

BOOK REVIEWS : BOEKRESENSIES

HAEMATOLOGY

Progress in Hematology. Volume I. Edited by Leandro M. Tocantins, M.D., with 27 contributors. Pp. ix + 336. \$9.75. New York and London: Grune & Stratton, Inc. 1956.

Contents: Introduction, L. M. Tocantins. 1. Gastric Intrinsic Factor and Vitamin B₁₂. Interrelationships, C. C. Ungley and R. B. Thompson. 2. Parenterally Administered Iron in the Treatment of Hypochromic Anemia, Elmer B. Brown and Carl V. Moore. 3. Exchange Transfusion as a Therapeutic Measure, with Special Reference to Its Use in Erythroblastosis Fetalis, Thomas R. Boggs, Jr. 4. The Life Span of Erythrocytes and Their Post-Transfusion Survival, Max M. Strumia. 5. Abnormal Hemoglobins, Wolf W. Zuelzer, James V. Neel and Abner R. Robinson. 6. Radioactive Colloidal Gold in the Treatment of Severe Acquired Hemolytic Anemia Refractory to Splenectomy, L. M. Tocantins and George C. Wang. 7. Radioactive Phosphorus in the Treatment of Primary Polycythemia (Vera), Lowell A. Erf. 8. The autoimmune Thrombocytopenias, William, J. Harrington, Virginia Minnich and Grace Arimura. 9. Guiding Principles in the Surgery of Hemophilic Patients, Anthony F. DePalma. 10. Mechanisms of Production of Acute Fibrinogen Deficiencies, Charles L. Schneider. 11. Local Environmental Factors Affecting Hemostasis in Bleeding from the Gastrointestinal Tract, Tibor Bódi, C. Wilmer Wirts and L. M. Tocantins. 12. Systemic Lupus Erythematosus and the Blood, Malcolm M. Hargreaves and Richard W. Opfell. 13. Chemotherapy of Human Leukemia, Joseph H. Burchenal and Rose Ruth Ellison. 14. The Biochemistry and Enzymatic Activities of Leukocytes in Health and Disease, William N. Valentine. 15. Hematologic Recovery from Irradiation Injury, Leon O. Jacobson. 16. Agammaglobulinemia—Congenital, Acquired and Transient Forms, David Gitlin and Charles A. Janeway. Index.

Haematology advances at a cracking pace and the average reader finds considerable difficulty in keeping up with the latest progress. He requires books such as this one to make the process relatively painless.

This book contains a number of articles written by authorities who have themselves been in the vanguard of progress; who have, by their original work, been largely responsible for the rapid increase of our knowledge of these fields. In this category one can place the very readable and authoritative chapter on the hereditary haemoglobinopathies. With new haemoglobins con-

tinually being discovered we are not surprised to hear that the letters A to I have already been exhausted (and only B has fallen by the wayside). It is almost a race to see whether we shall run out of haemoglobins before we exhaust the alphabet! But with Zielzer and Neel in charge of the chapter it all sounds delightfully simple. Similarly Harrington discourses on the auto-immune thrombocytopenias, Ungley on gastric intrinsic factor, Hargreaves on systemic lupus erythematosus and Burchenal on the chemotherapy of human leukaemia. There are 16 chapters altogether, many of which are excellent. One learns, for instance, the indications for the use of parenteral iron (and they are indeed much scantier than the frequent use of this medicament would lead one to suppose), the validity of the various methods used to measure red-cell survival, and conclusions drawn from the extensive use of radiophosphorus in polycythaemia vera. There is mention of the importance of 'heme' pigments in addition to bilirubin in the assessment of the need for exchange transfusion in erythroblastosis foetalis as well as in acute toxic states in infants and even occasionally in adults.

There are some poor chapters. A chapter on the guiding principles in the surgery of haemophilic patients, which is a very important subject and merited extensive consideration, turns out to be a discussion (and a poor one at that) on the treatment of haemorthosis in haemophilia. Unlike most of the writers in the book, who furnish extensive bibliographies and do not hesitate to give credit to other workers, the writer of this chapter, on haemophilia, gives only one reference, which he says is 'in preparation', and it refers to a subject which has been published by others on more than one occasion in the last 5 years.

There are a few other chapters which are poor, mainly because they consider unpublished, and therefore unassessed, material, in contrast with the rest of the book, where previously published material is digested and evaluated. But the blemishes are more

than compensated for by the rest of the book. It is a book that may well be read with profit, and Vol. II, if it maintains the same high standard, will receive an equally warm welcome.

C.M.

LAW OF DOCTOR AND PATIENT

Doctor and Patient and the Law. Third Edition. By Louis J. Regan, M.D., LL.B. Pp. 716. South African Price £5 6s. 3d. St. Louis: The C. V. Mosby Company. 1956.

Contents: Chapter I. Malpractice or Negligence. 1. Definition of Malpractice. 2. Malpractice Illustrated. 3. Malpractice or Negligence. 4. Chapter Discussion. Chapter II. Physician and Patient. 5. The Legal Duty of a Physician. 6. Prenatal Injuries. 7. Physician-Patient Relation. 8. The Physician is not an Insurer. 9. Care and Skill required of a Specialist. 10. Chapter Discussion. Chapter III. Special Rights to be Respected. 11. There must be Consent for Operation. 12. There Must Be Consent to Autopsy. 13. Invasion of the Right of Privacy. 14. Privileged Communications. 15. Chapter Discussion. Chapter IV. Liability for Act of Another. 16. Negligence of Partner, Employee, or Associate. 17. Chapter Discussion. Chapter V. Hospitals. 18. Charitable Hospitals. 19. Private Hospitals. 20. Public Hospitals. 21. Hospitals Not Liable for Acts of Attending Physician. 22. Right to Practice in a Hospital. 23. Chapter Discussion. Chapter VI. Expert Witnesses. 24. The Expert Witness: 25. Experts of Different Schools. 26. Hypothetical Questions. 27. Chapter Discussion. Chapter VII. Expert Testimony. 28. Expert Testimony is Usually Necessary. 29. When Expert Testimony is Not Necessary. 30. Res Ipsa Loquitur. 31. Chapter Discussion. Chapter VIII. When Physician is Liable. 32. Proximate Cause. 33. Contributory Negligence. 34. Statute of Limitations. 35. Chapter Discussion. Chapter IX. Evidence. 36. Evidence—Admissibility. 37. Chapter Discussion. Chapter X. Proof. 38. Proof Required of Negligence. 39. No Liability for Honest Error of Judgment. 40. Admissions. 41. Nonsuit and Directed Verdict. 42. Chapter Discussion. Chapter XI. Miscellaneous. 43. Abortion. 44. Adoption. 45. Adverse Party Called as Witness. 46. Artificial Insemination. 47. Blood Grouping Tests in Affiliation Proceedings. 48. Contraceptive Statutes. 49. Contracts in Restraint of Trade. 50. Coroners and Medical Examiners. 51. Criminal Malpractice. 52. Damages. 53. Disclosure under Statute. 54. Dying Declaration. 55. Experimentation. 56. Federal Food, Drug, and Cosmetic Act. 57. Implied Promise to Pay for Professional Services. 58. Insane Persons. 59. Insurance. 60. License to Practice. 61. Medical Societies. 62. Narcotics. 63. Pharmacists. 64. Special Defenses. A. Release. B. Res Judicata. C. Compensation Award as Bar to Malpractice Action. D. Requirement of Written Notice. 65. Wrongful Death Actions. 66. X-ray Films, Ownership of. Chapter XII. The Dentist. 67. Duties and Liabilities of Dentist Analogous to Those of Physician. 68. Chapter Discussion. Chapter XIII. The Nurse. 69. General Considerations. 70. The Nurse in Industry. 71. The Nurse and Malpractice. 72. Chapter Discussion. Chapter XIV. Public Health. 73. The Law of Public Health. 74. Foeticide, Infanticide, Concealment of Birth or Death. Chapter XV. Forms. 75. Consent to Operation. 76. Consent to Operation Upon Minor. 77. Anticipatory Consent to Treat Minor. 78. Consent for Autopsy. 79. Consent to Disclosure of Privileged Information. 80. Patient Leaving Hospital Against Advice. 81. Acknowledgement of Hazards of Particular Therapy. 82. Obstetrician Unable to Be Present at Delivery. Authorization to Treat Patient Who has Recently or Partially Aborted. 84. Patient Fails to Carry Out Advice. 85. Patient Fails to Keep Appointment. 86. Patient Discharges Physician from Case. 87. Physician Withdraws From Case. 88. Patient Injured, or Alleging Injury, in Hospital. Chapter XVI. Malpractice Vulnerability. Self-Test. 89. General Questions. 90. The Physician—Personal Factors. 91. Equipment, Records, and Employees. 92. Self-Determination of Vulnerability. Chapter XVII. 93. Prevention of Malpractice Claims—Education of the Physician. 94. Prevention of Malpractice Claims—Education of the Public. 95. The Patient's Interest in Malpractice. 96. Malpractice Prophylaxis—Admissions. 97. Malpractice Prophylaxis—Records. 98. Malpractice Prophylaxis—Unethical Criticism. 99. Malpractice Prophylaxis—Tact. 100. Malpractice Prophylaxis—Liability for Act of Another. 101. Malpractice Prophylaxis—Operation, Autopsy, Hazardous Therapy. 102. Malpractice Prophylaxis—X-ray, Diathermy, etc. 103. Malpractice Prophylaxis—Insufficient Treatment. 104. Malpractice Prophylaxis—Miscellaneous. 1. Refusals. 2. Contract versus Tort. 3. Experimentation. 4. Sterilization. 5. Equipment. 6. Unwise to be too secretive. 7. Inquests. 8. Self-sufficiency. 9. Contributory Negligence. 10. Statute of Limitations. 11. Administration of Anesthetics. 12. Consultants. Chapter XVIII. Allegations in Malpractice Suits. 105. Frequent Allegations in Malpractice Suits. Chapter XIX. Case and Comment. 106. Illustrative Cases With Comments. Chapter XX. Medical Defense. 107. Strong Defense Necessary. Chapter XXI. A Malpractice Program. 108. Why a Malpractice Program? 109. Fundamentals of a Constructive Malpractice Program. 110. The Grievance Committee and Malpractice. 111. Routine Case Handling in Claims Prevention. Conclusion. Table of Cases Cited.

For the purpose of this work the author deals only with that part of the law which concerns problems which arise out of the duties, privileges and obligations of the doctor in relation to his patients. The other aspects concerning forensic medicine and its allied subjects are left to the many other books on these matters. The wide scope of the book is indicated in the contents list above. Each section consists of a discussion of the topic dealt with, so that the reader is able to gain a reasonable understanding of the matter before proceeding to the extracts of decided cases taken from court records. The selection of the extracts is designed to illustrate the points arising from the discussion and to show how decisions have varied at times.

One must bear in mind that the decisions were made in the courts of the United States and that they may not necessarily constitute precedents in the courts of this country. However they make interesting reading.

The responsibilities of the dentist and nurse are touched upon as well as the relationship between the hospital and the patient.

The writer states that 'the likelihood of being sued for malpractice is now so great that it constitutes a definite occupational hazard to the practising physician' and he points out the many difficulties that beset the doctor in his practice and the lack of mutual trust and confidence that is inspired by the possibility of legal action.

Regarding the duties of the doctor the author writes: 'Of all the obligations and responsibilities burdening the physician, the greatest is without question the duty he owes to his patient. It is in this that the real reason for his being is found. The patient expects his physician to be a dedicated person—gentle and kind, always available, inexhaustibly patient, everlastingly resourceful, and possessed of endless charity. That which is for the greatest benefit to his patient must be the first consideration of the physician'.

A.H.T.

STRESS: FIFTH ANNUAL REPORT

Fifth Annual Report on Stress—1955/56. Edited by Hans Selye and Gunnar Heuser. Pp. 815. New York: MD Publications, Inc. 1956.

Contents: Introduction. Definitions and Terminology. Part I. General Physiology and Pathology of Stress—Hans Selye. The Stress Concept in 1955. A. Brief Synopsis of the Stress Concept as It Presents Itself in 1955. B. Principal Problems of Stress Research in 1955. Introduction. I. Generalities. What is Stress? Anti-stress Drugs. II. Analysis of Pathways. (1) The Stressor and its Immediate Effects. (2) The 'First Mediator of Stress-Responses'. (3) The Hypothalamo-Hypophyseal System. A. The Hypothalamus. B. The Posterior Lobe. C. The Anterior Lobe. (4) The Adrenals. A. Afferent Nerves. B. The Adrenal Medulla. C. The Adrenal Cortex. (5) The Kidney. (6) The Nervous System. (7) The Thyroid. (8) The Ovary. (9) The Liver. III. Analysis of Chronology. IV. Analysis of Complex Disorders. A. Experimental diseases of adaptation. B. Clinical diseases of adaptation. Special Articles. Primary Aldosteronism. A new Clinical Entity. By Jerome W. Conn and Lawrence H. Louis. Hormonal Influences on Inflammation and Detoxification. By Thomas F. Dougherty and R. D. Higginbotham. Stress and Catechol Hormones. By U.S. von Euler. Adrenal influences upon the Stomach and the Gastric Response to Stress. By Seymour J. Gray, Colin G. Ramsey, Ramon Villarreal, and Lewis J. Krakauer. The Role of the Adrenal Cortex in the Etiology of Disease. By Dwight J. Ingle. Adrenocortical Secretion and Factors Affecting That Secretion. By Don H. Nelson. Neurosecretion. By Ernst Scharrer. Some Observations on Psychiatric Stress in Infancy. By René A. Spitz. Cortisone in Relation to Lymphoid Tissue and Immunity. By H. C. Stoerk. Part II. Special Physiology and Pathology of Stress in 1955—Gunnar Heuser. Introduction. The Order of Precedence. The Annotation of Subject. The Annotation of the Experimental Results. Reviews and Critiques. The Stressor Agents. The Adaptive Hormones. Chemistry and Pharmacology. Tests for Stress and Resistance. Resistance. Resistance Diseases. Metabolic Changes: General Metabolism. Carbohydrate Metabolism. Lipid Metabolism. Nitrogen Metabolism. Salt Metabolism. Acid Base Balance. Water Metabolism. Hormones and Hormone-like Substances. Enzymes. Vitamins. Hemoglobin and Its Derivatives. Various Metabolites. Metabolic Diseases. Organ Changes: Nervous System (including psyche). Nervous Diseases. Psychic Diseases. The Endocrines and Endocrine Diseases. Blood-count. Diseases of Blood. Erythrocyte Sedimentation Rate (ESR). Blood-clotting. Thromboembolic and Hemorrhagic Diseases. Hemopoietic System. Hemopoietic Diseases. Cardiovascular System. Cardiovascular Diseases. Kidney. Renal Diseases. Respiratory System. Respiratory Diseases. Gastrointestinal System. Salivary Glands. Diseases of Salivary Glands. Liver Hepatic Diseases. Bones. Diseases of Bones. Joints. Diseases of Joints. Muscular System. Muscular Diseases. Skin and Appendages. Cutaneous Diseases. Hibernating Gland. Sense Organs and Diseases of Sense Organs. Connective Tissue. Inflammation and Wound-Healing. Connective Tissue Diseases. Microbes. Serologic Reactions. Serologic Diseases. Neoplasia. Malformations. Part III. Afterthoughts. Endotheliomyelosis—An Experimental Model of the 'Focal Syndrome'. By Hans Selye and Pierre Bois. References. Acknowledgements. Index.

The first 100 pages of this book consists of a review by Hans Selye of the present status of the stress concept. The next 100 pages contains 9 special articles, all of which bear some relationship to stress. The contributors to this section are all distinguished workers and all of them have made valuable original contributions. Because of this it is invidious to mention any particular one. One could question whether it would not have been better to publish these papers in medical journals. (One of them 'Primary Aldosteronism, a new clinical entity', by Conn and Louis, does in fact appear in the January number of *Annals of Internal Medicine*, and the topicality of the subject is sufficient excuse for reprinting it in this volume.)

The rest of the 600 pages of this book are to all intents and purposes a glorified and massive *index medicus*, which is not particularly easy to follow. Those who are unfamiliar with the terminology, abbreviations and mode of presentation require a postgraduate course to be able to follow it, and this despite extensive explanations and illustrations. The authors have not only listed and grouped the articles but have attempted to indicate the conclusions reached in the article. The latter has some slight value but it is unlikely to obviate the necessity of referring to the original publication. All in all it is a massive compilation, sur-

prisingly up-to-date, and a veritable credit to a modern filing system.

One cannot help wondering if it is all worth while. With each annual volume the number of books to be consulted increases. The field of stress as defined in this volume is now so vast that it embraces most of medicine. There is more than a germ of truth in the statement (page 220) that it would be more interesting and surprising to find a factor which fails to produce the general adaptation syndrome than to find one that produces it! One could imagine the general reader purchasing a book consisting of the first quarter of this work. A medical library or an advanced laboratory might be persuaded to purchase the rest of the book. The two halves could well be separated. More important, the necessity for producing annual volumes of this type could perhaps be considered.

C.M.

CHRISTOPHER'S SURGERY

Christopher's Textbook of Surgery. Sixth Edition. Edited by Loyal Davis, M.D. Pp. xvii + 1484, with 1,359 illustrations on 716 figures. \$15.50. Philadelphia and London: W. B. Saunders Company. 1956.

Contents: 1. History of Surgery. 2. Physiology of Wound Healing. 3. Surgical Bacteriology, Chemotherapy and Antibiotic Therapy. 4. Shock. 5. Principles of Pre- and Postoperative Care: Preoperative, Operative and postoperative Care. Management of Fluid and Electrolytes in Surgical Practice. 6. Endocrinology and Metabolism in Surgical Care. 7. Anesthesiology. 8. Basic Principles of Technique in Surgical Care. 9. The Principles of the Surgical Care to the Soft Tissues. 10. Thermal and Irradiation Injuries: Burns. Local Cold Injury. Irradiation Injuries. Nuclear Radiation Injuries. 11. The Head: The Scalp. The Eyes. The Nose, Nasal Accessory Sinuses and the Pharynx. Tumours of the Nose, Nasal Sinuses and Nasopharynx. The Ears. The Mouth, Tongue, Jaws and Salivary Glands. 12. The Neck: Developmental Anomalies, Tumours, Infections and Wounds of the Neck. Larynx and Trachea. 13. The Thyroid and Parathyroid Glands. 14. The Breasts. 15. The Mediastinum. 16. The Thoracic Wall, Pleura and Lungs: The Thoracic Wall and Pleura. Diseases of the Lungs and Bronchi. Tumours of the Lungs and Bronchi. 17. The Heart and Pericardium. 18. The Abdominal Wall and Peritoneum. 19. Hernia. 20. The Alimentary Canal: Congenital Malformations. The Esophagus. The Stomach. Peptic Ulcer and Benign Gastric Lesions. The Surgical Treatment of Peptic Ulcer. Tumours of the Stomach. The Duodenum, Jejunum, Ileum and Appendix. The Colon. The Anal Canal and Rectum. Intestinal Obstruction. 21. The Liver and Biliary System: Anatomy and Physiology of the Liver and Biliary System and Diseases of the Gallbladder and Bile Ducts. Diseases of the Liver. 22. The Pancreas. 23. The Adrenal Glands. 24. The Spleen. 25. The Urinary System: Methods of Diagnosis. Infections of the Urinary Tract. Anomalies and Injuries. Tumours and Calculi. 26. The Male Reproductive System. 27. The Female Reproductive System. 28. The Bones and Joints: Considerations in the Treatment of Closed and Open Fractures. Pathology and Repair of Fractures. Fractures and Dislocations. Fractures and Dislocations of the Upper Extremity and Spine. Fractures and Dislocations of the Pelvis and the Lower Extremity. Muscles, Ligaments and Bursae. Acute and Chronic Infections of the Bones and Joints. Tuberculosis of the Bones and Joints. Tumours of the Bones and Joints. 29. Surgery of the Hand. 30. Surgery of the Foot. 31. Amputations and Artificial Limbs. 32. Physical Medicine and Rehabilitation. 33. The Vascular System: The Veins. The Arteries. The Lymphatics. 34. The Nervous System: Neurosurgical diagnostic Procedures. Cranio-cerebral Injuries. The Cerebrum and Cerebellum. The Spinal Cord. The Peripheral and Cranial Nerves. The Autonomic Nervous System: The Neurosurgical Relief of Pain. Congenital Anomalies. 35. The Qualifications of a Surgeon. Index.

Loyal Davis points out in his preface that this 6th edition of Christopher differs from previous editions in its presentation of the subject. Your reviewer used the 2nd edition as a student 20 years ago; while at that time the book was an outstanding one, the present edition makes much more interesting and more widely informative reading.

The editor has gathered a splendid group of contemporary outstanding American surgeons, who have endeavoured 'to place before the student an interestingly told story of the facts and principles which should form the basis for his self-education in surgery which must continue throughout his professional life'. Perusal of the list of contributors lends emphasis to the fine character of the volume, if this is required.

Whipple makes a fascinating story of the History of Surgery and Meleney's contribution on bacteriology and on chemotherapy and antibiotic therapy is no less authoritative for being exhaustive. Ravdin's chapter on shock admirably sets out the practical present-day position of this much investigated subject. Pre- and post-operative care are carefully dealt with, with nice attention to all common and several uncommon complications. Crile's section on the thyroid accurately summarizes our present knowledge of the subject—perhaps the absence of clear knowledge of malignant exophthalmos explains its omission as a topic. The section on the breast, too, is a well-reasoned exposition with

a very fair distribution of emphasis on various present opinions. McVay's work on hernia is thorough and sound, as is to be expected. A glance at the authors of the section on the alimentary tract—Sweet, Baborka, Walters, Marshall and others—ensures high quality in this department.

A delightful aside on some of the duties of a houseman, of a kind not usually included in text-books, is found in 'observing the amenities' under 'basic principles of technique' in Surgical Care. 'The Qualifications of a Surgeon' carries a message for students which could profitably be read by many of us in busy practice. The book is highly recommended as an excellent advance on the now outmoded style of most modern surgical text-books.

P.C.W.M

A CLASSIC PHYSIOLOGY

Principles of Human Physiology. (Twelfth Edition.) By Sir Charles Lovatt Evans, D.Sc., F.R.C.P., F.R.S., LL.D., with chapters on the Special Senses by H. Hartridge, M.A., M.D., Sc.D., F.R.S. Pp. xii + 1233. Illustrations 721—some in colour. 65s. net. London: J. & A. Churchill Ltd. 1956.

Contents: I. Introduction. Book I. General Principles. A. Structural Principles. II. The Structural Basis of the Body. B. Biochemical Principles. III. The Elementary Constituents of Protoplasm. IV. The Proximate Constituents. C. Biophysical Principles. V. The Energy of Molecules in Solution. VI. The Properties of Colloids. VII. The Passage of Water and Solutes through Membranes. VIII. Bioelectric Potentials. IX. Enzymes and Enzyme Action. Book II. Tissues Subservient to Movement and Conduction—Muscle and Nerve. Historical Note. X. Voluntary Striated Muscle. XI. Plain Muscle and other Contractile Tissues. XII. Nerve Fibres. Book III. Centralized Control and Co-ordination—The Central Nervous System. Historical Note. XIII. General Features of a Central Nervous System. XIV. The Receptors. XV. The Spinal Cord and its Relationship to the Higher Parts of the Central Nervous System. XVI. The Excitability of Neurons and the Properties of Conduction at Synapses. XVII. Characteristics of Reflex Actions. XVIII. The Labyrinth and Postural Reflexes. XIX. Higher Afferent Paths. XX. The Cerebral Hemispheres and the Efferent Paths. XXI. Functions of the Cerebral Cortex. XXII. The Cerebellum. XXIII. The Autonomic System: The Hypothalamus: Humoral Transmission. Book IV. The Supplying of Information—The Special Senses (by F. Hartridge, F.R.S.) XXIV. The Nervous Mechanism of Sensation. XXV. Vision. XXVI. Hearing and Speech. XXVII. Cutaneous Sensations. XXVIII. Sensations of Smell and Taste. Book V. Systems for Distribution of Materials—Blood, Circulation and Respiration. Historical Note. XXIX. The Blood. XXX. General Features of the Circulation. XXXI. Physiology of the Heart. XXXII. Factors which Modify the Heart's Action. XXXIII. Dynamics of the Circulation. XXXIV. Local Regulation of Blood Flow. XXXV. The Pulmonary, Hepatic and Cerebral Circulations. XXXVI. Examples of Circulatory Adaptation. XXXVII. Lymph, Tissue Fluids, and Cerebro-spinal Fluid. XXXVIII. The Defence of the Organism against Infection. XXXIX. Respiration. (I) Mechanics of Respiratory Movements. (II) The Chemistry of Respiration. XL. The Control of the Respiratory Movements. Book VI. The Intake of Materials—Nutrition, Metabolism. Historical Note. XLI. The Exchanges of Matter and Energy in the Body. XLII. The Vitamins. XLIII. The Normal Diet of Man. XLIV. The Physiology of Digestion—Changes undergone by the Foodstuffs in the Alimentary Canal. XLV. The Absorption of the Foodstuffs. XLVI. The History of the Foodstuffs. Book VII. The Removal of Waste Material and Temperature Conservation—Excretion and Temperature Regulation. Historical Note. XLVII. Renal Excretion. XLVIII. The Skin and the Skin Glands. XLIX. The Temperature and Heat-Balance of the Body. Book VIII. The Provision of Special Chemical Stimulants, and of Measures for Continuance of the Species—The Endocrine Organs and Reproduction. Historical Note. A. Endocrine Organs. I. The Endocrine Organs. B. Reproduction. LI. The Formation of Germ Cells. LII. Reproduction in Man and other Mammals. LIII. The Secretion and Properties of Milk. LIV. Heredity.

Originally by Starling, written since 1930 by Lovatt Evans, this remains the standard British text-book of physiology. It is a great achievement that it should still be written almost entirely by one man. This single authorship gives the book a unity of thought which is lacking in many composite text-books and there is little to support the author's statement, expressed in the preface to a previous edition, that it makes the book 'patchy, superficial and out of date'.

Inevitably the single authorship of the greater part of the work precludes the detailed information on some of the most recent advances in each field which could be provided by a team of specialists, but this is not a major fault, since it limits the book to the general information which is required by every physiologist. This general information is commendably up to date.

In general, space is reasonably allocated to the several systems but the chapters on blood and on the endocrine organs are rather condensed and the description of blood coagulation omits several important factors. The chapters on sensation, as in previous editions, are written by Professor Hartridge, whose contribution fully maintains the high standard of the rest of his work. The biochemical principles enunciated are adequate for the reader's

understanding of the physiology described, but this is not a textbook of biochemistry and the details of that subject must be sought elsewhere.

Lovatt Evans is not a book to be recommended to students commencing the study of physiology. It is so full of information

that the novice may have difficulty in appreciating the general pattern. For the more advanced student and as a reference book on physiology for biologist or medical practitioner it has never been surpassed.

A.W.S.