deluded as the flat earthers, the pyramidologists, the phrenologists and all the other cranks whose will-'o-the-wisps ran away with them. The protective title 'parapsychologist' avails nothing in the face of Martin Gardner, who disposes of our pretensions with much the same arguments as he dismisses the flying saucer craze and the claims for spontaneous generation. In the preface he remarks that, after the publication of his first edition, he received many irate letters from the protagonists of the different cults, approving his general approach, but objecting to his attack on their own pet theories, and to finding themselves classified with a lot of cranks. The present reviewer shares these sentiments exactly, agreeing with the scorn poured upon all the other cults, but objecting to the remarks about parapsychology.

Mr Gardner's attack on ESP and PK concentrates on Dr J. B. Rhine as the leading exponent of the cult. He shows some sneaking regard for Dr Rhine, calling him an excellent example of a borderland scientist whose work cannot be called crank, yet who is far on the outskirts of ordinary science. But he quotes some of Rhine's more extreme opinions, for instance that Lady, the 'talking' horse, had psychic powers, and that one day increased psi capacities may make war obsolete since no military secrets could be kept. Mr Gardner apparently thinks that Dr Rhine's personal beliefs have an important bearing on the evidence for ESP. He ends his chapter with a thumb-nail sketch of some other experimenters in the field, giving the impression that their work is on a par with Rhine's. But instead of names like Pratt, Stuart, Soal,

Humphrey-Nicol, one reads of Upton Sinclair's *Mental Radio* and Nander Fodor's *Haunted People*. These are not comparable with workers in the Duke Parapsychology Laboratory, and should never have been included in the chapter.

The author's material criticisms reduce themselves to a few old chestnuts that hardly deserve discussion. For instance, he suggests that so many different statistical effects count as evidence of ESP that enthusiasts will read significance into any batch of data. But no experimenter worthy of the name would embark on an analysis of a large mass of data without finding out first precisely what effects to expect and evaluate. Mr Gardner also suggests that unpublished negative work might dilute the published results to insignificance. This suggestion reveals the critic's ignorance of the magnitude of the effects reported. Mr Gardner also slips up when he laughs at us for finding evidence of concealed ESP effects in the negative results of Professor J. E. Coover's 'extensive and carefully controlled ESP tests'. In fact Coover's tests were poorly controlled; they would have been little use as evidence had the results been more striking, but they could only be quoted as apparently negative because Coover failed to apply the standard tests of statistical significance.

Other chapters of special interest to us include those on dowsing and Bridey Murphy, and with these the present reviewer has more sympathy. Mr Gardner dismisses the 'ponderous work' of Dr S. W. Tromp in a few paragraphs of which the following is a good example :

Dr Tromp admits that dowsers frequently make a bad showing when they are being tested. But this does not bother Tromp. He lists several dozen factors which may cause the failure—fatigue, lack of concentration, poor physical condition, worry, too much friction on soles of shoes, all sorts of atmospheric conditions, the presence of electric lines in the area, humidity of soil, and so on. 'Trees and their roots are particularly likely to create disturbances that prevent accurate measurements,' he writes. Although he has tried in his experiments to take all these considerations into account, it is quite clear that they are so numerous and intangible that he has a ready excuse for every dowsing failure. Nothing remotely resembling a controlled experiment is reported in the entire volume.

The Search for Bridey Murphy (reviewed in *S.P.R. Journal*, 38, 1956, pp. 376-8), a recent American best-seller, told how Morey Bernstein hypnotized Mrs Virginia Tighe and stimulated her to recall and dramatize a previous incarnation, a nineteenth-century Irish girl, Bridey Murphy. The matter aroused immense popular interest, and the topic has even been used as subject for a film.

Mr Gardner now describes the amusing denouement when newspaper reporters discovered the real living Bridie Corkell née Murphy. Under hypnosis Mrs Tighe had produced nothing more than jumbled recollections of incidents and personalities from her own childhood. Bridie Murphy was a close neighbour, Kevin and Uncle Plazz, characters mentioned by the spirit Bridey, proved to be childhood friends, and several incidents described by the spirit, such as receiving a whipping for scratching paint off a bedstead, had happened to Mrs Tighe herself.

The story carries a warning—not to take trance productions literally. An investigation into the personal histories of trance mediums might well yield clues to the origin of some of their spirit guides. Mr Gardner rightly pours scorn on George Devereux's 'Bridey Murphy: a Psychoanalytic View' (*Tomorrow*, Summer, 1956), an example of a learned specialist speculating on the basis of the slenderest factual evidence. But Mr Gardner goes too far in writing: 'In every case of this sort where there has been adequate checking on the subject's past, it has been found that the subject's unconscious mind was weaving together long forgotten bits of information acquired during his early years.' Has Mr Gardner never heard of Patience Worth?

D. J. WEST

DER LEBENSABLAUF DES MENSCHEN IM RAHMEN EINER WELLENLEHRE. By Dr Hildegard Vaubel. Justus von Liebig Verlag, Darmstadt, 1956.

In two years' time psycho-physical cosmology will be celebrating its centenary, for in 1860 Fechner published his celebrated work entitled *Elemente der Psychophysik*. He was a mathematician and physicist who 'believed that the material world had an all-pervasive psychical aspect, or 'daylight' side, into which man has some glimpses through his own conscious experience',¹ and his psycho-physical methods still form the basis of experimental procedure in psychology.

'Man's life in the light of a wave theory' is an attempt to give a structure to the psycho-physical problem (das psychophysische Problem zu unterbauen) by means of a theory of waves. Dr Hildegard Vaubel follows in the psycho-physical tradition of researchers who collect data from many disciplines in an endeavour to provide a unitary theory which will account for the world as we know it. She writes as a psychiatrist who is dissatisfied with the conventional basis of medicine, and believes that the data of

¹ R. S. Woodworth, *Experimental Psychology*, New York: Holt, p. 392