

longer always passed by as 'accidental' . . . Most important, however, is the increasing sense people have of being moved by obscure forces within themselves which they are unable to define . . . and this . . . we owe above all to Freud."

C. E. HEDGMAN TURNER.

The Shakespearean Ciphers Examined. By WILLIAM F. FRIEDMAN and ELIZABETH S. FRIEDMAN. The University Press, Cambridge, 1957. Pp. 303. Price 25s.

The arguments on the Baconian controversy run the gamut from sense to nonsense. Let me say at once that this book is written by two experts on the subject of ciphers, professional cryptologists in the U.S. military and diplomatic services; they take the various ciphers that have been proposed as existing in the Shakespearean texts and study them exhaustively.

The book is first-rate. It is masterly, impartial, and clearly written. It demonstrates beyond question that the so-called ciphers are not ciphers in any proper sense, but "rules" with so many exceptions and variations that, as the authors demonstrate abundantly, almost any text may be made to yield almost any message. The book can first be recommended simply as an interesting study in applied cryptology. However, it has psychiatric applications. The subject clearly lies on the fringe of paranoia, and the authors' study of how Donnelly, Gallup, Owen, and many others have thought and "reasoned" may give, to those interested in paranoia, an insight into those mental processes that are almost within normal limits yet not fully psychotic. Contrary to a psychiatrist's expectation, most of the cipher-proposers are not psychotic in any ordinary sense; and it is this fact that makes the book unusually interesting.

Mrs. Gallup, for instance, attempted to apply a cipher that Bacon is known to have proposed; she found that after a little coaxing, and by making some allowance for compositor's errors, some sort of message began to emerge. She admitted that she was not sure what credence to give it, but as page after page of the first Folio continued the "message", she felt unable to reject it. The Friedmans showed, by experiments on each other with related ciphers, that the actual freedom allowed by her in the interpretation of the letter forms was, in fact, sufficient so that the growing "message" would never break down irremediably into nonsense. Though the breakdown was incessantly threatened, there was always enough freedom for further adjustments, perhaps by going back a little way for a fresh line, so that a sufficient degree of "sense" could be preserved. What the authors demonstrate is how little freedom will suffice to make the threatening chaos always at least postponable. Mrs. Gallup was probably an innocent victim of this not very obvious property of ciphers and their breaking. The others, however, come nearer to the psychiatric domain.

Those who are interested in the psychology of paranoia may well find this book illuminating and suggestive. It will repay detailed study.

W. ROSS ASHBY.

Schizophrenia: Somatic Aspects. By nine contributors, edited by D. RICHTER. Pergamon Press, London, 1957. Pp. 181. Price 40s.

This book is very simple to review, for it is an up-to-date account of our knowledge about the somatic aspects of schizophrenia, each aspect reviewed by a well-known expert in the field. The whole subject is treated adequately, without being overloaded with insignificant detail; as a result, every part is readable. Paper and binding are good, and the print is beautifully clear.

Those who want to remain well informed on the subject of schizophrenia (and who does not?) cannot afford to overlook it.

W. ROSS ASHBY.

An Introduction to Cybernetics. By W. ROSS ASHBY. Chapman and Hall, Ltd., London, 1956.

Dr. Ashby, who has become well known over two decades of writing in the field now known as cybernetics, has ventured the difficult task of writing an intro-