to achieve fixation of bones as a primary need. If plates are used in the presence of skin tension and skin loss there is a grave risk of screw-hole infection—the most difficult of problems. He fails to mention that decortication of bone denuded of periosteum allows a good survival of split skin at the primary repair. He fails to follow the basic principle that if good cover has been achieved the bones can be dealt with secondarily. The reverse does not apply.

The treatment of decubitus ulceration is well described, but more stress should have been laid on general nutritional and nursing measures, for the sake of completeness.

The chapter on hand surgery which confines itself to the provision of soft-tissue cover is clear and well produced, but stress should have been made on the necessity of conserving tissues on the ulnar (gripping) side of the hand. In “neurovascular flap” transfer it is better to use the radial side of the ring finger.

The surgery of the eyelids is briefly described, stress being laid on minor repair following trauma. The section on maxillo-facial injuries is as concise as it is possible to be. Good principles are laid down. Mechanism of injury, deformity and methods of repair are adequately described and the author has brought in some methods used more frequently in North America, where dental laboratory facilities are less available.

Generally speaking the book serves its function extremely well, but it must not be allowed to enlarge much further.—R. L. G. DAWSON.

Bone Biodynamics. Editor Harold M. FROST, M.D., Director, Orthopaedic Research Laboratory, Associate Surgeon, Department of Orthopaedic Surgery, Henry Ford Hospital; with thirty-six other contributors. Henry Ford Hospital International Symposium, March 20–22, 1963. Pp. xvi + 687, with many figures and tables. Index. 1964. London: J. & A. Churchill Ltd. Price £6 10s.

This is the published account of a symposium sponsored by the Henry Ford Hospital and held at Detroit, Michigan, in March 1963. It consists of the papers presented, together with a verbatim record of the discussion. It is an excellently produced and well illustrated volume. The price, perhaps, is rather high and the value of some of the discussion sections is not apparent to this reviewer.

The thirty-five contributions cover a very wide range of topics. Some are by authorities who are well known in connection with bone research and deal with current work on well aired topics; others are by authors whose work has been in other fields and who discuss this work because of its possible, though not always obvious, bearing on some of the problems encountered in bone research. This wide range is, in fact, the chief interest of the present volume, and allows the reader to speculate on the application to skeletal research of such diverse topics as the mechanism of hormone action, mathematical models for growth processes, and the properties of cellular membranes. In a sense, the organisers of the symposium and the author of the published volume appear to be groping for some general concept which will allow “the revaluation and review of concepts concerning the structure and function of the skeleton.” No such concept emerges from the book, but to say this is no criticism of its usefulness in other directions.

Indeed, one does not need to agree with the pretentious comments on the publisher's jacket to gain much from this interesting volume. The contributors include such distinguished names as Bassett, Bauer, Copp, Fell, McLean, Neuman, Ray, Robinson, Romer, Trueta and Weiss, and cover fields which range from chemistry and electron microscopy to palaeontology and clinical medicine. Of particular interest to the present reviewer were the following, to name but a few: A. S. Romer (Cambridge, Mass.) on the origin of bone tissue in ancient fish-like vertebrates; D. A. Cameron, H. A. Paschall and R. A. Robinson (Sydney and Baltimore) on the ultrastructure of bone cells; R. W. Young (Los Angeles) on specialisation of bone cells; M. R. Urist (Los Angeles) on the comparative aspects of calcium metabolism; Honor B. Fell (Cambridge, England) on the effect of vitamin A on cartilage and bone in tissue culture; D. H. Copp (Vancouver) on parathyroid hormones, and L. C. Johnson (Washington) on morphological analysis in bone pathology.—H. A. SISSONS.

Il Trattamento Chirurgico della Sublussazione Congenita dell'Anca. (The Surgical Treatment of Congenital Dislocation of the Hip.) By A. SANTACROCE, P. G. MARCHETTI, G. STRINGA and R. ZANASI. 11 × 8½ in. Pp. vi + 354, with many figures and tables. Proceedings of the Forty-ninth Congress of the Italian Orthopaedic and Traumatological Society, Venice. September 19–22, 1964.

Part I—Surgical Treatment of Congenital Subluxation of the Hip—A. SANTACROCE. There are seven chapters. The first describes the limits of primary subluxation, the characteristics which differentiate it from simple dysplasia and its concrete nosology in the larger field of dysplastic malformations. The second chapter concerns the anatomy of the hip and the physiopathology of subluxation. The

radiological semeiotics of the normal hip at different ages and geometric figures giving evidence of the slightest alteration are treated in the third chapter, in which the value of arthrography in the diagnosis of primary subluxation is discussed. The chapter concerning pathology deals with the various macroscopic and microscopic alterations of the luxated hip, according to age. In the fifth chapter the different aspects of primary subluxation of the hip with reference to the different ages in which it appears are described.

The chapter on the etiology and pathogenesis refers mainly to the statistics of the Orthopaedic Clinic of the University of Bari; in this chapter the different theories on the subject are considered from a broad viewpoint. The last chapter is on secondary luxation with reference to the clinico-radiological characteristics and to the factors conditioning the articular displacement.

From the personal researches conducted, the author makes the following points: 1) The statico-dynamic conditions of the subluxation determine the form and the orientation of the upper end of the femur and of the acetabulum. 2) Clinico-radiological examination shows that in subluxated hips, even after treatment, displacement of the centres of convexity of the femoral head and of the acetabulum often persists. This observation explains the frequency of evolution of subluxation towards osteochondritis and arthritis. 3) In the 31.25 per cent of the hips followed up, secondary subluxation appears after a period of three to ten years from treatment; it is related to an increase in anteversion of the femoral neck, to aplasia of the acetabulum or to severe osteochondritis.

Part II—Open Reduction and Shelf Operation in the Surgical Treatment of Congenital Dislocation of the Hip in Infancy and in Adolescence—P. G. MARCHETTI.

The report is based upon the experiences gathered from six cases of open reduction, nine cases of open reduction associated with shelf operation and seventy-one cases of shelf operation in hips affected by subluxation. The author outlines the fundamental aim of open reduction and a shelf operation, which is that of restoration within the limits of the abnormality of normal anatomical conditions, so as to avoid the development of late arthritis. The several unsatisfactory results were mainly because of incorrect indications together with the age of the patient; the type of subluxation must be accurately evaluated before operation.

The author differentiates two fundamental kinds of subluxation: 1) Cotyloid subluxation: morphologically normal head and neck with a normal orientation. 2) Femoro-cotyloid or symptomatic subluxation: morphologically abnormal and abnormally orientated head and neck. These two groups are successively divided into: *a*) centrable luxations and *b*) non-centrable luxations, using "centrability" as the possibility or not of recentering the head in its normal relation to the acetabulum.

Both centrable and non-centrable femoro-cotyloid subluxations are never a primary indication for open reduction or shelf operation: in these cases centration osteotomies are more opportune. The shelf operation is indicated in the not very frequent cases of centrable cotyloid subluxation. Open reduction, either combined with a shelf operation or not, is indicated in cases of non-centrable cotyloid subluxation in patients between three and six years of age.

Part III—Varus-derotation ("Centering") Osteotomy in Congenital Subluxation of the Hip in the Growing Age—G. STRINGA.

The report is based upon 142 "centering" osteotomies performed upon patients under twelve years of age affected by subluxation of the hip. Eighty of these patients are still being followed up.

The statistics have been divided into four groups: *a*) cases under eight years of age with a normally shaped epiphysis centrable with adequate manipulation; *b*) cases over nine years of age with a normal and centrable epiphysis; *c*) cases under eight years of age with a painful and hardly centrable epiphysis; *d*) cases under nine years of age with a painful and non-centrable epiphysis. In patients from three to five years of age the operation must overcorrect the deformity because there is a possibility of relapse, while in patients ten years of age or older there should be no overcorrection because relapse will not occur. The operative technique used in the Orthopaedic Clinic of the University of Florence directed by Professor Scaglietti is then described.

The results reported are good or very good in 73 per cent of the cases; this means that after a minimum of three years the epiphysis is well centred, the roof is considerably lowered, gait and function are normal.

Part IV—The Treatment of Congenital Subluxation of the Hip in the Adult, without Arthritis—R. ZANASI.

The author observes that the most important defects which lead to arthritis of the hip are an insufficiently extended acetabular shelf, anteversion and increased obliquity of the acetabulum.

An osteotomy which corrects the valgus and the anteversion reconstructs the hip so as to compensate the defects of the acetabulum; in fact, within some limits the deficiency of the acetabulum may be compensated by an osteotomy which reduces the valgus from 140 to 110–120 degrees. Slight coxa vara may result in a very useful restoration of good articular mechanics.—O. SCAGLIETTI.

BOOKS OF ORTHOPAEDIC INTEREST

Henry Ford Hospital Medical Bulletin. Lamellar Bone Physiology in Diabetes Mellitus. By Harold M. FROST, M.D., and contributors. Papers of the Orthopaedic Research Laboratory. December 1964—Volume 12, No. 4—Part II. Detroit, Michigan: Publications Committee, The Henry Ford Hospital.

Eine Untersuchung der Fersenbelastung beim Gehen. Eine Methode für die Messung der Fersenbelastung im Schuh. (An enquiry into the weight loading of the heel in walking, together with a method for measuring pressure of the heel in the shoe.) By Hilding WETZENSTEIN. Pp. 95. 1964. Stockholm: Acta Orthopaedica Scandinavica, Supplementum No. 75.

Mathematical Elements of Lamellar Bone Remodelling. By H. M. FROST, M.D. 1964. Springfield, Illinois: Charles C. Thomas, Publisher.

Peripheral Nerve Suture. A Technique for Improved Intraneural Topography Evaluation of Some Suture Materials. By Svante EDSHAGE. Pp. 104. 1964. Stockholm: Acta Chirurgica Scandinavica, Supplementum 331.

This volume sets out the experimental work necessary to estimate the values of different methods of nerve, and suture materials. The value of intraneural topography is well known, and the bad effects of crooked fascicular lines at the plane of suture are described. By steadying the nerve with a special instrument almost transverse sections were obtained which could be sutured by epineural sutures, so that the fasciculi were parallel and in good end-to-end contact. Of the suture materials stainless steel thread appeared the most satisfactory.

Fractures du Cou de Pied. By R. SOUQUET. Pp. 178. 1965. Paris: Éditions Doin. Price 42 F

This brief and well illustrated volume describes injuries of the ankle from the mechanistic approach, and conforms to the generally accepted pattern of the subject. There is nothing new in it, but fresh emphasis is laid on the value of early operative fixation followed by early active movements in order to reduce stiffness and late disability.

Derzeitige Grenzen bei der planmässigen Versorgung schwerer Handverletzungen. (Present-day Limits in the Planned Care of Severe Hand Injuries.) By Dr G. ZRUBECKY. Mannheim. Pp. 38, with 15 illustrations. Large octavo. 1965. Springer Verlag. Price DM 15. Volume 83 of the *Hefte zur Unfallheilkunde*.

This short monograph develops the theme of immediate formal and complete repair in severe hand injuries and explores the immediate possibilities of success.

The Keys to Orthopedic Anatomy. By William A. MILLER, M.D. Pp. vii+155. 1965. Springfield, Illinois: Charles C. Thomas, Publisher. Price \$5.75.

This is no more than a brief summary of anatomical facts essential to orthopaedic surgeons. It is a little difficult to know which doors it will open.

Surgery in World War II. Thoracic Surgery—Volume II. Edited by Frank B. BERRY, M.D.; Associate Editor Elizabeth M. McFETRIDGE, M.A.; with six other contributors. Prepared and published under the direction of Lieutenant-General Leonard D. HEATON, the Surgeon General, United States Army. Editor-in-Chief, Colonel Arnold Lorentz AHNFELDT, M.C., U.S.A. Pp. xxvii+615. 1965. Washington, D.C.: Office of the Surgeon General, Department of the Army.

Volume I was reviewed by Mr John W. Jackson in this Journal (1963, 45-B, 816).

A new series of paper-covered handbooks of some seventy-five pages are being published by William Heinemann Medical Books Limited, London, in association with The Chartered Society of Physiotherapy. The titles issued are: *Faulty Posture, Its Effects and Treatment*—Molly TURNER, F.C.S.P.; *Abnormal Postural Reflex Activity Caused by Brain Lesions*—Berta BOBATH, F.C.S.P.; *Physiotherapy in Major Knee Surgery*—Stella SAYWELL, F.C.S.P.