Book Reviews


This Research Monograph brings together the results of the author’s remarkably complete follow-up study, at the age of 6–9 years, of the children of a birthweight of 1800 g. (4 lb.) or less, who were originally included in the Medical Research Council’s investigation of retrolental fibroplasia. They were born during 1951–53 in one of the 14 British centres which supplied the obstetric and perinatal information, and it is estimated that they represent the product in this weight range of no less than 230,000 total births. Of the 1128 who survived the first six months of life, 28 had died and 19 could not be traced: the remainder were all seen by a health visitor, and 1012 were assessed by a test of IQ appropriate to their age and any neurological disability. A gross handicap (blindness, deafness, cerebral palsy, or an IQ of less than 50) was found in 13·6% of the 759 singletons and 5·9% of the 322 survivors of multiple births, and just over 6% of the whole group had had one or more convulsions. Separate chapters discuss clearly the different aetiological factors which can be shown to be related to these different handicaps. Short gestation and cyanotic attacks, for instance, are clearly related to the syndrome of spastic diplegia and to perceptive deafness, while being born small-for-dates clearly increases the risk of developing convulsions or cataracts. But one of the most important and provocative findings is that if these grossly handicapped children are excluded, the IQ of the remainder does not differ from national norms.

It is of great value to have all this work, much of it already published in a series of separate papers, brought together and discussed as a whole, with suggestions for prevention and for future study—but the price is a handicap which may limit the effective distribution of this monograph.


This concise textbook about the premature infant now has a significant subtitle ‘and other babies with low birth weight’. A lengthening of 56 pages from the previous edition is more than justified by the inclusion of new material on the causes and prognosis of low birthweight, the respiratory distress syndrome, neonatal hypoglycaemia, and neonatal infections and their treatment. The deservedly high reputation of this excellent text will be further enhanced by this edition. The book is well produced and the references are most extensive.

It is so good that the reader is made impatient for yet a further edition, in which perhaps more information might be included about the techniques used in the clinical assessment of maturity of newborn infants. In the present edition the author might be considered over cautious about the use of oxygen for the respiratory distress syndrome, and some authorities would disagree with the statement that in the treatment of cyanotic attacks the oxygen concentration must be rapidly reduced immediately an attack is overcome. The value of early feeding in the prevention of hypoglycaemia in dysmature infants is perhaps still considered too controversial to be mentioned in this edition.

It is difficult to single out particular aspects of this book for special praise, when the general standard is so high, but the section on the epidemiology of low birthweight is particularly valuable, because much information is brought together from many varied sources for the first time and submitted to succinct analysis. Dr. Mary Crosse has put us all in her debt by this up-to-date and excellent revision of her famous book.


This small book manages to give a brief account of the main theories of the origin of speech, as well as describing normal speech development in the child. It gives, as we would expect, evidence of massive erudition, in a historical account of thought about aphasia, apraxia and agnosia. The book as a whole is founded upon a particular thesis—‘That the key to our understanding of speech and its pathology is a physiological one, physiology being the link between the anatomy of the brain, in terms of which we describe lesions, and psychology, in terms of which we apprehend speech disorders.’ The author calls the several physiological organisations that must subserve speech ‘schemas’ and he hypothesises the role of the schema as the means by which a large number of variable stimuli elicit the same response. Some mechanism such as this must underlie, for example, the child’s ability to recognize a particular word spoken so differently by his father, his mother or himself. The author suggests that a schema works by automatically calculating that a stimulus possesses a certain set of properties, and refers to the evidence that the organiz-
tion of cortical neurones is such as to make this possible. Lord Brain posits a hierarchy of schemas, reminiscent of the clinical tradition we usually call Jacksonian. However, he claims a functional independence of schemas to account for the possibility of the various disorders, the receptive or the expressive, and so on, to exist in isolation. He also describes, however, ‘central word-schemas’ to account for those disorders which affect both the receptive and expressive functions of language together.

The importance of this book lies in its comprehensive and critical introduction to the literature on the one hand, and on the other, the introduction of the concept of schemas, operationally defined, that link up what are otherwise discrete, unrelated facts scattered throughout linguistics, phonetics, communication, probability and information theory, morbid anatomy, psychiatry, psychology, and so on.

In the section ‘The Nature of Words’ for example, one meets terms such as ‘phoneme’, without their being clearly defined. Such highly technical concepts, taken from linguistics, need to be very carefully explained before they are used, as they are also steps in a very brilliant, complex argument which is otherwise obscure. At the same time, it must be accepted that the theoretical problems attaching to the nature of normal and disordered speech, as to those of vision, are fantastic. Both vision and speech are almost inextricably placed at the inter-face of body and mind, and are also intrinsically difficult subjects in themselves. The philosophers have yet to clear up the body-mind problem for us, and so we are left with some authorities tending to underrate psychology and psychopathology, and some psychologists and psychiatrists sometimes seeming to ignore that we have bodies at all. Lord Brain quotes approvingly Head’s comment on the ‘diagram makers’ of 19th-century neurology, ‘They failed to appreciate that the logical formulae of the intellect do not correspond absolutely to physical events, and that the universe does not exist as an exercise for the human mind.’ Our eyes are better than cameras, for what we see is embedded in our past visual and other experiences and our present anticipations. Similarly our ears are microphones with memories and intelligence; perception and language go together to form much of what we call intelligence; language also, in a sense, extends our intelligence out into time, whether we are listening, or speaking. On the one hand, we store up what we hear, as we hear it, until it makes sense to us, in units of meaning not equivalent to sentences, which are themselves indefinable. On the other hand, having an idea, which may exist entire in our mind at a specific moment, we have to express that idea, if we must, in words, in a serial order in time, the idea itself evoking words which are mutually modified by the laws of the language we use. The mind seems able to compute in terms of probabilities what words we are likely to hear, or need to think of next, to understand or to express meaning. Apart from the microphone task of hearing mere noise, we can keep track of a meaningful voice in a crowd which involves both a statistical analysis of all the sounds we hear, and excluding the irrelevant voices, but also, by assessing the time delay between the two ears, being able to determine the direction of, and follow, the speaker, even if he moves about. Both picking out the voice against a background of sound, and direction finding, involves storing the incoming signals for measurable amounts of time. Here lie problems for the child, deaf in one ear or hearing via a hearing aid in one ear, in a noisy classroom, unable to pick out and keep track of the teacher’s voice.

Hearing and understanding seem indeed to need several layers or classes of discrimination, most of them operating unconsciously, or physiologically. We need, as Lord Brain states, ‘A hypothetical principle which will explain the facts (so that) we can then ask the neuro-physiologist whether the structure and the functions of the nervous system are capable of acting in accordance with the hypothetical principle and whether there is any evidence that they do.’

Stated in a very simple way, but reviewed more fully in the text, the facts established by experiment seem to indicate that we store the received sounds of a chosen voice, say, as sounds (phones) for under a second, then another discriminatory level becomes activated, which deals with the heard sounds in terms of the meaningful sounds we could potentially make ourselves (auditory phoneme-schemas); this newly activated level holds the information for a small but appreciable amount of time again, whereupon it is transferred to yet a further discriminatory level (short-term memory) in which the sounds are consciously identified and experienced as meaningful words (via word-meaning schemas, and sentence-schemas), having been matched, also unconsciously, against central word-schemas, one of the higher physiological and unconscious levels of organization in respect of words, a process which is basic to both the comprehension and expression of words. Such conscious information within 5 to 6 seconds then either fades or it can be transferred yet again to a long-term memory store.

It is fascinating to see the links revealed in this text between neurology and psychiatry. Janet and Freud are among the illustrious figures who are quoted and who have contributed to both the fields of neurology and psychiatry. Indeed, it was Freud who introduced the term agnosia. It is language that makes us essentially human. It is in particular in the anatomy, psychopathology and morbid anatomy of speech that one sees clearly how any simple mechanistic explanatory system pertaining to speech must fail to be satisfactory. The neurologist of genius is led to posit unconscious mental and physiological mechanisms, just as the psychiatrist has had to. We must regret that there will not be a third edition under this author’s hand.


This book is the second volume on Assessment of Cerebral Palsy by Kenneth Holt. In writing it, he is