

government, and that they could all be cured, as by the stroke of a magician's wand, by the introduction of a perfectly democratic government—a species of argumentation vitiated, as is obvious all through, by the assumption of one imaginary cause to all social evils, and an equally imaginary cure.

In the cultivation of habits of correct reasoning, I would certainly, in the first place, earnestly advise young men to submit themselves for a season, after the old Platonic recipe, to a system of thorough mathematical training. This will strengthen the binding power of the mind, which is necessary for all sorts of reasoning, and teach the inexperienced really to know what necessary dependence, unavoidable sequence, or pure causality means. But they must not stop here; for the reasonings of mathematics being founded on theoretical assumptions and conditions which, when once given are liable to no variation or disturbance, can never be an adequate discipline for the great and most important class of human conclusions, which are founded on a complexity of curiously acting and reacting facts and forces liable to various disturbing influences, which even the wisest sometimes fail to calculate correctly. On political, moral and social questions, our reasonings are not less certain than in mathematics; they are only more difficult and more comprehensive; and the great dangers to be avoided here are one-sided observation, hasty conclusions and the distortion of intellectual vision, caused by personal passions and party interests. The politician who fails in solving a political problem fails not from the uncertainty of the science, but either from an imperfect knowledge of the facts, or from the action of passions and interests, which prevent him from making a just appreciation of the facts.

At this point I can imagine it is not

unlikely that some young man may be inclined to ask me whether I should advise him, with the view of strengthening his reasoning powers, to enter upon a formal study of logic and metaphysics. To this I answer, by all means, if you have first, in a natural way, as opposed to mere scholastic discipline, acquired the general habit of thinking and reasoning. A man has learned to walk first by having legs, and then by using them. After that he may go to a drill-sergeant and learn to march, and to perform various tactical evolutions, which no experience of mere untrained locomotion can produce. So exactly it is with the art of thinking. Have your thinking first, and plenty to think about, and then ask the logician to teach you to scrutinize with a nice eye the process by which you have arrived at your conclusions. In such fashion there is no doubt that the study of logic may be highly beneficial. But as this science, like mathematics, has no real contents, and merely sets forth in order, the universal forms under which all thinking is exercised, it must always be a very barren affair to attempt obtaining from pure logic any rich growth of thought that will bear ripe fruit in the great garden of life. One may as well expect to make a great patriot—a Bruce or a Wallace—of a fencing-master, as to make a great thinker out of a mere logician. So it is in truth with all formal studies. Grammar and rhetoric are equally barren, and bear fruit only when dealing with materials given by life and experience. A meagre soul can never be made fat, nor a narrow soul large, by studying rules of thinking. An intense vitality, a wide sympathy, a keen observation, a various experience, is worth all the logic of the schools; and yet the logic is not useless; it has a regulative, not a creative, virtue; it is useful to think-