are morphologically indistinguishable. The lessons from experimental embryology have tended the same way, and it was established in the early years of this century that the stage of embryonic development is more decisive in teratogenesis than the teratogenic agent employed. For over a generation now, intensive investigations have proceeded on the mechanisms of development: the neural plate and the optic vesicle are examples of "organizer" tissues which determine development in embryonic tissue in their vicinity. Nuclei from various anlage were seen to have morphogenetic properties at particular periods of embryonic development, and this knowledge has led to biochemical studies involving enzyme systems and protein synthesis. Teratogenesis has become channelled into three distinct procedures—artificially induced deficiency (such as vitamin-A deficiency in development), the administration of metabolic inhibitors which interfere with a necessary enzyme system, and recognition of the hereditary lack of (or fault in) such enzyme systems. And a synthesis is beginning to emerge which embraces knowledge derived from clinical studies, genetic analysis, experimental observations, and biochemical investigations.

All this is reflected in this study by Lopashov and Storesha. This is very welcome, for though English literature contains excellent volumes of the descriptive embryology and biology of congenital defects, and also many individual papers on different aspects of experimental embryology as applied to the eye, there is no overall survey of the new embryology with its emphasis on the experimental approach such as has developed in recent decades. This book suggests that present-day ocular embryology is almost a new discipline. Even the chapter of some 30 pages on descriptive embryology departs from the more usual formal accounts; it draws extensively on comparative anatomy, especially of those biological forms used in experimental observations. For the rest the text follows a physiological rather than an anatomical course in dealing with normal formation and its aberrations. A fascinating chapter deals with recent work on regeneration of retina and lens, with its tantalizing promise of clinical applications ultimately.

Language difficulties are still a barrier against the dissemination of work in Russian. Through the world this language barrier remains formidable. This rendering from Russian sponsored by the Israel programme for scientific translations shows that fortunately countervaluing measures are also developing. Such translations are beset by difficulties, and the present effort by Dr. B. Meytar is particularly competent and graceful.

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Books Received

Review is not precluded by notice here of books recently received.


