of the starting point from which a psychology-any kind of psychology, including a psychology of personality—could be written. . . We shall rectify sonality—could be written. . . . mistakes not primarily by the minor readjustments of the lines of the argument, but by recognition of the fundamental limitations of the whole present system of conceptions". Perhaps Eysenck would not wholly disagree with a statement such as this, for he more than once implies that factorial studies are provisional only, until more solid methods are available to take their place. Whether even as a provisional method their value is as great as Eysenck believes, or whether other less precise methods deserve the total rejection which Eysenck accords them, time will no doubt L. S. HEARNSHAW

THE PSYCHOLOGY OF SPECTRES

By G. N. M. Tyrrell. Revised edition. Pp. 172. (London: Gerald Duckworth and Co., Ltd., 1953.) 12s. 6d.

HIS book, the first edition of which was reviewed in Nature in July 1943, is a revised version of the seventh Frederic W. H. Myers Memorial Lecture which was delivered by Mr. Tyrrell in October 1942. Since that date the theory that Mr. Tyrrell then put forward has met with a growing interest, and in the present volume Prof. H. H. Price, in an admirable introduction, gives it as his opinion that the book is probably the best of all the late Mr. Tyrrell's contri-

butions to psychical research.

Dismissing the physical theories of apparitions as almost wholly unpromising, Mr. Tyrrell turns to those of a psychological nature. To him, apparitions are hallucinations of a particular and very interesting kind, and he divides them into four main classes which, however, cannot be very sharply differentiated. These four classes are: (1) Experimental cases, in which the agent tries to make an apparition visible to a particular percipient. (2) Cases in which a recognized apparition is seen, heard or felt at a time when the person represented by the apparition is undergoing some crisis such as a moment of danger or even death. (3) Cases in which a recognized apparition is seen or heard so long after death or after some crisis that no coincidence can be supposed. (4) Cases of alleged haunted localities in which apparitions are said occasionally to be observed. Cutting across these cases there are a number of characteristics which are common in a greater or lesser degree to all four classes. Moreover, these characteristics, which are of constant occurrence in the statements of the various witnesses, suggest that, in the majority of cases, the accounts are not merely the inventions of imaginative persons, but that they describe actual incidents which have occurred within the experience of the percipients.

One of the main features of Mr. Tyrrell's theory is what he terms the 'idea-pattern', which is the dramatic production of the agent's idea, the apparition itself being the sensory expression of the idea-pattern. It is in no sense a substantival entity but rather the creative product of substantival constituents belonging to one or more personalities. Thus what is perceived as a full-blown hallucination is merely the outward expression of a drama; and it is within this drama that elements can be detected which may be able to throw considerable light upon the deeper

strata of human personality and the remarkable power of subconscious activity.

In developing his thesis Mr. Tyrrell is careful to avoid any extravagant suggestions. He relies for his facts upon the best cases to be found in the literature, especially those published in "Phantasms of the Living" and in the Journal and Proceedings of the Society for Psychical Research. How far these accounts can be relied upon is for the reader himself to decide. More than sixty years ago Mr. A. T. Innes, in a discussion of "Phantasms of the Living" (1886), pointed out that contemporary letters and documents proving the authenticity of the crisis cases were conspicuous by their absence, and he went so far as to state that of seven hundred miscellaneous cases which he had examined one only was accompanied by a relevant document.

Although perhaps it might have been wiser in this edition to warn the reader regarding the weakness of many of the examples quoted and to have recorded the gist of the Innes-Peirce-Gurney controversies, the book remains the best critical discussion of apparitions that has hitherto appeared. It sweeps away many of the misconceptions so common when discussing 'ghosts', and brings the whole subject into sober perspective so that these very curious phenomena can be fitted (at least partially) into the psychological framework where they undoubtedly belong. E. J. DINGWALL

LOGIC FOR MODERN SCIENCE

The Logic of Modern Science

By Prof. J. R. Kantor. Pp. xvi+360. (Bloomington, Indiana: The Principia Press, Inc., 1953.) 6 dollars.

HE principal thesis of this book appears to be that scientific procedures and results have been too much and too unwittingly influenced by cultural institutions. The author, who is a psychologist, therefore proposes to reject all current ontological, epistemological and psychological theories concerning natural science, for these all suffer from the defect of involving what the author calls mentalistic and spiritistic notions which have been introduced not in the interest of science but of theology. But he goes even further than this: he not only rejects Berkeley but also Hume. He wishes, apparently, to reinstate naïve realism in epistemology and to retain a thingattribute theory in ontology. His psychological theory is his own and is called interbehaviourism to distinguish it from ordinary behaviourism which he rejects. He calls the latter "the end point in the dualistic development we have just sketched". The psychological organism becomes the body without mind. The behaviourists, for example, simply deny the necessity of dealing with any psychic factor. The strict behaviourist attempts to interpret all psychic happenings in terms of the operation of the brain and other nervous structures.

"But has the behaviorist disposed of 'mind'? Hardly. He simply throws away one half of the traditional body-mind construction and builds his system on the remainder. In no sense does he extricate himself from the dualistic tradition. What is required is to withdraw completely from historical constructions. We need to start over again. Interbehavioral psychology . . . makes this attempt" (p. 259).