

am able to judge, and I have had considerable experience on the subject, the Revised Code will have beneficial effects in Scotland, which it has not had in England. It has always appeared to me that the fault of the Scotch schools was that they were rather deficient in school appliances and equipment, and that though the masters were of a very high class, there was a want more or less of assistance in teaching. The masters receive a high salary, but the rest of the school has appeared to me to be less adequately furnished than in England, and I believe the money given to the heritors or managers of the school would be more beneficially expended in providing more assistant teaching, than in augmenting the already liberal salaries of the masters. I cannot, however, agree with the view taken by the Commissioners with regard to the children of persons in easier circumstances than are the parents of most of the children sent to these schools. No one, of course, would object that they should send their children to the parish schools in Scotland, and it is a happy symptom of the state of things in a country when such things occur—(hear, hear)—but if those people are able to pay for the schooling of their children, they ought to pay for it, and not take it from the public funds. (Cheers.) I do not think we should do right in taxing the heritors of a parish indiscriminately to educate the children of the rich people who are able to pay for that education themselves. (Cheers.) On this point, I must record my dissent from the Commissioners. I believe this, further, that though I have indicated what I think ought to be done, I am not sanguine in the belief that it will be done. Those who are concerned with the present system will be most urgent in resisting a change, which would trench on their prejudices and feelings, and they may think more of the disturbance of that which has cost them so much care and trouble to establish, than of the larger public views which I have explained. But while these people will be warm and earnest in their resistance to such a change, the friends of education will be comparatively luke-warm. A man acts with very different energy when he strives for that which affects himself, than when he fights the battle of the public at large. (Hear, hear.) I will give you an instance of this. In the colony of Victoria, in Australia, recently, the Attorney-General brought forward a bill to introduce a really national system of education like that I have described. You know that there the Legislature is elected by universal suffrage, and you would suppose that he would have had the strongest element of support from the working people, because the very people for whom he worked were invested with the greatest power in the election of the Legislature. But as soon as he had broached his scheme of education, it was opposed on all hands. The Roman Catholic Bishop entered a formal protest against it; the Bishop of the Church of England entered his protest; all the religious bodies of the colony protested against it. The people for whose benefit it was brought forward were silent and apathetic, the Attorney-General was obliged to withdraw his bill, and the hopes of passing a really efficient educational measure in that colony are indefinitely postponed. I hope I may be wrong in my anticipations, but whether it be carried or not, it is the duty of those who have at heart the good of the country to strain every nerve to get it done, and to free themselves from the responsibility which is at present imposed upon them. Now, gentlemen, if you will allow me, I will pass from this part of the subject and go on to the second member of it, which was, as I told you, the education of the upper and middle classes. And, first, I will endeavour to explain to you what I conceive to be the object to be aimed at. It seems to me that the form—the abstract idea of education—ought to be to teach a person everything it is important he should know, and at the same time to discipline his mind. And as the period during which it can be communicated is very short, I must qualify that view by saying that the business of education is to teach a person as much of that which it is important he should know as can be done within the limit and with reference to the ordinary faculties of mankind; and also that in doing so care should be taken to discipline the mind of the pupil as far as possible. That is what I conceive to be the object of education. Well, that being so, you see a question arises of very great difficulty. What is it most important that a person should know? Until we can answer the question, we cannot satisfactorily solve the question I am now proposing—What is the education that ought to be given to the upper and middle classes of this country? We must invent for ourselves a sort of new science—a science of weights and measures, and we shall have to put in the scales the different measures of human knowledge, and decide upon the relative importance of each. All knowledge is valuable, there is nothing that is not worth while knowing. But it is a question of relative importance, it is not a question of decriing one kind of knowledge and praising another, but of taking as far as we can the whole cycle of human knowledge, and considering which part ought to be taught first, and to which attention should be most urgently directed. That is a problem of most enormous difficulty. I can suggest only one or two considerations to assist us in solving it. I think it will be admitted by all here present, that as we live in a universe of things, and not of words, a knowledge of things is more important to us than a knowledge of words. (Applause.) The first few months or years of a child's existence are employed in learning both, and a great deal more in making an acquaintance with the union between the two. That is the order which Nature takes in her teaching. She begins with a knowledge of words, and teaches a knowledge of things afterwards. To give an illustration: I think it is more important that a man should know where his liver is situated, than to know what is called *jecur* in Latin and *2per* in Greek.

I would go a little farther, I think that, where it is a question between true and false, it is more important that we should know what is true than what is false. It is more important to know the history of England than the mythology of Greece and Rome. (Applause.) I think it is more important to know those transactions out of which the present state of political and social problems has arisen, than that we should know the lives of all the gods and goddesses contained in Lempriere's Dictionary. (Laughter and cheers.) Yet, according to my experience—though I hope these things are better managed now—we learned a great deal more of Pagan than of Christian religion at school. While the latter was put off till Sunday, and done in very short time, the former was the work of every day, and attended with enormous trouble, for the slightest slip in the genealogy of the children of Jupiter was followed by personal castigation, which I never remember having been bestowed on any one for a slip in divinity. (Laughter and applause.) Then, gentlemen, I venture to think that, as we cannot teach people everything, it is more important to teach them practical things than speculative things. There must be speculation, and there must be practice, but if we cannot have both we should rather lean to the practical side. It is more important that a man should be able to work out a sum in arithmetic than that he should be acquainted with the abstract form of an argument, as detailed in Aristotle's logic. To be able to work out a syllogism is not so important as the Rule of Three or Practice. (Cheers.) Therefore, if we must choose, I confess I should lean to the practical side. One more rule I venture to submit to you: if we must choose in these matters, the present is more important than the past. The institutions, communities, kingdoms, and countries with which we are daily brought into contact are more important to us than institutions, kingdoms, and communities that have ceased to exist for upwards of 2000 years. (Applause.) I will dwell on the topic no farther, but, having made this general observation as my contribution towards the new science of ponderation or measurement, I am anxious to show that in grappling with this question we must compare one species of knowledge with another, and decide which is most valuable and important. I shall proceed to consider how far the education of the upper and middle classes corresponds with this idea. Without going into detail, I think that the principal education in the Universities—I do not say the Scotch Universities, for you are more liberal here—but at Oxford and Cambridge the subjects of education are just two—analytical mathematics and what are called learned languages, Latin and Greek. Well, no doubt mathematics are a most admirable study, calculated to train the mind to strict habits of reasoning, and to keep up a habit of close and severe attention, but analytical mathematics encourage a man to this kind of proceeding—he takes his conclusion for granted, and then investigates the conditions upon which it rests. Well, that is not a good way of reasoning. (Laughter.) The best way is to take your principles and facts, and then see what conclusion they give you—not to begin at your conclusion and then see what principles and facts you can pick up anywhere in order to support it. Any one who has had the good fortune to go through this study knows that though one understands each step as he goes along, yet the whole eludes his grasp. We find ourselves landed in a conclusion, and though we see each step we have taken, still we do not understand how we have arrived at it. In one respect it is too easy, in another it is too difficult, and involves an immense strain upon the mind.

Then you are aware of this also, that perhaps the most useful lesson a man can learn is the estimating of probabilities and the sifting of evidence. But this is excluded wholly from mathematics, which deal purely with necessary truth, and therefore it has been often observed, and by no one more forcibly than Sir William Hamilton, that a mind formed upon this kind of study is very apt to oscillate between the extreme of credulity and the extreme of scepticism, and is seldom trained to take the practical, common sense, reasonable view of probabilities and contingencies of life, far more than any abstract powers of reasoning, success and prosperity in the undertakings of mankind depend. (Cheers.) But this subject is abstract, and I fear must be distasteful to you. I will therefore not follow that part of it farther. These very abstract mathematical studies always seem to me to fall under one of two heads—they either remain foreign to the mind, or they overload and enslave a man's mind so, that he is unable to enter into the ordinary matters of life, and is unfit for anything but the most abstruse speculation. A man is not mainly required for the purpose of calculating very high astronomical problems, and I do not think such a study is the one that best fits a man for the duties of life. To illustrate again: Napoleon employed on one occasion as his minister the greatest mathematician perhaps that ever lived—Laplace, a geometer of the first rank, but his idea of transacting the duties of his office was with reference to the differential and integral calculus. (Laughter.) But to pass on to the other study—that which is the principal occupation of youth—learning the Latin and Greek languages, and the history and geography and mythology connected with them—the chief study being the languages, the rest merely accessories to that. It strikes me, in the first instance, that it is very absurd that education should be devoted mainly to the acquisition of any language whatever. Language is the vehicle of thought, but it is not a substitute or an equivalent for it, it presupposes knowledge of things, and it is only useful, when the knowledge is attained, for the purpose of communicating it. With reference to this point, I shall read a few lines from Pope, much better than anything I can say. It is 140 or 150 years old, but it shows how abuses and mistakes