ical methods are available (*cf.* Price and Price, 1957) but are not mentioned. Biological methods adequate for analyzing plasma were also in use at least as early as 1954, but these are dismissed as either too insensitive or too erratic for use. Actually, neither is true. The method advanced by Manger is not completely specific for epinephrine and norepinephrine, and it has not been verified either by biological or by more specific chemical methods. Indeed both the biological and the more specific chemical methods indicate plasma catecholamine concentrations which are lower than those determined by Manger, which suggests that his method detects biologically inactive substances present in the plasma. This is not explicitly stated in the text. Results, obviously, are significant only to the extent that the method used is reliable.

Of the methods discussed only that of Manger is treated in detail, but even here there are omissions. The technique, as described, contains references to other authors whose papers must be consulted if one is to follow the procedure outlined. The grades and chemical characterization of the reagents used are not given. In addition, two methods used by Manger are presented (separated by a section on instrumentation), one of which is merely a later version of the first method. In the results many of the data reported were obtained using the unperfected early method. Since the early method did not distinguish between epinephrine and norepinephrine, there is no way in which the data obtained with the two techniques can be compared.

Chapters II and III deal with observations both in man and animals during hypertension and hypotension produced by a variety of means. As just mentioned, most data are reported as "epinephrine-like substance" and are uninterpretable in terms of epinephrine or norepinephrine. Moreover, there appear to be errors in assigning statistical significance–for instance on page 81, where it is stated on the basis of data given in adjacent tables that there is a significantly greater plasma concentration of norepinephrine in hypertensive than in normal women. No statistical method known to the reviewer would support this assertion, on the basis of the findings given. Unfortunately, the authors do not describe the statistical methods used, or their criteria for establishing significance.

Chapter IV considers concentrations of epinephrine and norepinephrine in plasma and cerebrospinal fluid in patients with mental disease, as well as the effects of various drugs used in treating mental disease.

Chapter V considers metabolic and other effects of epinephrine and norepinephrine. It begins with a consideration of possible routes of inactivation and elimination of epinephrine and norepinephrine *in vivo*. Two pages later the reader learns the discussion he has been reading is out of date. This is acknowledged in a footnote. This information was available in 1957, but there is no reference to it among those listed at the end of the chapter. Indeed, there are few references anywhere in the text to papers appearing after 1957, and even that year is incompletely covered (*vide supra*), which is remarkable in a book appearing near the end of 1959. Chapter VI contains further comment.

In summary, this book is a discursive account of the application of a chemical method for analyzing catecholamines in plasma to a host of experimental and disease conditions in animals and men.

HENRY L. PRICE, M.D.

Medicinal Chemistry. Volume IV. A Series of Reviews Prepared under the Auspices of the Division of Medicinal Chemistry of the American Chemical Society. AUTHOR: WILBUR J. DORAN. EDITORS: F. F. BLICKE AND R. H. COX. ASSOCIATE EDITOR: L. A. WOODS. ASSISTANT EDITOR: HARRIET GEER. Cloth $12.00. Pp. 334. John Wiley & Sons, Inc., New York, and Chapman and Hall, Ltd., London, 1959.

As with other books of this series on medicinal chemistry, this volume provides a comprehensive summary of available material on biological and chemical data of the substances considered, in this instance, the barbiturates. A short history of the clinical use of these substances starts the book. This discussion is followed by a general description of the chemical methods of preparation. Details are not

included, but ample references to original work are included. There is a section on chemical and physical properties of the barbiturates, with references to methods of determination. The pharmacology of these compounds is discussed, followed by a review of what is known concerning distribution and metabolism of the barbiturates. The chemistry of the metabolism and relationship of molecular structure to pharmacological activity are stressed. The potentiation and antagonism to barbiturates are reviewed. The material mentioned takes about 40 pages. The remainder of the 334 pages is composed of tables concerned with dissociation constants of barbituric acids, salts and compounds, physical properties, and distribution coefficients.

There is a listing of barbituric acids by generic chemical name and another by trade name. There is also an excellent listing of barbituric acids by chemical structure, grouped by chemical composition, with references to the original work describing each compound. The thoroughness of this listing is seen when it is realized that there are 1,204 references. A valuable formula index is included, as well as a good subject index.

This book is well bound and the type easily legible. Formulas are easy to read. The presentation is concise and accurate. It is recommended for anyone who desires a good source of material on chemistry of barbiturates, or who desires completeness of literature references to the preparation and properties of these substances. Anyone working in either chemistry of pharmacology of the barbiturates will find it valuable. The first 40 pages contain material with which every anesthesiologist should be familiar.

ROBERT W. VIRTUE, M.D.

Resuscitation of the Unconscious Victim, a Manual for Rescue Breathing. BY PETER SAFAR, M.D. Chief, Department of Anesthesiology, Baltimore City Hospitals, Asst. Prof. Anesthesiology, Johns Hopkins University School of Medicine, Clinical Associate Professor of Anesthesiology University of Maryland School of Medicine, and MARTIN C. MCMAHON, Captain, Baltimore Fire Department Ambulance Service, with 15 illustrations by COLIN E. THOMPSON, JR. Paper $1.75. Pp. 80. Charles C Thomas, Publisher, Springfield, Illinois, 1959.

This pocket sized, paper bound manual is written primarily for nonmedical persons "actively concerned with the application and teaching of first aid." However, physicians will find it a useful guide for instruction in the life saving techniques of getting air into the lungs of unconscious persons whose airway may be obstructed, or who have ceased to breathe. It is well founded on the personal study and experiences of the authors. The material is logically and understandably presented to emphasize the important place of expired air methods (mouth-to-mouth, mouth-to-nose, mouth-to-airway, and mouth-to-mask) as compared with mechanical or atmospheric air methods in emergency treatment. Excellent elementary discussions, a useful glossary, and 15 references are included.

LUCIEN E. MORRIS, M.D.