

homologous contours thus obtained, and here, as in other sections of the book, the author's originality and freshness of approach are much in evidence. But the very simplicity of this part of the text could well give an erroneous impression that the statistical background of this problem is correspondingly elementary. This is not so; the techniques of multivariate (canonical) analysis, appropriate to handling multidimensional data derived from a co-ordinate grid, are mathematically complex but essential.

The original contributions recorded in the central sections of Dr. Rabey's monograph are noteworthy.

ERIC H. ASHTON.

## Ménière's Disorder

**Ménière's Disease.** Mechanism and Management. By M. Spencer Harrison, M.D., F.R.C.P., F.R.C.S., and Lionel Naftalin, B.Sc., F.C.Path. (Pp. 226+xvii; illustrated. \$12.) Springfield, Illinois: Charles C. Thomas, 1968.

Over recent years Mr. Spencer Harrison and Mr. Naftalin have collaborated in a study of the biochemical aspects of what Sir Terence Cawthorne now terms "Ménière's disorder." It is therefore fitting that these two, an otolaryngologist and a chemist, have been asked to contribute a monograph on this disorder to the *Living Chemistry* series which Charles C. Thomas have produced.

The monograph opens with a brief but interesting historical introduction which sheds light on the sources of the variations in the spelling of Ménière's name. The next chapter deals with the clinical aspects of the disorder and the relationship to migraine, which also affords contributory evidence to the belief that Ménière's disorder is a psycho-

somatic one. The cited prevalence of the disorder of 1:1,000 population in Britain is at variance with the results of direct examination of random samples of the general population which indicate a prevalence of the order of 10:1,000. Another chapter is devoted to water and salt balance. Over 40 years ago Mygind suggested that alterations in body fluids may play a part in the pathogenesis of Ménière's disorder. Harrison and Naftalin have found that episodes of vertigo in Ménière's disorder occur during phases of sodium diuresis concomitant with a water gain (relative or absolute), which results, they contend, are compatible with a hypothesis that the attacks are a concomitant of a decreased aldosterone production. The authors rightfully use the term "concomitant" to avoid any implication of a causal relationship. The previously mentioned related episodic disorder, migraine, has also been shown to exhibit blood cation changes related to phases of activity, but no one has suggested that these changes are the cause of the condition. Moreover, some 16 years ago Perlman and his associates reported their failure to demonstrate any concomitant effect by either water depletion and loading or salt depletion and loading on patients suffering from Ménière's disorder. The authors' assertion that the hot-and-cold caloric test has been shown to be superior to all other techniques will be questioned by other specialists in this field.

This is a very readable account of the biochemistry of Ménière's disorder, together with supporting descriptions of the symptomatology of the disorder and of the physiology of labyrinthine fluids. The monograph thus forms a worthy supplement to Henry Williams's book on the condition which the same publishers produced 17 years ago.

R. HINCHCLIFFE.

## Teeth and Music

**Dental Problems in Wind Instrument Playing.** By M. M. Porter, L.D.S. (Pp. 55; illustrated. 6s.) London: British Dental Association, 1969. **The Embouchure.** By Maurice Porter. (Pp. 144+xiii; illustrated. 35s.) London: Boosey & Hawkes, 1968.

The art and skill of the wind instrument player are of great antiquity and for the last three centuries have undergone continuous development. The two publications now under review are probably unique in the qualifications of the author. As a dentist he is acutely conscious of the complex anatomical substructure of the player's skill, and as an executant himself—he never admits to this, but the evidence is obvious—he is familiar with the demands that playing makes.

He shows in detail the interrelations of diaphragm, chest, larynx, mouth, and dental tissues in the production of the exquisite sounds which the wind instrument player makes, but it is inevitable that his concern should be centred on the dental tissues. However, this inevitability arises not so much from the fact of his being a dentist as from his knowledge that, of all the structures involved, the enormous prevalence of dental disease makes the teeth the structures most likely to be damaged. He utters many well-justified warnings to dentists concerning the care they should exercise, but—and I heartily echo him—he expresses amazement at the casual lack of concern that most wind players seem to exhibit about their teeth. The part teeth play in the achievement of the embouchure and—even more importantly—in the preservation of the facial skeleton, which is the substrate on which the muscles work, seems to be very poorly comprehended. The warning punch lines could be punched even harder.

S. FRANCIS FISH.

## Books Received

*Books noticed here may be reviewed later.*

**Some Inherited Disorders of Brain and Muscle.** Proceedings of the Fifth Symposium of the Society for the Study of Inborn Errors of Metabolism. Edited by J. D. Allan, M.D., F.R.C.P.Ed., and D. N. Raine, Ph.D., B.Sc., M.B. (Pp. 154+xviii; illustrated. 40s.) Edinburgh and London: E. & S. Livingstone, 1969.

**The Treatment of Mental Illness.** By T. M. Caine and D. J. Smail. (Pp. 192. 35s.) London: University of London Press, 1969.

**Blood Grouping Tests.** Medicolegal Uses. By Leon N. Sussman, M.D. (Pp. 136+xvii. \$9.75.) Springfield, Illinois: Charles C. Thomas, 1969.

**Rehabilitation and Medicine.** Edited by Sidney Licht, M.D. (Pp. 823+xx; illustrated. 153s.) London: Lloyd-Luke, 1969.

**Subcellular Components.** Preparation and Fractionation. Edited by G. D. Birnie, B.Sc., Ph.D., and Sylvia M. Fox, M.A., M.I.Biol. (Pp. 173+xviii; illustrated. 60s.) London: Butterworths, 1969.

**Cardiac Diagnosis.** By Noble O. Fowler, M.D. (Pp. 722+xiii; illustrated. \$23.50.) London and New York: Harper & Row, 1969.

**Histopathologic Features of Cardiac Arrhythmias.** By Lino Rossi. (Pp. 297+xv; illustrated. \$22.) Milan: Casa Editrice Ambrosiana, 1969.

**The Nervous System.** By Peter Nathan. (Pp. 391; illustrated. 10s.) London: Penguin Books, 1969.

**Index Pharmacorum.** Synonyma, Struktur und Wirkung der organisch-chemischen Arzneistoffe. By Hellmut Ippen. (Pp. 693+xxviii. DM. 130.) Stuttgart: Georg Thieme Verlag, 1969.

**Virology Monographs. Interferon.** Vol. 6. By J. Vilcek. (Pp. 141. \$10.50.) Vienna and New York: Springer-Verlag, 1969.

**Infectious Diseases: Epidemiology and Clinical Practice.** By A. B. Christie, M.D., D.P.H., D.C.H. (Pp. 1047+xviii; illustrated. 120s.) Edinburgh: E. & S. Livingstone, 1969.

**Side Effects of Drugs.** A Survey of Unwanted Effects of Drugs, Reported in 1965–1967. Vol. VI. Edited by L. Meyler and A. Herxheimer. (Pp. 561+xi. 230s.) Amsterdam: Excerpta Medica, 1969.

**Advances in Planned Parenthood.** Vol. 4. Edited by Aquiles J. Sobrero, M.D., and Sarah Lewit. (Pp. 152+xviii; illustrated. 88s.) Amsterdam: Excerpta Medica, 1969.

**Muscles, Molecules, and Movement.** By J. R. Bendall, B.A., Sc.D. (Pp. 219+xx; illustrated. 35s.) London: Heinemann Educational Books, 1969.

**Evaluation of Drug Effects on the Eye.** Proceedings of a Symposium held at the Royal Society of Medicine, London, 2 May 1968. Edited by P. V. Pigott, M.B., D.O. (Pp. 129; illustrated. 45s.) Horsham, Sussex: Trust for Education and Research in Therapeutics, 1969.

**Children Under Stress.** By Sula Wolff. (Pp. 248+xiii. 42s.) London: Allen Lane. The Penguin Press, 1969.

**Methods of Multivariate Analysis.** By Keith Hope, B.A., M.A., Ph.D. (Pp. 165. 30s.) London: University of London Press, 1969.

**The Medical Clinics of North America.** Vol. 53, No. 2. **Medical Emergencies.** Edited by Henry E. Zellman, M.D. (Pp. 483+vii; illustrated. No price given.) Philadelphia and London: W. B. Saunders, 1969.

**Practical Nursing.** Including Hygiene, Elementary Psychology, and Dietetics. By the late W. T. Gordon Pugh, F.R.C.S. Edited by P. D. Gordon Pugh, O.B.E., F.R.C.S. 21st edition. (Pp. 1331+xiv; illustrated. 60s.) Edinburgh and London: William Blackwood, 1969.