ence and the almost stationary status of social and educational institutions. This is especially true in the underdeveloped countries of the world, which will soon find themselves confronted with patterns of life to which they will be able to adjust only by a slow process of undisturbed development.

Most writers dealing with this grave problem of our time approach it from one of two diametrically opposite angles: they picture, in extravagant terms, the enormous possibilities which modern science and technology offer for the material benefit of mankind, with scant attention to man himself, or they envision economic and social utopias which are more the product of wishful thinking than of a realistic appraisal of technologic opportunities and social possibilities.

While both groups fail to give an integrated picture of the impact of modern science and technology on the social, psychological, and moral behavior of man as an individuum and a part of the community, R. L. Meirer draws from his large fund of knowledge in both the natural and the social sciences to give us a refreshing and provocative appraisal of the most probable course of events, considering both technologic and social factors. As a scholar trained in the exact sciences, he starts, naturally enough, with a sound attempt to quantify material human needs and world resources. He does not ignore spiritual requirements but does not complicate the picture by irrational and imponderable factors. Some agreement exists among scientists concerning an adequate level of living, and human needs can be expressed quantitatively in terms of nutrients, water, fiber, energy, and construction material. Estimates can be made of the availability of the world's renewable resources under conservative application of present agricultural, forestry, and fishery practices, and the probable reserves of nonrenewable resources will permit some extrapolations, provided that some minor resources such as uranium or titanium do not suddenly become major ones.

Where we reach the field of conjecture—namely, in the application of very recent discoveries in the physical and biological sciences to more efficient resource management—we find the book at its best, for it is always scientifically exact, technically sound, and directed toward a world as it is and not as it ought to be. Whether the author speaks about the protein problem, which he correctly considers the most fundamental in human nutrition, or of opportunities for expanding the protein supply by better utilization of marine resources, pisciculture in fresh waters, or growing of algae and other microorganisms, he always remains within the domain of proved scientific facts and technical experience. In one respect only could he have enlarged his exposition of maximal resource exploitation—that is, in the field of wild terrestrial vegetation, of which man uses only about 0.2 percent. There is no reason why the vast catabolism of organic matter, through bacterial and fungal decomposition (especially in the rain-soaked forests of the tropics and subtropics), could not be channeled toward an orderly degradation into useful products without impairing the cycle of nutrient metabolism in nature.

In the chapter on new fuels, the author deals lucidly with the utilization of solar energy, biological photosynthesis, nonbiological photosynthesis, and water- and wind-power as well as with utilization of atomic energy. He estimates the fossil fuel supply at 3×10^{19} calories. The yield of other energy sources, especially that of the "big unknown," atomic energy, cannot even be conjectured. There is no question that energy requirements for food, transportation, thermal comfort, and industry, especially in some newer metal-reduction processes, will increase rapidly, but so also will man's efficiency in utilizing energy.

In the most fascinating chapter of the book, Meirer tries to appraise the impact of this enormous expansion of human knowledge and productive capacity on the structure of society and the patterns of living. True scientist that he is, he meets this difficult problem objectively, without political bias or preconceived opinions. He realizes that the economically underdeveloped countries are not only suffering from overpopulation, or rather underemployment, but are continuously caught in a vicious economic cycle. Because of the low income-level, the people have a tendency to consume all their earnings and are unable to save. This naturally inhibits formation of domestic capital. Since low income is largely due to shortage of capital, the economy remains depressed. This lack of capital is the main factor in the ever-widening gap between scientific discoveries and their application. Only by way of international cooperation between the capital-rich and the capital-poor nations can satisfactory development of the world be brought about, and eventual disaster averted. However, such cooperation should be administered so as to leave the greatest possible freedom of self-expression and development of spiritual values to less advanced peoples.

All in all, this is an excellent book, written by a man who, as a chemist and physicist (University of California) and as an economist (Manchester School of Economic and Social Studies), is on good speaking terms with both natural and social scientists. While the former have lately become concerned with the consequences of their scientific research and discoveries, the latter are paying more and more attention to the dynamics of social and economic developments (especially in the less developed areas of the world), brought about by the progress and the application of science and technology. To both, the book is highly recommended.

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The Organization of the Cerebral Cortex. D. A. Sholl. Methuen, London; Wiley, New York, 1956. 125 pp. Illus. $4.25.

The Organization of the Cerebral Cortex is a summary of some interesting anatomical studies on the cerebral cortex. The point of view is that of quantitative cytological neuroanatomy. D. A. Sholl has some interesting data, from extensive silver preparations, on the distribution and extent of dendritic branchings. He attempts to relate these data to a theory of cortical activity based on connectivity and critical thresholds for excitation.

This theory has succeeded in mimicking one kind of cortical activity—that is, the slow spread of certain spontaneous figures of electric activity under deep Nembutal anesthesia. Such kinds of cortical activity may be confined to states of anesthesia, sleep, toxicity, and epileptic seizures. However, it may be that such mechanisms exist, operate, and are masked in the case of unanesthetized cortex that is bombarded by nonsynchronized activities.

The illustrations are excellent, and the bibliography is useful.

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Structure Reports for 1940–1941. vol. 8. A. J. C. Wilson, Ed. Published for the International Union of Crystallography. Oosthoek, Utrecht, Netherlands, 1956. 383 pp. Fl. 80.

The publication of *Structure Reports for 1940–1941* completes the coverage of all essential molecular structure information for solids, liquids, and gases obtained during the period 1913–50 and published in *Structurbericht,* volumes 1–7 (1913–39), and *Structure Reports,* volumes 8–13 (1940–50). The data for 1952 are now being assembled, and those for 1951 are presumably in press. This