70; electrophysiological approaches 55; and clinical and therapeutic considerations 70. In our present state of knowledge this allotment of space is probably reasonable. The aim of the symposium is to review recent progress in the subject. Much of what is said is simply an extension and elaboration of what has been known for some time. However, some new hypotheses and ways of interpreting observations are proposed, and some new techniques are described. The 'gate control' theory of pain, put forward by Melzack and Wall, is novel and useful because it goes some way to explain a number of disparate observations on pain, and because it indicates further experimental approaches which may confirm or refute it. In papers by Lim and Guzman, Charpentier, and Romer a number of new procedures which attempt to measure and quantify pain are described. These are mostly, of necessity, based on measuring certain behavioural accompaniments of pain—both autonomic and motor. Nevertheless, they do provide some degree of measurement and the evidence suggests that what is called pain has a quantitative relation to the changes measured. Beecher also attempts a measurement of pain in man by a test based on exercise of ischaemic muscles. Here again some quantification is achieved. Another approach, mentioned in a short paper by Cohen, and likely to pay dividends in the future, is the study of the distribution of 'labelled' analgesic drugs in the nervous system and elsewhere. However, as several authors imply, pain is to some extent a learned response and a number of more diffuse factors—apprehension, attention, and aspects of the accompanying sensory situation, apart from a specific pain stimulus—may play a part in evoking response, which imposes further difficulties to measurement. Much of the work reported is based on animal experiments and transfer of the findings to man may be misleading. Nevertheless, quantitative methods in the study of pain and analgesia are valuable additions to technique, since pain all too easily becomes a subject of philosophical speculation. In the long run, however, it is a subject which can only be studied first hand in the human subject. The experimental model, even assuming that objective autonomic and behavioural changes have a direct quantitative relation to pain, is difficult to construct and of doubtful validity. Pain has to be studied in models provided by disease and injury in man. This book has much of interest to those working on the problems of pain, but it will only be an occasional source of reference for clinicians in general.

C. W. M. WHITTY

KLINISCHE ELEKTROENZEPHALOGRAPHE. Lehrbuch und Atlas. By Walter Christian. (Pp. viii + 336; illustrated. DM 98.) Thieme: Stuttgart. 1968. This beautifully produced, but necessarily expensive, volume is intended to cover the whole field of electroencephalography in relation to clinical practice. After the usual descriptions of the biological basis of the electrical activity of the brain and techniques of recording, there is a very full atlas of the normal EEG from infancy to old age and of abnormal records in a remarkably wide range of pathological conditions. The illustrative tracings (bipolar recordings on 8 and 12 channel machines) are well chosen and well reproduced. A refreshing commonsense inspires the clinical evaluation of the records, especially in the section on epilepsy which itself occupies one-quarter of the book. The author has succeeded in producing an up-to-date and authoritative textbook of clinical electroencephalography.

LEHRBUCH DER NEUROLOGIE By Werner Schneid, H. H. Wieck, and S. Stammler, with assistance from K.-A. Jocheim, I. Seidenfaden, and E. Gibbels. (Pp. xvi + 796; illustrated. DM 79.) Thieme: Stuttgart. 1968. Those already familiar with this excellent textbook of neurology, which first appeared in 1963, will not be surprised that its success has already called for a third edition. This new edition has been fully revised, particularly the sections on polyneuritis, muscular dystrophy, and the syndromes of stenosis of the carotid and vertebral arteries. More detailed description is now included on the techniques of cerebral angiography, echoencephalography, and radioactive isotope scanning of the brain. Recent advances in treatment are included in the sections on epilepsy and myasthenia. This edition fully deserves the same success as its predecessors.

HANDBOOK OF CLINICAL NEUROLOGY Edited by P. Vinken and G. W. Bruyn. Vol. 5: Headaches and Cranial Neuralgias. (Pp. xii + 414; illustrated. 301s.) North Holland Publishing Co.: Amsterdam. 1968. This volume of a mammoth textbook in process of evolution is a fine collection of competent contributions and a high standard is set by the opening chapters prepared by H. Heyck and A. P. Friedman. Neurologists will find this an excellent work of reference and a decorative addition to their library.

APPLIED NEUROCHEMISTRY Edited by A. N. Davison and John Dobbing. (Pp. xi + 442; illustrated. 90s.) Blackwell Scientific Publications: Oxford and Edinburgh. 1968. Clinicians will read with astonishment and admiration this fine record of current research into many baffling aspects of nervous system activity. Most of the chapters end with a summary and discussion which, on the whole, indicate the limitations and boundaries of present knowledge, and for these alone this volume should be widely studied.

CHOROBY MIEŚNI Edited by J. Hausmanowa-Petrusewicz: Państwowy Zakład Wydawnictw Lekarskich: Warszawa. 1967. This volume on the myopathies and neuromuscular disorders, edited by Hausmanowa-Petrusewicz, begins with general introductory chapters covering such matters as electrophysiology, histology, histochemistry, electron microscopy, biochemistry, and genetics. Chapters on individual disorders follow. The outlook and presentation conform in general with that obtaining in Great Britain. There is perhaps one particular lesson for us to learn.
from the volume—namely, the extensive coverage of foreign literature; to take a trivial example, all of the references to the 'Stiff-man' syndrome come from outside Poland. It is encouraging that a similar approach to neurology is evident in countries with diverse medical traditions.


This remarkable collection of over 100 papers by 167 expert contributors provides a wonderful and unique tribute to a great neurologist and scientist, thus providing a jubilee volume in honour of Professor Mario Gozzano. The title of the volume is most misleading, for these chapters are concerned with every field of scientific study related to the nervous system. The writers have been drawn from many countries and have been free to write on a subject of their choice: the result is refreshing, for there is often provided a recent glimpse into the thoughts of those who are re-assessing their previous researches. No one can fail to be fascinated by some of these chapters and a summary in English where required is helpful.

W. Ritchie Russell


Earlier volumes in this series will be familiar to most readers of this Journal. The book is divided into four sections—Basic Sciences, Neurology, Neurosurgery, and Psychiatry—and covers a wide range of topics. The references must run into thousands and there are 904 appended to the two chapters on neuropathology alone. The book is, therefore, a 'gold-mine' of information on recently published work. In almost all the chapters the contributors have confined themselves to supplying summaries of published work and have refrained from comment or critical evaluation. The editor's intention must be to provide a comprehensive work of reference rather than a work to be read through. For British readers, it should be observed that the section devoted to psychiatry appears to be a well-balanced presentation. Nowadays, when the world literature is unmanageable, the value of such reviews is enhanced. Not surprisingly, it is very expensive.

C. J. Earl


This book contains a series of fascinating papers on many aspects of growth in the nervous system which were given at a Symposium held in June 1967. The subjects covered include the formation of functional connections between pieces of mammalian central nervous system cultured side by side, regeneration and reconnection of the optic nerve in amphibia, studies of the beginnings of co-ordinated limb movements, and the influence of endocrine organs on neural development. Some substances such as 'nerve growth factor' and, strangely enough, heavy water ($D_2O$), stimulate nerve cell growth and differentiation. Other substances prevent proper differentiation. Neuromuscular blocking agents, for instance, lead to functional denervation and to disappearance of skeletal muscle in the chick embryo. Pertinent topics such as the relation of axon to glial sheath, and transport of substances along nerve fibres are also covered. Workers in many fields will find food for thought in this book. Most of the papers are clearly written, the illustrations are well produced, and, as usual with Ciba Foundation Symposia, the discussions which follow the papers are illuminating and well edited.

S. J. Strich

**High Blood Pressure** By G. Pickering. 2nd ed. (Pp. viii + 717; illustrated. 120s.) Churchill: London. 1968.

In this volume the author is at pains to stress his view that high blood pressure, unlike many disorders, is not a disease in itself which some people have and others do not, but is simply a quantity. Many neurologists will find this easy to accept, though it is a subject which has aroused much controversy. The author believes that three main vascular diseases occur in patients with high blood pressure: fibrinoid necrosis of small arteries and arterioles, as a consequence of high blood pressure and the *sine qua non* of malignant hypertension; miliary aneurysms of cerebral arteries, which are the commonest cause of cerebral haemorrhage and are associated with high blood pressure and age; and artheroma or nodular arteriosclerosis, which is an occlusive disease of large arteries and therefore a common cause of cerebral thrombosis and embolism, and in which age, sex, serum cholesterol, cigarette smoking, diet, and exercise are of importance as arterial pressure. Other items of special interest to the neurologist occur especially in the earlier chapters where factors controlling the blood pressure are discussed, including the reflexes concerned in the control of both the heart and the peripheral circulation, and the effect on these reflexes of sleeping and waking and of various stimuli. The standard of production is good and the illustrations are many and lucid.

J. M. K. Spalding


An impressive amount of work has gone into the making of this monograph. The author has been involved in the subject for nearly a half a century. During that time, the language of neuropathology has changed, so that it is often difficult, in reading a report from the 1920s, to understand just what the author was describing. Dr. Kirschbaum is able to overcome this difficulty. His book reviews 150 cases (eight hitherto unpublished) of a particular type of subacute polyencephalopathy, originally called 'spastic pseudosclerosis', now generally referred to as 'Jakob-Creutzfeldt disease', of unknown aetiology and of disputed unity. He starts with detailed descriptions of Jakob's original five cases, and of Creutzfeldt's case, which Jakob—mistakenly, according