

clear, the reader will readily sense the promise for the early emergence of basic, biochemically defined mechanisms that are conceptually adequate to describe the controlled series of sequential changes occurring in the development and differentiation of animal embryos.

The amount of new information published since this volume went to press speaks for the current vigor of this field of investigation as well as for the limited "timeliness" of a volume published in 1965!

The following statement is from the preface: "The present treatise is, therefore, intended to introduce advanced students already familiar with elementary embryology and biochemistry to various areas of biochemical embryology." Further, it is stated that "In selecting the material, emphasis has been placed on those problems in which research is currently most active and in which a promising contact between experimental embryology and biochemical inquiry has been established." For the most part these objectives have been realized—at least as well as is possible in the current scene of relatively rapid appearance of scientific papers and the relatively slow publication of multi-authored, expensive review volumes.

The need for a greater number of inexpensive paperback reviews of more limited scope, which can be more rapidly published and revised (or discarded!), is urgent to help stem the spate of expensive volumes that are rapidly filling our libraries with rapidly obsolescent information.

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Science in Hungary

The Hungarian word for science, *tudomány*, has a broader meaning than its English equivalent. The concept is more closely related to the German term *Wissenschaft*. Thus, the Hungarian notion of science includes both the natural and social sciences and even some of the humanities. **Science in Hungary** (Corvina Press, Budapest, Hungary, 1965. 348 pp.), edited by Tibor Erdey-Grúz and Imre Trencsényi-Waldapfel, devotes seven chapters to the natural sciences (mathematics, physics, chemistry, agronomy, earth sciences, biology, and medicine) and

12 chapters to the social sciences and humanities (economics, linguistics, ethnography, philosophy, archeology, Oriental studies, musicology, history, political and legal sciences, history of art, and classical and literary scholarship).

The introductory chapter, by T. Erdey-Grúz, describes and analyzes the growth and institutional setting of modern science in Hungary in the period following World War II. It devotes special attention to the Hungarian Academy of Sciences, an institution founded some 140 years ago, which since 1949 has directed the scientific life of the country by coordinating the work of research institutes and learned societies. Each chapter traces briefly the historical development of a particular discipline in Hungary and presents its achievements and problems. Major representatives and publications (books and journals) in each field are enumerated for the period treated.

A more detailed treatment of the role of the universities and learned societies, the traditional centers of science in Hungary, would have made the book more complete. The disproportionate emphasis on the humanities and social sciences is surprising in view of the fact that more than 70 percent of the academicians are active in the natural and exact sciences.

The book does not answer the puzzling question of the "overrepresentation" of Hungary in many branches of modern science. It does not analyze the political and social forces which hampered scientific developments and which resulted in the exodus of a large number of Hungarian mathematicians, physicists, sociologists, and economists during the pre-World War II period. Among the small nations, Hungary has been one of the major "exporters" of scientists to the more advanced countries—for example, John von Neumann, L. Szilárd, E. Teller, E. Wigner, Th. von Kármán, A. Szent-Györgyi, G. von Békésy, G. von Hevesy, R. Bárány, the Polányis, and K. Mannheim. Five of those named are Nobel laureates.

The book shows in some detail recent efforts to broaden the institutional and social base of science, to coordinate research on a national basis, and to make science out of the individual activity of a few dedicated men into an integral part of Hungarian culture. The current momentum in research, reinforced by the widening international contacts and the end of

the ideological dogmatism of the Stalinist cast, promises a bright future for science in Hungary.

Science in Hungary is the first undertaking of its kind made available to an international audience. It should assist persons interested in the developments in science and the intellectual history of Hungary. An index would have made the book more useful.

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Theoretical Physics

The essays assembled in this volume, **High Energy Physics** (Gordon and Breach, New York, 1965. 521 pp., \$10.50), edited by C. DeWitt and M. Jacob, are the lectures delivered at Les Houches during the Summer School of Theoretical Physics in 1965. With one exception they are devoted to the two most actively pursued methods in the theory of strong interactions of fundamental particles: S-matrix theory and group theory. But the exception is an important one. After the discovery of parity violation in weak interactions of elementary particles in 1956 (to be precise, the parity as defined by strong interactions, for the meaning of discrete symmetries like parity P, time reversal T, and charge conjugation C, depends on the type of interaction), it was generally believed that the time reversal invariance is still an exact symmetry; so is CP, because, on the basis of some very general principles the product, CPT is expected to be an exact symmetry. The experimental discovery in 1964 by Christenson, Cronin, Fitch, and Turlay of the decay of long-lived K_0 -meson into two mesons, $\pi^+\pi^-$, indicates that the time reversal invariance, as is used now, must be violated in some of the interactions entering the above reaction. As a result, the possibility of a breakdown of time-reversal symmetry has been reconsidered in all types of interactions. In his lecture, J. S. Bell not only discusses these questions, but also provides an excellent review of the whole theory of weak interactions, including experimental comparison of various phenomenological principles of which this theory has an abundance.

The background of the use of the S-matrix and group theoretic methods in high energy physics has been discussed in detail in *Science* [144, 698 (1964)]