INDUSTRIAL RESEARCH IN INDIA

MR. J. J. GHANDY'S presidential address to the Section of Engineering and Metallurgy at the thirty-first Indian Science Congress, held at Delhi, on "Industrial Research, with Special Reference to India", reviews the development of industrial research in India and the work of the Board of Scientific and Industrial Research.

Mr. Ghandy said that the Control and Research Laboratories of the Tata Iron and Steel Company at Jamshedpur, completed in 1937, are specially mentioned as among the finest laboratories attached to any single steel-producing unit in the world; yet industrial research in India is still sporadic and unsystematized, although its importance as the chief instrument of progress increases. A review of the position and organization of research in Germany, Great Britain, the United States and the U.S.S.R. leads to the conclusion that the Government, universities and industry in India must be assigned distinct research functions although working in close collaboration. The Council of Scientific and Industrial Research should correspond to the Committee of the Privy Council for Scientific and Industrial Research in Great Britain, and consist of prominent industrialists, economists and scientific men with the main function of laying down broad principles of policy, co-ordinating activities and receiving financial grants from the Government.

The Board of Scientific and Industrial Research should concern itself largely with science, while the industrial application of scientific research would be the concern of the Industrial Research Utilization Committee. In Mr. Ghandy's view, the broad functions of the Board would be to plan national, scientific and industrial research in collaboration with the Industrial Research Utilisation Committee under the general direction of the parent Council; to develop facilities for executing the national research programme, by setting up laboratories for chemical, metallurgical, physical, fuel and food research, etc., stimulating the growth of private research institutes and laboratories and encouraging the American fellowship plan for this purpose; and to apportion research schemes to its own and private and university laboratories. It should also control, supervise and co-ordinate scientific research activities and technical education, thus ensuring proper collaboration between Government, industry and science; as well as distribute grants to research institutes and individual workers when necessary. It should formulate and submit its general recommendations annually to the parent Council for approval.

As at present, the Board should operate through a number of research committees, each committee being responsible for research in a particular branch of science, with a director of that branch as secretary. The Industrial Research Utilization Committee should be an industrial committee with much wider functions, co-operating with the Board on one hand in formulating a national research programme, for which it would provide the industrial basis, and on the other operating through a chain of industrial committees covering the different groups of industries. This Committee should also devise methods for the utilization of researches completed by the Board, and formulate rules regarding the taking out of patents and the collection and distribution of royalties. The Board of Scientific and Industrial Research should make its own laboratory facilities available to duly qualified workers, and allow industries to conduct research on specific problems with their own research workers in these laboratories on the lines of the American research associate plan.

Mr. Ghandy also suggested a supreme academy of sciences representative of private research associations and academies and eminent scientific men from the universities to collaborate with the Board in the general planning and direction of scientific research. The Board should provide the universities with financial assistance both for the extension of staff and laboratory facilities and for scholarships for post-graduate research, while the universities should give facilities for industrial fellowships for the investigation of specific industrial problems. The Government scientific services require strengthening, and while they should be given the fullest possible measure of autonomy, they should co-operate with the Department of Scientific and Industrial Research in the enunciation of policy. A scientific news agency and greater attention to publicity and the dissemination of scientific knowledge are also advocated.

TRUTH IN ANTHROPOLOGY

MR. VERRIER ELWIN has made notable contributions to anthropology in India. In his remarkable monograph on the Baiga, he has shown that he can get deeper into the life of a primitive tribe than any of his predecessors in that field, while his second monograph, on the Agaria, has shown that he is as well able to present the life of a primitive craftsman and iron-smelter as that of the primitive hunter, agriculturist and poet which makes a Baiga. It must be confessed, however, that his presidential address to the Section of Anthropology and Archæology at the Indian Science Congress at Delhi last January is far from being the happiest of his efforts. He calls it "Truth in Anthropology"; but the matter that follows the title puts one in mind at once of jesting Pilate, for it fairly bristles with controversial opinions stated dogmatically as truths. Worse than that, to allege, for example, that Frazer, Westermarck and Briffault have been influenced in any way *by the political bias of their sources of information* is a very improper and unjust imputation on the scientific integrity of three great men, of whom two at any rate are no longer alive to defend their reputations. To suggest of Briffault, of all people, that his "only standard of judgment appears to be political respectability", shows an ignorance of his work so profound as to make Mr. Elwin's strictures as worthless as they are deplorable. Let him take and read "Reasons for Anger" before he talks further of Briffault and political respectability. To decry the value of Frazer's work is, of course, rather the fashion, and those who do so rarely seem to have read what he wrote or to realize that, had he not written, it is doubtful whether they would ever have written either. Mr. Elwin adds nothing to his stature by swelling their numbers.

It is difficult after this to attach a great deal of importance to Mr. Elwin's attack on the Indian Census for classifying the primitive tribes of that peninsula as other than Hindu. It may be indeed, as he says, that Hinduism is an animistic religion, but even if all Hindus be animists, that does not make all animists Hindus. It is true that Hinduism is a receptive creed; that many of the most orthodox Hindus hold that all other creeds are mere back-

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