Hématologie Géographique. Écologie Humaine Caractères Héréditaires du Sang. By Jean Bernard and Jacques Ruffié. (Pp. vii + 436; 56 figures + tables. 86 F.) Paris: Masson et Cie. 1966.

Jean Bernard and Jacques Ruffié are well known as haematologists, but in this book they have shown themselves masters of the whole subject of human polymorphism of blood and plasma. They are not only dealing with the blood groups on the surface, but also with the haemoglobin in the interior of the red cells and with numerous plasma proteins, such as haptoglobins, transferrins, and the coagulation factors.

The book begins with a discussion of human ecology and the association of race and biological climate, such as the adaptation of man to the savannah and to tropical forests. There are 15 pages on the ethnic and social aspects of the diversity of man, describing the neolithic revolution of old and the industrial revolution which is recent, and human society in town and country, in advanced and backward societies.

Abnormal haemoglobins, the thalassaemias, and enzyme deficiencies are each dealt with exhaustively, but not too lengthily. The enzyme deficiencies now include those found inside the red cells, such as glucose-6-phosphate dehydrogenase deficiency. Here the polymorphism almost equals that of the abnormal haemoglobins. Other intracellular polymorphisms exist for pyruvate-kinase, diaphorase, and catalase. For plasma, perhaps the most important examples of polymorphism are the pseudocholinesterases and caeruloplasmin.

A large part of the book is given over to the blood groups as a whole, both to their detailed laboratory properties and to their anthropological aspects. The blood groups of platelets and white cells are also included, and so are the serum groups, such as Gm, and even the individual antiglobulins.

It is remarkable that such an all-embracing survey can be so thorough and yet be contained in 436 pages. This book can be thoroughly recommended. The French is not difficult to follow, and most readers in this country will enjoy it. Even so, one wonders whether a translation into English would not be well justified.

HERMANN LEHMANN

Morphogenèse Pathologique. Des Monstrosités aux Malformations. By Bernard Duhamel, with the assistance of Pierre Haegel and Robert Pagès. (Pp. 307; 256 figures + 24 tables. 110 F.) Paris: Masson et Cie. 1966.

France has made many contributions to the science of teratology. Already, in the 16th century, a deep interest in abnormal development and in its causes was manifested by Ambrose Paré, and, in a more popular manner, by Michel de Montaigne. The basic terminology employed in teratology largely stems from the work of the Parisian anatomists Etienne and Isidore Geoffroy de Saint-Hilaire in the early 19th century. Subsequent contributions by Dareste on the artificial production of

monstrosities, of Ancel on chemical teratogenesis, and of Etienne Wolff, have clearly demonstrated a continuation of this interest. Finally, during the last ten years the observations of Turpin and his collaborators have contributed largely to knowledge concerning, and interest in, chromosomal anomalies in relation to abnormal development.

The volume under review is a worthy addition to this tradition; it has as its principal author Dr. Bernard Duhamel, the children's surgeon, who has had the advantage of the collaboration of Drs. P. Haegel and R. Pagès, who are both embryologists.

A distinction is made by the authors between 'monstrosities' and 'malformations'. The former are thought to arise from perturbations in morphogenesis, whereas 'malformations' arise from derangements in organogenesis or histogenesis. The distinction is perhaps not always as easily determined as the authors consider possible, but it is a fact that the earlier the onset of abnormal development, the more widespread is its effect. The abnormalities are considered under several different headings; indeed, it is in the detailed analysis of the regional development perturbations that the greatest interest of this book lies.

The developmental errors are discussed under three principal subgroups. In the first are included the notochordal dysraphias and encephalo-myelo-dysraphias. Secondly, there is the extensive subgroup of perturbations of morphogenesis that result in malformations of the ventral body wall (ectroptychia), the cephalic embryonic pole (ectroprosopia), the caudal embryonic pole, including caudal retrogression (ectrouria), and of the limbs (ectromelia). Detailed accounts are given of the mechanisms involved in the production of monsters in these subgroups. The associated diagrams and schemes submitted in illustration of the possible or probable method of origin and of the result of the morphogenetic fault are often very helpful. Thirdly, the final part of the book is devoted to a fascinating summary of the different types of double monsters. It again contains most useful illustrations.

The bibliography, as with so many French books, lacks titles of papers and contains some errors. The alphabetical index, however, includes a useful teratological lexicon.

In spite of a formalistic approach, this helpfully illustrated volume should prove of interest to anyone concerned with problems of abnormal development. It will, perhaps, be specially useful to those concerned with double monsters and their classification.

J. D. BOYD

Endocrine Genetics. Memoirs of the Society for Endocrinology, No. 15. Edited by S. G. Spickett with the assistance of J. G. M. Shire. (Pp. xv + 325; illustrated. 70s.) London: Cambridge University Press. 1967.

This symposium was conceived, planned, and organized by Dr. S. G. Spickett, who died tragically at the age