attributed to 'the group at Stanford, where a great deal of this work is currently in progress'!

Looking at the whole, this book represents a good way of catching up on the literature, with some chapters being truly excellent. The price, however, is high, and in the present economic climate there are many other demands on our income.

A L W F EDDLESTON

Bilirubin Volume 1 Chemistry and Volume 2 Metabolism By K P M Heirwegh and S B Brown. (Pp. 384; illustrated; \$140.) Boca Ratou, Florida, USA: CRC Press, Inc. 1982.

In 1968, With concluded his 669-page book on bile pigment with the remark: 'In few places is so much biochemistry used with so small results as in liver diagnostics'. More than a decade later Heirwegh and Brown have felt the need to review the still expanding research on bilirubin with emphasis on the importance of methodological advances and their potential for future developments. The book appears in two volumes, the first dealing with the structure, physical chemistry and analytical methods, and the second with bilirubin formation, metabolism, and pathophysiology. The 16 authors of the book are all actively engaged in bilirubin research and have included references up to 1980 in the text. Important advances on the photochemistry of bilirubin, chemical synthesis of bilirubin conjugates, development of new analytical techniques such as HPLC after alkaline methanolysis are lucidly reviewed. Chapters on bilirubin formation, transport, mechanism of biliary excretion and the kinetic analysis of bilirubin metabolism all point to the fact that bilirubin has become a useful model for the general study of hepatic uptake, binding and transport. For clinicians the final chapter of 30 pages is an excellent update on physiology and disorders of human bilirubin metabolism. The first part of the book will primarily appeal to physiologists, biochemists, and other fundamental scientists. The price of the book is too high; hopefully it will not prevent its presence in every medical university library as the most up-to-date reference work on bilirubin.

S W SCHALM

Mediators and drugs in gastrointestinal motility 1: Morphological basis and neurophysiological control; 2: Endogenous and exogenous agents. Edited by G. Bertaccini. (Vol. 1): pp. 468; illustrated; \$159.90; vol. 2: pp. 386; illustrated; \$137.70.) Berlin:

Springer Verlag. 1982.

An explosion is caused by a sudden upsurge of hot air which has two main consequences: an alteration in the landscape, and a degree of chaos. The consequences of the scientific explosion which has transformed the previously tranquil, even static, subject of gut motility are well illustrated in these two volumes, which collectively constitute Volume 59 of the *Handbook of Experimental Pharmacology*. Over many years, millions of gut strips have twitched in thousands of organ baths in response to hundreds of chemicals, generating in terms of data, more heat than light. The transformation has been wrought by neurophysiology, not pharmacology, with the revelation of the complexity of the interacting local and distant nerve networks which control the gut. In this situation, the editor has wisely chosen to emphasise physiology and morphology at the expense of classical pharmacology. The majority of volume 1 is devoted to extensive reviews of the central (Roman) and enteric (Costa and Furness) neurophysiology. The residual chaos is in the topic of the 'gut hormones'; we now know that they are, for the most part, neither hormones nor confined to the gut, and we also know that they play some part in neural control. But what part? Professor Bertaccini has himself tackled this subject in a massive review of peptides, which forms the greater part of volume 2. While this survey of peptides is a useful source of references, it does emphasise, perhaps, the pharmacologist's enduring preference for substances which appear to act directly on smooth muscle. Moreover, it is incomplete, as a review of peptides which omits opioids, somatostatin, and pancreatic polypeptide cannot be said to be comprehensive in 1983. Despite omissions, and an understandable bias towards pharmacology, much of this book is essential reading for scientists in the field.

But what does it offer to the clinician, apart from the possibility of financial bankruptcy? The answer has to be not much. The recent scientific advances have not yet led to significant modifications of clinical practice; this work is essentially an interim report for the workers at the face. The real significance of motility research is that the motor apparatus is rapidly responsive to neural control, and modulation of motor activity is a rich source of clues to the nature of the control systems. When these controls are finally elucidated, every gastroenterologist will need to know how they work, for it will emerge that they integrate all aspects of gut function.

To buy a book at this price for the sake of the first five pages is obviously ludicrous, but they contain Charles Code's lucid and entertaining overview of