obvious evidence. Dr. Berg has assembled a long list of conditions, hereditary and environmental, which result in mental defect. But this list is far from complete, and it is not so much extreme rarities that have been excluded as some relatively common conditions, especially under the heading of postnatal environmental causes. The following are some of the more serious omissions. (1) Neonatal hypoglycaemia, especially involving the 'small for dates baby' which some believe may cause as many cases of mental defect as does mongolism. (2) Cerebral vascular accidents resulting from severe water and electrolyte disturbances. Gastro-enteritis receives two lines, but this very important subject deserves full consideration. (3) Infantile spasms (lightning fits) which in more than 50% of cases affects previously normal infants and almost invariably leads to severe mental defect. (4) Infantile chronic subdural haematoma. Head injury receives a mention but not this common and serious consequence. (5) Encephalitis. The author states that infectious fevers, for instance measles, chicken-pox, and scarlet fever can sometimes be followed by mental deterioration, but he does not state that this is nearly always secondary to obvious encephalitis. The only other form of encephalitis noted is the defunct disease, encephalitis lethargica. To these relatively common conditions one could add a number of rare conditions, including infantile hypercalcaemia, idiopathic hypoglycaemia, primary hyperparathyroidism, chronic idiopathic hypoparathyroidism, and several degenerative diseases of the central nervous system in childhood such as metachromatic leucodystrophy and ataxia telangiectasia.

But there is another and different sort of omission: in spite of this long list of known causes of mental deficiency the aetiology in the great majority of the severely subnormal (idiots and imbeciles) remains unknown: this surely needs to be said and discussed. Institutions for the mentally defective should provide a setting in which these cases of unknown aetiology can be sifted and analysed—by a paediatrician. Finally, in this chapter there are certain errors that could have been avoided by consultation with a paediatrician. On page 141 Dr. Berg states, 'Thus, all hereditary conditions are congenital although some congenital ones are not hereditary'. But the sense in which the word congenital is used today is *phenotypically* present at birth, not genotypically. Thus there are many hereditary conditions which are not congenital, such as Huntington's chorea and male baldness. On page 140 he states that in rhesus incompatibility the products of the haemolytic process can seriously damage *fetal tissue*, including the brain. This is untrue, as is the implication that the object of exchange transfusion is to remove harmful maternal antibodies from the newborn baby.

All the contributors to this book are clearly highly intelligent people but Dr. Berg is not the only one of whom it could be said that he is sometimes out of his depth. Professor J. Tizard has some harsh words to say about the 'traditional narrow medical approach to the handicapped', but this book suggests that clinical medicine has much to offer to the study of mental defect and the practical problems of helping the subnormal. Of course the psychologist has an essential role, but may the medical profession, chastened by the psychologists' criticism (not wholly justified, but not wholly unjustified), and in collaboration with them, play a greater part in the future? Finally, it is the reviewer's opinion that the mentally subnormal both in the present and in the future have more to lose than to gain by 'mental deficiency' being separated off as an isolated professional discipline.


In a paediatric context the word 'development' is gradually becoming restricted to the unfolding of central nervous function rather than to all aspects of structural and functional growth; thus this book is not concerned with, for example, height and weight, maturation of enzyme systems, development of immunity mechanisms, and so on. Not even all aspects of central nervous function are included, since the author has deliberately eschewed any consideration of emotional maturation or the development of personality. What remains is nevertheless a very large subject and one that is of continual importance in the day-to-day work of a paediatrician.

If this book is not now familiar to all readers of the *Archives*, it should be: it is written with clarity and with a justifiable air of personal authority and is delightfully and appropriately illustrated with photographs and anecdotes: it is a book to be read through and to be kept as a work of reference—most paediatricians in this country must value it for both purposes. It can, therefore, easily withstand a little gentle criticism, directed towards some muddled thinking revealed in one of Professor Illingworth's more forthright statements. He repeatedly stresses the importance of history-taking in developmental diagnosis. 'Without a good history which I have taken myself, I am most reluctant to give an opinion about a child's development. It is in this matter that I disagree most strongly with those psychologists who attempt to make their developmental diagnosis and predictions purely on one objective examination.' In the reviewer's opinion this disagreement probably arises from a misunderstanding. Professor Illingworth discusses the value of history-taking under six headings. (1) A history of prenatal and perinatal factors may be relevant to the diagnosis. (2) The environmental circumstances. (3) The assessment of rate of development (i.e. history of milestones from the mother). (4) An account of the rate and mode of development in siblings. (5) Other family history, e.g. sinistrality or dyslexia. (6) History of achievements to supplement and confirm one's observations, i.e. comments of an observant mother.

But history-taking is better classified under three headings, the first two of which are relevant to developmental diagnosis, whereas the third is not. First, there
may be evidence which mitigates the significance of retardation, for instance, prematurity (included under Illingworth's first heading), emotional deprivation, or prolonged illness (in his second), and the family pattern of delayed development in children who subsequently turn out to be normal (in his fourth). Secondly, it is clear that one developmental assessment has not as reliable a predictive value as two or three or four or better still, continuous observation. Under his headings 3 and 6, Illingworth in effect obtains further developmental assessments from the mother as a substitute for not having done them himself. This is entirely reasonable—the mother may be less sophisticated an observer than the paediatrician, but at least her observations are continuous. Thirdly, there are Illingworth's categories 1 and 5, and it is in this connexion that he is illogical. He says himself that adverse perinatal factors do not imply that the child in question will be abnormal (neither does an abnormal family history). That being so, they should not be taken into any account in developmental assessment except as a warning to the examiner not to try to be too clever too early or as a reminder to carry out an adequate examination. Severe neonatal hyper-bilirubinaemia does not necessarily imply deafness, but of course a baby may be deaf without ever having been jaundiced. Even a history of really gloomy significance, such as cardiac arrest at birth, or prolonged and uncontrollable neonatal convulsions, should not influence one's assessment of the baby's development.

In this, the third edition, Professor Illingworth has written new chapters on reflexes and reactions of the newborn, the assessment of maturity and (particularly valuable) assessment for adoption. His colleague, Dr. Kenneth Holt, has added a useful contribution on seeing and hearing. New editions seem to appear at three-yearly intervals, so here are a few points for 1969. In the section on prenatal and perinatal factors a much more detailed discussion is needed of low birthweight due to intrauterine malnutrition rather than to prematurity. On page 93 he suggests that in the dysmature baby defective physical and defective mental growth both begin in utero. The evidence, such as it is, opposes this view, but neonatal hypoglycaemia, to which 'small for dates' babies are particularly prone, is probably a much commoner cause of mental and motor retardation than has hitherto been recognized. In the same section he should mention cytomegalic inclusion body disease of the foetus as a recognized cause of microcephaly and mental deficiency. In the section on the neurological assessment of maturity, attention should be drawn to Robinson (Arch. Dis. Childh. (1966), 41, 437)—the only really convincing paper on the subject hitherto. Dr. Holt should be asked to enlarge on fixation and following and head-turning to a diffuse light in the newborn, since these reactions may be dependent on functioning cerebral hemispheres. Finally, could not Professor Illingworth provide more details and case histories of the relation between emotional deprivation in early infancy and motor and mental retardation?

But the 1966 edition will still be very useful long after 1969.


The understanding and management of the problems of the handicapped child and his family are the very essence of paediatrics. Readers of this book will find that Dr. Kershaw has not only an insight into these problems but also the ability to express himself in the written word. He has a style and command of language unusual in a medical author and it is impossible not to be affected by his enthusiasm. Yet he maintains a logical and common-sense attitude without recourse to emotion and sentimentality.

The basic principles of accepting the handicapped child and using all the available services to help him and his parents to find his place in society—at home, at school, and in employment—are set out in the introductory chapters. The special problems of children with specific handicaps such as blindness, deafness, cerebral palsy, and mental subnormality are discussed in similar terms in later chapters. Very little is said of the purely medical aspects of the various handicaps and the emphasis is on assessment, management, and education as practised by doctors, social workers, educationalists, and therapists of various kinds. The problems of coordination of effort of workers in such differing disciplines are not neglected. "The concept of a team evokes the concept of a captain of the team and many are those who assert their divine right to the captaincy." However, 'in the end . . . community of purpose and zeal in a cause reconcile the conflicts'.

Illustrative case histories are woven into the text in an unobtrusive way, and the reader becomes involved in the fortunes and problems of Martin, whose unstable family life resulted in severe and continuous asthma, or of Sammy who, with an IQ of 75, was outshone throughout his school life by a brother of above average intelligence, and finally fulfilled himself by becoming an accomplished bicycle thief at the age of 12, or of Susan, a spastic who was rejected by special schools, but was saved from intellectual starvation by a patient and sympathetic home teacher.

If it is true, as the author says in his preface, that some lay workers have found the book too technical and some doctors have found it not technical enough, then these critics have not appreciated the real aim of the book. It is to teach the philosophy that 'the handicapped child is a whole person who needs to live a whole life', and that 'his care is a matter of team work in which he and his family are as much members of the team as the professional workers who look after him'.


Surgery of the brain and spinal cord in children is not everywhere acknowledged as a separate branch of neurosurgery. It is true that in very few centres outside the Soviet Union has it been possible to establish independent departments where its special features can be properly studied. Dr. Klein had the good fortune to