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## Science and Faith

THE meeting of the American Association for the Advancement of Science, which took place at Richmond, Va. during December 27–31 will be memorable in the annals of science as being the first to mark that closer co-operation between this body and the parent British Association, to which Lord Rayleigh, in his presidential address to the latter body at Cambridge in August last, looked for aid in promoting international amity. No less will it be remembered as the occasion of the delivery of the two addresses of which the main parts are given in the following pages.

In these pronouncements, two of the leaders of scientific thought in the United States and Great Britain at the present day, Prof. G. D. Birkhoff, the president of the American Association, and Sir Richard Gregory, chairman of the newly formed Division for the Social and International Relations of Science of the British Association, declared their faith in the mission of science in the resolution of the maladjustments which lie deep-seated at the root of the difficulties and the dangers with which the world of to-day is faced. In the words of Prof. Birkhoff, "The increasing number of unco-ordinated theories and mechanical inventions confuse and chill many of us. Man is felt to be a tragic detail in a vast incomprehensible whole, and the old sense of values seems to become less and less real". But he went on to show in his lucid analysis of the function of intuition, reason and faith in the approach to his hierarchy of five ascending levels in the nature-mind spectrum, that while reality is to be attributed to each and all, at each level there is an ever-widening succession of abstract ideas, each explaining imperfectly some aspect of the stupendous whole; but that at the

social level a fundamental truth of transcendent importance is truth and good will in all social relationships. In concluding that a new injunction has been laid upon the spirit of man to know and to understand ever more broadly and deeply, he added that in the daring effort of the man of science to extend knowledge there arises a spontaneous faith which is the most powerful incentive and the best guide to further progress.

In essence, Sir Richard Gregory's address is complementary to that of Prof. Birkhoff. Just as Prof. Birkhoff holds that faith in the ultimate truth of certain fundamental principles is the guiding star of the man of science, so Sir Richard shows that in the study of man and society from the earliest ages it is seen that faith in an unseen power which lies behind the appearance of things is a fundamental component of man's nature. He goes on to demonstrate that, in the course of the development of mankind, faith also has developed, not only in the conception of the object of devotion and the relation of that object to the universe, but also in the extension of the circle of those to whom the ethical system which is its accompaniment is made to apply. Although it has to be admitted that the development of spiritual and ethical concepts has been retarded in comparison with material development, nevertheless it is in the recognition of this conception of a process of continuous development in theological and ethical ideas that Sir Richard sees hope for the ultimate approach one to the other of religion and science, while in the fundamental urge of faith he sees a guide pointing the way to an enlargement of the ethical ideal, in which present differences and antagonisms may be resolved.