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## SCIENCE AND THE WORLD OF TODAY

ANOTHER article in this issue of *Current Science* deals with that part of Mr. D. N. Wadia's presidential address to the 29th Indian Science Congress (Baroda) which reviews certain aspects of the geological structure of India. This note is intended to consider some general remarks made by him on the now much-discussed subject of the relation between science and the world of today. He enters a protest against the suspicion and uneasiness expressed of late by some no doubt well-meaning people about the growing power of science. In this timely protest, Mr. Wadia has voiced the feeling not only of scientists in general, but of all men of cultivated intelligence and just sensibility to benefits received. All alike will share his hope that "science will, without doubt, re-build the damaged world on better founda-

tions and reintegrate the stricken people to a new and more secure life". To cherish such a hope is, however, to admit the social responsibility of the scientist; and if that social responsibility is admitted by the scientist, he cannot consistently repudiate the charge that till now science has gone on in forgetfulness of that responsibility; for if science had remembered that responsibility and taken thought as to ways of implementing it, we should not have had to witness the present wreckage of civilization. The difference between the present war and the wars of antiquity, in magnitude and in incidence of destructiveness, is the difference made by the progress of science. If science may claim, as Mr. Wadia claims on its behalf, credit for having conquered "many plagues and diseases" and "probing truths about creation," she must just as well be

prepared to take the blame that belongs to the discovery of fire-bombers and poison gas. Among her children are both angels and their opposites.

It is no use trying to plead that the scientist is innocent and lay the blame exclusively at the doors of the politician and the manufacturer. These no doubt have their share in this organization of disaster. But they have equally a share in science's record of regenerative service to mankind. What can be legitimately claimed for the scientist is that he has had no share in the profits reaped by the manufacturer or the applause elicited by the war-minister, and that he had no personal interest to promote. This plea, however, can be of no avail to him against the charge of negligence and want of wakefulness. Nobody would think of accusing the scientist of homicidal designs; but at the same time nobody could help thinking that, in not taking heed about the dangerous potentialities of his handiwork, he betrayed a singular lack of appreciation of his responsibility as a social being. In purest innocence, but equally in surest thoughtlessness, he helped to upset humanity's apple-cart. The lesson for him today is that he should beware of jingo-politicians and greedy merchants. Mr. Wadia is on the hopeful track when he speaks of "the democracy of science and altruistic knowledge" and suggests an international directorate of scientists as a means of preventing the abuse of science.

But it is not clear that in his plan of an international directorate, there will be a place for politicians. He indeed appears to think that "chancellors, diplomats and politicians" have had a long enough chance and must now be put aside. This is rather an

unscientific judgement for a scientist to pass on fellow-labourers of another category. The root cause of war is in the organization of unsatisfied human hungers and the counter-organization of fears and greeds which it provokes. The righteous politician endeavours to regulate the hungers, and the unrighteous one to excite and extend them. But neither creates the hunger, nor can either abolish it altogether; nor can the man of science either. The politician in any case has to reckon with it; and he has the duty of making a "science" of his job too to the extent possible. Our trouble of today is the outcome of the long-existing aloofness between the so-called natural sciences on the one side and the social sciences on the other; between the exact knowledge of the external world on the one side and the hints and guesses of man's internal world on the other side; between physics and chemistry and biology and the like on the one side and psychology and religion and economics and politics on the other side. Sir V. T. Krishnamachari (Dewan of Baroda), as was only to be expected of him, spoke like one who has observed life and pondered over its problems from many points of view when, in his speech welcoming the Science Congress, he said:—

The evil thus calls for not less of science but more of science—science in the broadest sense of the word, embracing the social sciences, those dealing with human relations—and also philosophy—all working with a common aim and a sense of unity and viewing life as a whole. Only thus can civilization be re-shaped so as to enable human personality to reach the fullest development of which it is capable.

What can save mankind is the cultivation of a unified and synoptic view of life,—a philosophy of world management in which

the sciences and the arts,—the achievements of the laboratory and the appeals of the music hall and the theatre, the findings of statistics and the messages of literature,—are all brought into correlation in the service of a large and upward-looking humanism. It is for such a synthesis that the world is waiting. A corollary to this belief is that science should refuse to be controlled by narrownesses of geography and race mis-called patriotism and nationalism. Science should commit its achievements to the care and management of a truly international agency which can be trusted to function with every conscientious care for the welfare of the whole of mankind and in no partiality or favouritism for any section or division of it. Patents and monopolies must be destroyed; and all that is of value and significance should become available to the public of the entire international world. This is a condition of minimising the evil possibilities inherent in the possession of lethal secrets.

In speaking of the philosophical achievement of science, Mr. Wadia has used language which does not quite accord with the attitude of modesty proper to science. He says that "science is near making an approach to Absolute Truth". How near?—one may ask; for, measurement implies precise knowledge of the two ends of the road. Has any one a fore-knowledge of what absolute truth is and how the distance between that truth and ourselves is to be measured? Many are the pilgrims that fancy themselves to be on the road to the shrine of absolute truth. Metaphysics, poetry, art—these too have been endeavouring to capture a vision of the reality behind the phenomena of the universe. Here, as in

the effort to secure world-peace, there is no warrant for the hope that the prize is for the soloist, whether he be scientist or poet or man of religion. True vision is to be hoped for only from the focussing of rays from all quarters from which light may shine. The several rays will serve both to correct and to supplement one another.

Indeed, is science unitary? Is it not still in a state of flux? Are its many branches speaking with one voice? With the progress of research and the increase of the armies of researchers, ramifications of science have become so many, and specialism has gone so far afield along every line, that anything like a unified and consistent message of science as a whole as to the principle of Nature and the meaning of life seems at the present stage to be impossible to arrive at. While some of the many mouths of science are speaking more or less clearly and others are just making inarticulate sounds, there are others that have not become even vocal yet. Until science has come to speak in one final voice, it is best she should have the candour to say that her final answer is not ready yet to the ultimate questions of life and reality. Perhaps it is inevitable that science should for ever remain as various in her speech as Nature appears to be in her plans,—as various in its findings, as tentative, as wanting in definitiveness on questions pertaining to that which (if it exists) transcends all the shapes and forms and forces of Nature. If this position is accepted by the scientist, it would be a contribution of some real value to the needed philosophy of life. Elimination of exaggeration is also a step taken towards Truth.

D. V. G.