

knows that he is called upon to form a judgment apart from his own feelings and emotions—a judgment in what he conceives to be the interests of society at large. How is such a judgment, so necessary in our time with its conflict of personal opinion and its increased responsibility for the individual citizen—how is such a judgment to be formed? It is obvious that it can only be based on a clear knowledge of *facts*, an appreciation of their sequence and relative significance. The facts, once classified, once understood, the judgment based upon them ought to be independent of the individual mind which examines them.

Is there any other sphere, outside that of ideal citizenship, in which there is habitual use of this method of classifying facts and forming judgments upon them? For if there be, it cannot fail to be suggestive as to methods of eliminating individual bias and ought to be one of the best training grounds for citizenship. The classification of facts and the formation of absolute judgments upon the basis of this classification is peculiarly the scope and methods of modern science. The scientific man has above all things to aim at self-elimination in his judgments, to provide an argument which is as true for each individual mind as for his own. The classification of facts, the recognition of their sequence and relative significance is the function of science, and the habit of forming a judgment upon these facts, unbiased by personal feeling is characteristic of what is termed the "scientific frame of mind." The scientific method of examining facts is not peculiar to one class phenomena and to one class of working; it is applicable to social as well as to physical problems, and we must carefully guard against supposing that the scientific frame of mind is a peculiarity of the professional scientist.

Now this frame of mind seems to me an essential of good citizenship, and of the several ways in which it can be acquired, few surpass the careful study of some one branch of natural science. The insight into method and the habit of dispassionate investigation which follow from acquaintance with the scientific classification of even some small range of natural facts, give the mind an invaluable power of dealing with many other classes of facts as the occasion arises. I do not believe that this power can best be acquired by giving a student a smattering of many sciences. Our true aim should be to impart an application of *method* rather than mere knowledge of facts. And this is far more readily achieved by concentrating the student's attention on a small range of phenomena than by leading him in rapid and superficial survey over wide fields of knowledge.

I should carefully state that I am only praising the scientific habit of mind, and suggesting one of the methods by which it may be cultivated. No assertion is made that the man of science is necessarily a good citizen, or that a student's judgment upon social or political questions will certainly be of weight, because he has read few scientific text books or performed a few