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SCIENCE AND HUMAN NATURE

THE dawn of the scientific era has been something of an adventure into the unknown, and no wonder each step that carries us forward is also fraught with fresh hopes and fears.

We all know where our curiosity has landed us: with advances in atomic physics which might be applied to devastate half the world, and if they were so applied would certainly make life in the other half extremely precarious. Our grandfathers were faced with scientific discoveries which were no laughing matter, for to many of them they spelled the end of all worthy human aims, but we face discoveries which might spell the end of all human aims, worthy or not.

In his Presidential Address to the British Association at its Oxford Meeting this year, Dr. Adrian is quite outspoken about the dangers which might arise from any future misuse of atomic energy. He has however shown that the hopes for the future can be bright provided we make a proper start right now in the study of the human factors which have led up to this situation. Thus, we can regret that atomic bombs are possible without regretting the discoveries that have led to them Advances in natural science cannot avoid advancing the methods of warfare; they do so, when they make armies more healthy as well as when they increase the power of their weapons. But although the strategists have to think mainly of immense explosions and great devastation, it would be a mistake to suppose that these are the only dangers. Even if we can survive, then we must face the possibility that repeated atomic explosions will lead to a degree of general radioactivity which no one can tolerate or escape.

We are afraid, and rightly, because we cannot trust ourselves to act peaceably, because we know that unless we are ready to give up some

of our old loyalties, we may be forced into a fight which might end the human race. Our predicament then is the inevitable result of our curiosity and of the physical nature of the world that we live in. According to Dr. Adrian, it is time we made headway in learning as much as possible about the mental and physical causes which makes us behave as we do A scientific study of human nature may well enable us to prevent its failures.

We do know of course an immense deal about human behaviour, from our own experience and from the accumulated wisdom of the past, but it is only in recent times that we have tried to check our knowledge by the mehods of natural sciences The development of physical sciences dates from the time when direct observation and experiment were accepted as better guides than the principles which had seemed self-evident to the philosophers and the schoolmen. They were wise enough, but it was found that they could be mistaken. And so now we can look to the many branches of social science to make a dispassionate study of what actually happens in our society without regard to what might be expected to happen if we are to believe all that we have been taught Indeed, one might say that the stage is nearly set for the new development and it might well be the most important scientific development in the present century. But why are we still reluctant to think well of it ?

Probably the answer is, we are not yet convinced that the kind of observations that the social scientist can make will be sufficiently objective and sufficiently precise. Those of us who work in laboratories have a far easier task in selecting what we should observe, yet we know how difficult it is for us to select and observe truly. We have to school ourselves not to reject the exceptional result as worthless when it does not fit in with a cherished theory , we have to be continually aware of our fallibility even though we have all the figures and controls to keep us straight With such experience before us we are loth to believe that the social scientists are more openminded than we are. The material they have to deal with seems to need an almost superhuman openmindedness combined with an almost superhuman power of selection, of seeing the wood as well as the trees in it. We feel that we should be lost in such a wood where everyone must feel the bias of his own upbringing and social ties, where there is so much that cannot be measured and may or may not be relevant and where there is rarely any opportunity to check the conclusions by experiment.

But to give way to such feelings would hardly seem to be proper. Perhaps we have forgotten how much we distrusted some new development near to our own field of science because it was unfamiliar and because we thought its backers claimed too much for it We ought to remember that the now flourishing science of biochemistry was once distrusted by chemists as well as by physiologists It is human nature for the guild of natural scientists to delay admitting a new member till he has paid his dues and satisfied the examiners of his competence in the craft.

At present there are many kinds of investigation grouped under the umbrella of social science : the groups seem to have little in common and few of them can put their results into figures, but it cannot be denied that scientists and laymen alike are becoming more and more aware of the value of social investigation and of the degree of certainty that it can bring We can see too that the search for these facts can be conducted on reasonably scientific lines. It is therefore too early to be cautious in spending money on large-scale investigations They are bound to be costly and those of the social scientists deserve not only the support of national and international funds There is this kind of support for the subject already, but it is too important a plan to be left in the hot-house atmosphere of research institutes and UNESCO teams. It deserves to be in full contact with all the conservative and academic people in Universities, the lawyers and historians as well as the economists, biologists and statisticians.

It may be that the search into the innermost recesses of human nature calls for a scientific temper bordering on the sublime ; but the search is no doubt worth making, as much for the dignity of science as for the larger purpose of serving the ends of humanity.