Such questions cannot be solved without a great deal of painstaking research. Census data alone could hardly provide all the answers. Migration statistics will not be enough by themselves. There must also be a good general knowledge of the economic and social aspects of the original migration; a special census-type analysis of people who have returned; and some close study of the personal motivations and aspirations involved in particular cases. All these are provided in this monograph, which succeeds not only in giving a reasoned interpretation of the principal aspects of the return movement but also in holding the reader's interest by a commendable brevity and clarity. This is a model report.

Here are just a few of the findings:

(i) Every Puerto Rican knows a good deal about the United States; one in three has lived there, and the others have either spent holidays in the USA or have relatives on the mainland.

(ii) Migration, both outward and return, is closely associated with the general movement from rural to urban areas, and return migrants who originated in the country end in the town.

(iii) There are many types of returning migrant; most of them have spent only a short time overseas and return for family reasons or for social and economic motives, e.g. they did not make a great success in the USA but nevertheless can now occupy a higher social status than before in their home country, especially as a result of skills acquired while away.

(iv) Puerto Ricans live in their own close communities in America, and so integration does not operate to diminish the prospects of their return to the island.

(v) Nevertheless, many are undecided whether or not to return, because of a balance of attraction between the wealth of the USA and the more favourable climate of the Caribbean, and between the *relative* poverty they experience on the mainland and the feeling of home that they have when back in Puerto Rico.

P. R. C.

PATHOLOGY

Ounsted, C., Lindsay, J. and **Norman, R.** Foreword by **Gilbert Glaser.** *Biological Factors in Temporal Lobe Epilepsy.* London, 1966. The Spastics Society Medical Education and Information Unit in association with Heinemann Medical Books. Pp. 135. Price 21s.

THIS PLEASANTLY PRODUCED monograph analyses the clinical case-records of 100 children with temporal lobe epilepsy and includes lengthy follow-ups. The study has been prospective and the findings reported to emphasize those features of the natural history of the disorder which might lead to its prevention. Many of the children were seen and recruited at the time of their first bout of status epilepticus or febrile convulsions, and the largely prospective nature of the work gives it importance.

Temporal lobe epilepsy is common and probably accounts for more than a third of all chronic seizure disorders, as well as being one of the more intractable forms of epilepsy. The seizures are complex and involve behavioural automatisms, personality and thought disorders, and visceral disturbances, and in this book attention is particularly paid to other little understood disturbances of behaviour, such as the hyperkinetic syndrome and the frequently occurring catastrophic rage. Disorders of psychological function and their relationship to home factors, schooling and society are considered, as is the problem of the destructive potentiality of grand mal occurring in infancy and early childhood. The indication that uncontrolled grand mal may lead to more severe temporal lobe epilepsy has important implications with regard to the treatment of grand mal and its prevention. The work includes detailed neuropathological studies, and these emphasize the separateness of the effect of status epilepticus from brain damage due to encephalitis and trauma.

The diagnosis of temporal lobe epilepsy may be difficult because of the brevity of the attacks, and in the 100 children many had been mis-diagnosed before investigation as suffering from petit mal. The understanding that behavioural disturbances such as hyperkinesis, rage, and learning difficulties may be expressions of temporal lobe epilepsy is important, and the authors analyse these carefully and helpfully in relation to their subject. Their data is clearly, if not statistically, presented, and the frequent case-histories are useful aids to the understanding of the problems which the authors have written about so well.

The analysis of the 100 biographies shows that temporal lobe epilepsy is a crippling and potentially mortal disorder. In only two of the patients was it due to genetic disease, namely phenylketonuria and tuberose sclerosis, and the point is made that the recognition of such genetic disease may allow prevention (by counselling) of the epilepsy and its associated defects of mentality, personality and work ability. Other aetiological factors were birth injuries, intracranial infections and febrile convulsions, and stress is made of the importance of attempting to lower their incidence, as well as recognizing the possibility that they may lead to temporal lobe epilepsy and taking prophylactic measures against this.

MILO KEYNES

PHYSIOLOGY

Kare, Morley R. and **Mailler, Owen** (Editors). *The Chemical Senses and Nutrition.* With a Bibliography on The Sense of Taste by **Rose Marie Pangborn** and **Ida M. Trabue**. Baltimore, 1967. Johns Hopkins. Pp. 495. Price 119s.

THIS MONUMENTAL VOLUME contains the contributions of thirty-four zoologists, neurophysiologists, psychologists, clinicians, entomologists and geneticists at a symposium, held at Cornell in 1966 and sponsored by the Nutrition Foundation. To the reviewer's knowledge this book is the first full-scale attempt to integrate the existing knowledge of taste and its associated perceptions with the science of nutrition and thus to begin the construction of flow diagrams, which indicate the numerous components of short- and long-term interactions and regulations between feeding behaviour and diet.

Each group of papers was introduced by a chairman and summarized by a critic and each paper was supposed to deal with one or several of the following topics: the physiology and functions of taste; the interactions of the chemical senses with metabolism, nutrition and the physiology of the organism concerned; the limitations by experience on chemical sensory information; the interaction of the chemical senses and receptors in the control of food and liquid intake.

This aim has to some extent been achieved. However highly specialist terminology and even jargon have not been entirely eliminated by the editors, as was their declared aim. Thus in the excellent chapter on the genetics of taste perception repeated mention is made of "Gaussian substances" meaning substances—practically all sapid substances, the taste thresholds for which are according to some scale about normally distributed in the population.

The 96 pages of bibliography on the sense of taste contain titles of about 3,500 books and papers published between 1566 and 1966. Though it is a mine of information, it does not contain all references listed after the individual papers in the book. Thus these lists must be additionally consulted by the reader.

H. KALMUS