cerebral ischaemia which is all too common. There is a single paper on vascular anatomy and two on haemodynamics in small vessels, but pathological changes are scarcely mentioned. The book, which is excellently produced and illustrated, is a valuable source of reference on neurosurgical techniques, but a better balance of subject matter is to be hoped for in the future.

Since then it has been about 2%. The book summarizes in a clear fashion the general and special effects of barbiturate intoxication and the skilled procedures of resuscitation which, as elsewhere, have transformed prognosis in this sector of the medical scene.

J. D. SPILLANE

THE BIOLOGY OF DREAMING By E. Hartmann. (Pp. xiii + 206; illustrated.) Thomas: Springfield, Illinois. 1967.

In the past fifteen years there have been considerable advances in our knowledge of sleep and dreaming, arising largely from the use of all-night EEG recordings. Normal sleep displays cyclical variations, with four or five periods of emergence from the deep stage (delta waves) to a stage characterized by desynchronized EEG activity, jerky rapid eye movements (REM), irregularity of pulse, respiration, and blood pressure, penile erection in the male, generalized muscular hypotonia, and the frequent reporting of dreams if the subject is awakened in this stage. This 'D-state' may be considered as a state qualitatively different both from non-dreaming sleep ('S-state') and from waking life. It has been found in a variety of mammals, as well as in the newborn. The D-state is impaired following pontine lesions, while the S-state is impaired after medullary lesions. There appears to be a biological need for the D-state, since subjects awakened repeatedly at the onset of this stage will subsequently spend a longer time in it when allowed to sleep undisturbed, as if to compensate for the period of deprivation; this phenomenon also occurs in decerebrate cats, so there is no proof that man needs to dream, merely that he needs a certain proportion of sleep to be in the D-state. There is as yet no agreement on the psychological changes consequent on deprivation of D-state in man. Pharmacological investigations suggest that various central transmitters may be involved in regulating the D-state. Abnormalities of the D-state have been suspected in many disorders; the evidence is strong only in narcolepsy, where the sleep attacks and the cataleptic attacks are both associated with D-state sleep, and where D-state sleep appears very early in nocturnal sleep.

Statements made in the text are supported by frequent references to a large bibliography (656 references), and it is therefore easy to pursue elsewhere any theme discussed by the author. The writing is crisp and attractive, and the volume will be of great value to those interested in this field.

R. T. C. PRATT

ACUTE BARBITURATE POISONING By S. J. Loennecken. (Translated by Barbara and Heltrud Hammer). (Pp. ix + 78; 27 figures. 17s 6d.) John Wright: Bristol. 1967.

The author is the head of the Department of Anaesthesia of the Neurosurgical Clinic of Cologne University, and in this English edition of the book, which was published in Germany in 1965, he reviews the experience of the Poison Centre in Cologne since 1951. A patient is admitted to the Centre on the average, every ten hours. Before 1954 the mortality rate on purely anaesthetic treatment was 9%.

BOOKS RECEIVED

(Books listed here may be reviewed in a later issue)

PRINCIPLES OF HEAD AND NECK SURGERY By H. R. Freund. (Pp. xi + 337; illustrated. £6 5s.) Butterworth: London. 1967.

A STEREOTAXIC ATLAS OF THE BRAIN OF THE PIGEON (Columba Livia) By H. J. Karten and W. Hodós. (Pp. ix + 195; illustrated. £9 10s.) Johns Hopkins Press: Baltimore, Maryland. (Oxford University Press: London.) 1968.

THE PSYCHOANALYTIC APPROACH Edited by J. D. Sutherland. (Pp. iv + 77; 2 figures. 10s.) Ballière, Tindall and Cassell: London. 1968.

SYNOPSIS OF NEUROANATOMY By H. A. Matzke and F. M. Foltz. (Pp. x + 149; 29 figures. 33s. 6d.) Oxford University Press: London. 1968.

INDUSTRY IN THE HOSPITAL. Mental Rehabilitation Through Work. By W. Winick. (Pp. viii + 84; 2 tables. \$5.75.) Charles C. Thomas: Springfield, Illinois. 1967.

MENTAL RETARDATION. A Programmed Manual for Volunteer Workers. By Alden S. Gilmore and Thomas A. Rich. (Pp. xi + 138; illustrated. \$5.75.) Charles C. Thomas: Springfield, Illinois. 1967.

BRAIN DAMAGE AND MENTAL RETARDATION. A Psychological Evaluation. Edited by J. L. Khanna. (Pp. x + 210; illustrated. \$8.75.) Charles C. Thomas: Springfield, Illinois. 1968.

NOTICES

SEVENTH INTERNATIONAL CONGRESS OF ELECTROENCEPHALOGRAPHY

The Seventh International Congress of Electroencephalography and Clinical Neurophysiology will be held in the El Cortez Hotel, in San Diego, on 13-19 September, 1969. Application forms and more detailed information about the Congress can be obtained from Dr. Richard D. Walter, Secretary, International Congress, The Neuropsychiatric Institute at U.C.L.A., 760 Westwood Plaza, Los Angeles, California 90024, U.S.A.

INTERNATIONAL SOCIETY FOR NEUROCHEMISTRY

The Second International Meeting of the International Society for Neurochemistry will be held in Milan, Italy, from 1-5 September 1969. Further information may be obtained from Dr. J. Folchi-Pi, McLean Hospital, Belmont, Massachusetts 02178, U.S.A., or from Dr. Rodolfo Paoletti, Institute of Pharmacology, University of Milan, Via Vanvitelli 32, 20129 Milan, Italy.