of the book along systematic lines, with chapters treating reptiles, amphibians, birds, mammals, and, in the next volume, arthropods and fishes. A further loss is that in some cases the systematic accounts are incomplete; for example, for desert mammals only temperature regulation is treated. A newcomer to the field will have to search from chapter to chapter and delve deeply into the references to uncover the general features of adaptation to the desert by animals.

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Psychopathology

The Epidemiology of Depression. CHARLOTTE SILVERMAN. Johns Hopkins Press, Baltimore, 1968. xx + 188 pp., illus. $7.50.

The title of this book seems simple, but neither of the terms in it is sharply definable. Depression can denote a normal emotion, a symptom, a syndrome, or a phase of a disease: it ranges from grief to manic-depressive psychosis. How the term is used depends on the user's view about psychopathology and classification, on which there is perennial dispute. Silverman sides with the angels.

Epidemiology, no longer restricted to the study of communicable and epidemic diseases, is now used in extended senses, ranging from Greenwood's "study of the mass-aspects of disease" to the American "study of the distribution and determinants of disease prevalence in man." Definitions mostly agree in indicating that it is concerned with groups or populations in relation to their environment, and that it is essentially characterized more by its methods than by its subject matter or uses. This is evident in such diverse fields of epidemiologic study as lung cancer, coronary occlusion, and mental disorder—chronic conditions of multiple etiology. The last of these has received much epidemiological attention during the last 30 years.

The World Health Organization, recognizing the demands—and the pitfalls—that beset psychiatric inquiry of this sort, commissioned an admirable guide in D. D. Reid's "Epidemiological Methods in the Study of Mental Disorders" (*Public Health Papers* No. 2, 1960). Silverman's comprehensive review of a narrower field offers guidance to all who have to explore an untidy but extensive literature (much fomented by the support given to symposia by the pharmaceutical industry). It is the outcome of a larger epidemiologic project embracing all mental disorder, in which she was engaged when she was chief of the relevant branch of the National Institute of Mental Health.

Because of her broad interpretation of what epidemiology comprises, Silverman traverses the whole field of depression, under the familiar heads—classification, diagnosis, morbidity trends, prevalence and incidence, suicide, social and ethnic factors, response to treatment, heredity, biochemical and endocrine anomalies, associations with somatic diseases, and psychodynamics. It is legitimate to shelter all these under the hospitable umbrella of epidemiology, but the amount of space allotted to such aspects as heredity and psychodynamics seems unduly generous in this context. Elsewhere, however, the detailed exposition of findings is balanced and does justice to the relative importance of the papers cited. Unfortunately, in the papers cited there is a conspicuous gap, due entirely to the fact that of the 358 references only three are to publications in a language other than English. Consequently there is no mention of such outstanding contributors as Johannes Lange or, more recently, Jules Angst or H. J. Weitbrecht.

Silverman is under no illusion regarding the present state of our knowledge. Depressions, she declares, are poorly defined, very variable in intensity and form, responsive to available treatment "in a non-specific way, if at all, and they vary in outcome over a vast spectrum. . . . Their etiology remains obscure. Knowledge and theory about them have not advanced very much beyond the level of clinical description." This excessively gloomy appraisal of the current state of affairs is not lightened when she contemplates what epidemiological studies have accomplished. Using morbidity surveys, chiefly, as the medium of investigation, they have cast up hypotheses, but these "hypotheses about the nature, course and consequences of depression . . . have remained largely untested." This weakness she attributes to the directing of effort toward unduly narrow objectives. She advocates a closer concern with natural history, prospective investigations into causation, and better selection and grouping of samples of population for retrospective studies.

The proposals she puts forward for future research do not break any fresh ground or show how the intrinsic barriers to productive inquiry into causes and prevention can be cleared away. They do, however, suggest a useful approach to the consideration of suicide, treating it as the mortality component in the spectrum of depressive illness: longitudinal studies of the "natural history" of depression would in suitable populations have suicide as their "definitive outcome event."

This book is a useful review of a large amount of published material. It could with advantage have selected and evaluated much of it more critically, and there are some surprising slips (for example, the Hutterites are alleged to have been completely free from mental disorder at the time when Eaton and Weil studied them, whereas in fact these investigators reported that "psychoses and other forms of mental disorder were found to occur with regularity in the Hutterite population"). But in the main Silverman has produced a serviceable guide, doing justice to the solid work carried out in a number of countries, as well as to the rather heated conflicts about classification and diagnosis.

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History of the Neurosciences

The Human Brain and Spinal Cord. A Historical Study Illustrated by Writings from Antiquity to the Twentieth Century. EDWIN CLARKE and C. D. O'MALLEY. University of California Press, Berkeley, 1968. xiv + 926 pp., illus. $25.

Anyone who has attempted to track down primary sources in the history of the neurosciences, particularly in English translation, will appreciate the monumental task undertaken by Clarke and O'Malley in compiling this source book. As they themselves point out in their preface, preparation of an anthology such as this involves difficult problems of selection. "At each stage individual preferences are likely to intervene and hence criticism [is] courted."

Apart from the general frustration one feels with any source book because of the brevity of its excerpts, however, this reader can find few grounds for criticizing *The Human Brain and Spinal Cord*. Faced with the vast range of subjects pertinent to the development of neuroanatomy and neurophysiology,