This is a field of enquiry where simple 'natural history' is still being actively pursued.

The book will be of interest to neurophysiologists rather than neurologists. Some parts of its content however will be the background for tomorrow's clinical advances: the difficulty is to know which parts.

**HISTOPHYSIOLOGY OF SYNAPSES AND NEUROSECRETION**


The author needs no introduction to the expert in electron microscopy of central and peripheral synapses and it would be impertinent to congratulate him and his publishers on the excellence of the photographs illustrating this valuable book. It is, however, more than a collection of anatomical data. There is a convincing attempt to correlate the ultrastructure revealed by the high-resolution electron microscope with the physiological knowledge on synaptic and junctional transmission.

The review covers synaptic regions of the central and peripheral nervous systems of vertebrate and invertebrate animals and of the retina, and it is shown that the ultrastructure is in all instances compatible with the theory of neuroseccess. One chapter explores the possible nature of these secretions. In Part II of the book the essential similarity of the neurohumoral mechanisms of the hypothalamic-neurohypophysial and adrenal medullary systems is demonstrated. Earlier theories of a similar mechanism in the pineal gland are supported. The interesting suggestion is made that one neurone may produce two or more neurosecretions, one released by the other.

The data in this very useful short review are no doubt selected to support the author's thesis but this has the merit of presenting the argument forcefully and logically in a way which will suggest many starting points for further investigation.

J. A. SIMPSON


The second edition of this work, originally by Gurdjian and Webster, appears 12 years after the first and has been extensively revised and enlarged. Most of the new techniques evolved during this period have been added, though some para-surgical methods, such as hypothermia and techniques of circulatory arrest, are only touched upon. New and complicated techniques, such as stereotactic surgery, where the progress of the operation must be determined by findings during the operation, are difficult to describe shortly and might best be left to specialized works. The purpose of this book is to guide the young neurosurgeon in operative techniques, to serve as a reference book for the established surgeon, and to provide a service manual for the general surgeon called upon to perform an occasional neurosurgical procedure. How far does it achieve these aims?

The plan of the book is formal, operations on the head, spine, sympathetic and peripheral nervous systems being dealt with in turn, and each section is followed by a lavish and satisfactory bibliography. In spite of this, however, the work is essentially confusing. In some cases quite a lot of history and clinical data is given, in others virtually none. The text on operative surgery is broken up by snippets of anatomy, clinical surgery, and minor operative procedures inserted in smaller type where the text accompanying an illustration has left available space on the page. Mostly, the material inserted in this manner bears no relation to the main text on the page. Only constant use of the index allows one to seek out information on a particular topic which may be scattered in different parts of the book, and the index is not sufficiently full for this. Much of the anatomical material is on too low a level and not sufficiently detailed for anyone specializing in neurosurgery. The section on the brain, for instance, the main interest of the neurosurgeon, comprises only six pages and two illustrations. Strange little pieces of anatomy appear in the section on sympathetic nervous system; surely no surgeon should be allowed to attempt a thoraco-lumbar sympathectomy unless he knew a great deal more of the anatomy of the spleen than is comprised in the seven lines on page 428. Most of the text consists of descriptions of operations on the lefthand page with accompanying illustrations on the right. Constant cross-reference is needed, for neither is understandable without the other, and this is tiring to the eyes and difficult to follow.

The illustrations are particularly difficult to understand. Most of them are semi-diagrammatic but with peculiar distortions; many of the heads, for instance, are like something out of space fiction and have no noses or mouths and are hardly of human shape. In most of the illustrations curved lines have been replaced by angles though the shading makes some attempt to indicate that a particular shape is, say, the cross section of a muscle rather than of a bone. In fact, the illustrations neither represent what the surgeon will actually see in the theatre nor do they conform to the diagrams he is so familiar with in standard textbooks of anatomy and surgery. I needed to spend a great deal of time on these drawings before I could understand them and some still remain obscure to me. Probably only several readings would accustom one to this type of drawing so that they became meaningful in terms of human surgery.

The descriptive text is clear and contains most of the relevant information required by a surgeon about to undertake an operation. There are, as always, points of fact and emphasis with which one would disagree, but these are few. The main failure of the text is that it never really comes alive. One does not get the impression that one is reading the description of an actual operation on a human patient. The tension, anxiety, blood, the ever-present possibility of complications and disaster, are all lacking; these are operations performed on bloodless manikins whose outcome in terms of human existence is purely academic.

Most young surgeons know a great deal more anatomy than their elders and can easily find out how to approach any particular part of the body. What they need is guidance in the unexpected difficulties, knowledge of 'the tricks of the trade' which make all the difference between
an easy and safe operation and one fraught with danger. The surgeon doing his first lumbar disc operation is immediately engulfed in venous blood from the epidual veins which may make exposure and safe removal of the disc impossible, unless he knows how simple it is to deal with, but this is not mentioned. No one would guess from reading this text that removal of an acoustic neurinoma is the most difficult operation in neurosurgery. A knowledge of the detailed anatomy of the tumour and its blood supply is the essential thing, and one not presented here at all well.

This book contains a mass of information and nearly all the essential facts about operative neurosurgery but they are presented in a manner which is difficult to assimilate and neglects the small details which make for easy and safe operating. Both editions have made a brave attempt to present the illustrations in a novel and dramatic fashion, but this is not a success, and the strange depersonalization of the drawings has made them more difficult rather than easier to understand.

**Brodie Hughes**


In the U.S.A., there are well over 1,000 doctors trained in neurosurgery, and one of a variety of sectional organizations for these, is the Annual Congress of Neurological Surgery. This meeting is dedicated to a distinguished senior neurosurgeon, on this occasion Dr. Bronson Ray. The volume consists of 18 chapters, mostly by familiar names, among them Matson, Graeme Robertson, Gurdjian, di Chiro, French, White, and DeBakey. Many chapters are new presentations of previously published work, and thus provide the opportunity for summarizing the experience of experts in a chosen field, so that many of the chapters become of more than transient value. Indeed many are useful as an introduction to a subject, and the volume is thus a kind of annual review.


This monograph is based on the angiographic study of over 200 acute cases in which this test was considered to be clinically desirable, that is in about 13 per cent of 1,500 acute head injuries. Carotid angiography is of special value in the identification of intracranial haematomata, but this study goes further and illustrates areas of disturbed or distorted intracerebral circulation. The illustrations are of a very high quality and will be studied with profit by those concerned with acute head injuries.

**W. Ritchie Russell**


How seldom one finds a really satisfactory book. Most are too long, some too short, many are unreadable and all are too expensive. This book, a second edition of Mr. Potter's short essay on the treatment of head injuries, satisfies me in every way. It is written in an attractive style, so familiar to all who have heard him speak, and so is readable. It is just about the right length, the print is clear, and its size enables it to be kept in the pocket or put on a shelf without difficulty. Its price is within the range of everyone; I wonder how long it will be before publishers realize that most medical books are beyond the price range of the ordinary students and doctors who should own and read them.

The first edition elicited universally good reviews, and rightly so, and it is not surprising therefore that only a few minor alterations have been necessary in this edition. I read this edition through twice before I became really worried that there was not a single serious fault I could find in it. There may be minor differences about emphasis and there may be some minor omissions, an ultrasonic echo-encephalograph, for instance, may well be the most valuable piece of apparatus in a head injury unit and can be used by anyone with a few minutes instruction, but the book achieves its purpose of giving simple and unequivocal instructions in the management of head injuries. It could and should be read by every nurse, medical student, and auxiliary in hospital, and every surgeon, and even neurosurgeon, would benefit from half an hour with it every year or so. It is sometimes said that unqualified praise is usually uninformed praise, but how delightful it is to a reviewer to be able to give it to at least one book.

**Brodie Hughes**


In this country Neurosurgical units usually exist as a main station on what is often for the patient a hectic journey through the hands of two or three physicians and hospitals. The brunt of this battering process on the staff side is borne by the skilled nurses and sisters who often do sterling work with an entirely inadequate background of formal instruction. Mr. Hooper has provided for them a well-produced and very practical manual which will be sufficient for the most knowledge-thirsty nurse. Indeed, if a medical student approached his final examination with the contents of this book well digested he would be better equipped in acute neurology than many of his colleagues. The diagrams are excellent, but occasionally are too complicated. Photographs of pathological specimens are seldom worthwhile, but those of faces and patients are often first-class. That of the patient with the meningeal irritation of subarachnoid haemorrhage is a classic. The drawing of pressure measurement at lumbar puncture on page 37 is not quite correct but this will not matter greatly in a work of this kind. I am sure that the nurses for whom it is intended will be grateful for the care and skill which have gone into the making of this book.

**Huw Griffith**

**Comparative Neurochemistry** Edited by D. Richter. (Pp. x + 491. 5s.) London: Pergamon Press. 1964.

This book is an account of the proceedings of the fifth