

"THE NATURE OF THE WORLD AND OF MAN"¹

BY J. V. NASH

THIS is an age of specialization. The fact is especially true in science. During the last twenty-five years advances have been made in every field of science greater than the progress in all previous history. The diameter of the stars has been measured, the amazing properties of radium have been analyzed, and the atom has been broken up and its almost incredible interior structure discovered, revealing to us the existence of solar systems in the realm of the infinitesimal. In chemistry, physics, geology, biology, bacteriology, palentology, anthropology, ethnology, zoölogy, and psychology, a mass of new knowledge has been accumulated that is, to the layman, utterly bewildering. So vast are the new fields which have been opened up to exploration that a man might spend his entire time specializing in one branch of science, or even in a minor sub-branch.

Never was the need so great for a comprehensive synthesis of science, such as Herbert Spencer achieved in the nineteenth century. While a specialist may by intensive labor become a master of some particular branch or sub-branch of science, he is apt to be deeply ignorant in other fields. He places so much emphasis upon his own specialty that his point of view becomes distorted. On the other hand if he tries to reach out into other fields, he is likely to get only a smattering of knowledge, which may be of little real value. In any event, he fails to get a true perspective of science as a whole, and of the relations of different branches to one another.

More important still is an understanding of the place of man in the order of Nature, and of the relation of the individual to the world in which he lives.

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The trouble has been that in the past there has been a lack of books designed to present that broad general survey of the entire field of modern science. What is needed is a work that is neither too superficial, through excessive popularization, nor too abstruse and technical; in short, a book that is both interesting and sufficiently thorough to give the reader a firm grasp of the fundamentals of every branch of modern science as worked out in the laboratory and to enable him to perceive the relationships of the parts to one another and to the great whole.

That want is now at last being filled. A noteworthy contribution in this direction will be found in the volume issued last year by the University of Chicago Press, entitled *The Nature of the World and of Man*, edited by Professor H. H. Newman. It consists of a series of brief yet vital surveys worked out by sixteen members of the University of Chicago faculties, each contributor being an outstanding authority in some special branch of science, with all the parts brought into significant relationship.

The purpose of the book is well stated in the *Preface* by the Editor . . . "to present an outline of our knowledge of the physical and the biological world, and to show the position of man in the universe in which he lives. Or, in more precise terms, it aims to assist the individual in the very important problem of forming well-defined conceptions of the cosmos and of his relation to it."

One of the most valuable aspects of the book is the human way in which so many difficult scientific subjects have been treated. The humanization of science is one of the greatest needs of the day. "The authors of this book," we are told, "have not treated science as something cold and austere and apart from human life. On the contrary, it glows with the burning enthusiasm of those who have cultivated it; it is severe only in the standards of truth that it maintains; and it has aesthetic aspects as well as practical. There has been no hesitation in pointing out the present great value of science to mankind and the hopes for better things that it promises for the future."

It is impossible to try to summarize in a brief paper the contents of a book that covers such an immense field. Suffice it to say that the drama of Evolution which it presents, beginning with the birth of the solar system, and going on through the gradual transformation of the earth into the state in which we find it to-day, and then taking up the history of life, both plant and animal, on the

planet, and the emergence of man as the highest form of life, is more thrilling than any novel or romance.

Some parts of the book, such as the chapters on energy, radiation, and atomic structure; on the nature of chemical processes; on the world of bacteria revealed by the microscope; and on the facts of human heredity, present a picture that is utterly amazing in its complexity, yet the broad outlines of which are readily grasped by the reader.

The last chapter, entitled "Mind in Evolution," brings the book to an impressive climax. Here we have a brief discussion of such topics as "The unique characteristics of man," "Man as a part of the evolutionary series," "The evolution of intelligence," "Civilization as a product of intelligence," "Tools as evidence of complex cerebral processes," "Language as the chief product of social intelligence," "Writing," "The contrast between man and animals," and so on.

One who gives this book a careful reading will not only acquire a valuable and significant synthesis of the whole vast range of modern scientific discovery, but will also gain a new sense of the values inherent in human life and character. For the book leaves us with a picture of man as a rational and civilized being the culmination of all the long history of the world's evolution. We perceive that, wonderful as organic Nature and all non-human forms of life may be, the human mind is the most marvellous of all Nature's achievements. In the words of the closing sentence: "In every normal human being there is an inner world of ideas and of recognition of values, for which inner world of rational thought there is no counterpart in the world studied by the physicist or in life below the human level."

Such a book as *The Nature of the World and of Man* is an important and far-reaching step in bringing together "the Science of Religion" and "the Religion of Science," for the redemption of the world.