

acids. But it is essentially and vitally important to him and to all of us that he should realise the historical significance of science, the part it has played in moulding the world as he sees it to-day, and the part it may come to play in creating new and undreamt-of civilizations, and we have surely the right to demand, when we review the vast potentialities of the subject for good or for evil, that the public men of the future shall have at least that measure of acquaintance with contemporary scientific literature which we would expect any educated man to possess of contemporary artistic literature.

A conscious and purposeful effort to disseminate the scientific point of view and a consciousness of the historical function of science has been made and has been attended by a considerable measure of success during the past generation by our adversaries. Of course it may be urged that if science makes us like the Germans, then for Heaven's sake let us have no more science. But to this we may reply in the first place that the misuse of fire does not render fire a wholly malignant evil to be eschewed, and in the second place that "needs must when the devil drives". We are placed under the necessity of becoming scientific or else ultimately succumbing to the domination of the only modern nation among whose people the scientific viewpoint is at all widely distributed. There can be no doubt as to which alternative we will prefer and we may as well adopt it wholeheartedly.

The Germans have characteristically cultivated the materialistic aspects of science to the almost total exclusion of its idealistic and spiritual values. But it is the character of the recipient mind which renders science materialistic, not the sincere endeavour to fathom the ultimate mysteries of the Universe and of our place within it which is the ultimate goal of Science, as it is of religion

itself. The prophetic words of Pasteur, so accurately define for us the true issue of to-day, that it is difficult to realize they were uttered thirty years ago:

"Two contrary laws seem to be wrestling with each other at the present time; the one a law of blood and death, ever devising new means of destruction and forcing nations to be constantly ready for the battlefield—the other a law of peace, work and health, ever developing new means of delivering man from the scourges which beset him.

"The one seeks violent conquests, the other the relief of humanity. The latter places one human life above any victory; while the former would sacrifice hundreds and thousands of lives to the ambition of one. . . . Which of these two laws will ultimately prevail God alone knows. But we may assert that French science will have tried, by obeying the law of humanity, to extend the frontiers of life."

Not only French science, but the science of all the allied democracies is to-day pitted against the science of autocracy. If this war awakens us to a realization, not merely of the passing utility of science in this immediate crisis, but of its organic function in society, of its fundamental significance to us all, in war, in peace, in health and in disease, materially and spiritually, of its enduring importance as the pre-eminently creative factor in civilization, then indeed we may entertain the hope that this war may in very truth be the last. For that order of society which attains the greatest harmony of its social consciousness with scientific thought must inevitably attain the domination of the world.

And thus out of the almost intolerable evils of our day, good may yet be the issue; and those who come after us may speak of our tragedies as the birth-pangs of a new democracy, conscious of its power, creating its own destiny purposefully, intelligently, systematically; looking forward with confidence and reverence over the vast perspective of unfathomed truth which lies ever before us, divining and fashioning new worlds, "extending the frontiers of life".