

But there was in this action of the Church a presage of the disintegrating character of the new doctrines. Descartes's physics practically nullified his theology, yet he was careful not to give offence. With the fate of Bruno, Campanella, and Galileo before his eyes, he naturally felt, as a recent writer expresses it, "no vocation for martyrdom." Nonetheless he pushed his mechanicalism to the extreme and carried it to the very throne of his God, engulfing all nature and all life. With motion and extension alone, supported by the laws of geometry, he constructed the Universe. The construction was largely *a priori* and was in defiance of the experimental principles that he so highly lauded, and in contradiction to the real mechanics that Galileo had just discovered and which Descartes mistook, but it contained most of the theoretical elements of the modern mechanical explanation of nature, and its main hypotheses, as the theory of vortices, the uniform constitution of matter, etc., have persisted to this day. His ideas were, thus, more powerful than even his own application of them, and in the hands of his successors led to the undermining of the very Faith which, from prudence or conviction, he himself had desired to leave untouched.

His system, even now, as shattered by modern research, and in its ruins, with the towers of its real achievements projecting aloft, presents a magnificent spectacle, daring in its scope and execution. The defects of its construction are to be measured by the standard of its time, not by the standard which through its assistance succeeding centuries have been enabled to establish. If it appears repellent in its aspect, harsh in its rigor, it must be remembered that it came from a man to whom "there was no beauty but the beauty of truth," and to whom the natural severity of science was the proudest adornment of civilisation, and redounded most surely to the enhancement of real, practical life.

Descartes, it has been said, is the cross-roads from which the modern paths of thought diverge. He was the forerunner of Newton and Leibnitz on the one hand, and of Hume and Kant on the other. The picture presented in this book, of his mental autobiography, is one of the most pleasing chapters of the history of philosophy. It belongs to the world, from the great heart of which it sprung, untrammelled by the mustiness of the study; and its candor and manliness of view cannot, even now when most of it has become commonplace, and some of it antiquated, fail to arouse from their apathy a people who are hungering for enlightenment.

T. J. McC.

A NEW AND IMPORTANT WORK IN SOCIOLOGY.

The publication of a new work entitled *Science and Faith*,¹ by Dr. Paul Topinard, the distinguished French anthropologist, is certain to arouse much interest in the thinking world, and also to evoke not a little criticism and opposition. For the main problems of life are here boldly attacked from an independent point of view, and the tentative solution of them promulgated in the distinctest terms.

Dr. Topinard's book is essentially a contribution to sociology; but it possesses the additional merit that it has been made by an original inquirer of high rank in a department of science which constitutes the groundwork of sociology, and that consequently its conclusions have sprung from a direct and creative contact with the facts, and not from derivative and secondary theories about those facts. Whatever

¹ *Science and Faith: or Man as an Animal, and Man as a Member of Society. With a Discussion of Animal Societies.* By Dr. Paul Topinard, Late General Secretary of the Anthropological Society of Paris, and sometime Professor in the School of Anthropology. Chicago: The Open Court Publishing Co. Pages, vi, 374. Price, \$1.50.

objections, therefore, some of its special tenets may evoke, its importance as a first-hand investigation, and the weight consequently due to its utterances, cannot be underrated.

But, while written by a specialist, the discussion is not exclusively anthropological and ethnological. The physical, historical, cultural, and psychological factors of social evolution receive the same emphasis of consideration as the biological and sociological proper.

We shall briefly indicate Dr. Topinard's central view.

To begin with, anthropology, supposing it not to concern itself with societies, discovers in man an animal only; man is in his primitive stage perforce subjective, and by a rigorous natural logic egocentric; the law of self-preservation, as determining his conduct, both towards nature and his fellow-animals, is paramount with him. Sociologically considered, therefore, man's animality, man's primitive and inherited egocentrism, is the primal source of all the difficulties that arise in society, the arch-enemy to be combated. And this contradiction, apparent or real, between the individual and society, between the social evolution as it actually is and the social evolution as we should like it to be, constitutes the problem to be elucidated. How has man been changed from an egocentric to a sociocentric animal? By what ideas? By what forms of reasoned conduct? By what organised impulses? By what forms of evolution, natural and artificial? And finally, what norm does the past furnish us for guidance in the future?

A glance at the Table of Contents will show the reader the manner in which Dr. Topinard has endeavored to solve this problem. Man as an animal, the factors and conditions of evolution, the animal family, animal and human societies the human family, political and religious evolution, social evolution proper, the high rôle of ideas in progress, the functions of the State and of education in shaping conduct, are successively considered. We would call especial attention to the pages which deal with the evolution and differentiation of the ego, in all its multitudinous forms. Here lies the key to the situation; and the results of modern biological and psychological research on this subject Dr. Topinard has exploited to the full. The analysis of the ego, so called, furnishes the mechanism of establishing right conduct. Right conduct is originally to be based upon right reasoning, upon an adequate and comprehensive consideration, both from the individual and social point of view, of the determinative facts involved. For the purposes of practice, that reasoning is to be consolidated into fixed and automatic habits: the individual must, so to speak, be de-individualised, or rather, super-individualised; altruism, in the form of the maxim of Christ, "Love ye one another," and as a species of differentiated and enlarged egoism, is the basis of his system, habits and social instincts are the means. In a word, a rationally and socio-centrally acquired ego, mechanical in its habits and super-individual in its impulses, is to be substituted for the primordial, self seeking animal ego. This has been the method by which, in all history, right conduct has been secured; and modern psychology has found the mechanism of this method of education to harmonise with the results of its purely scientific analysis of the human soul.

T. J. McC.

BOOK REVIEWS AND NOTES.

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