would be most successful; it would be the easiest system for the professor to adopt, but it would kill the spirit of science in any class in which it was adopted. I might say that students coming to me from school have frequently said, "It would be so nice if you would always tell us what parts of your lectures are the parts we ought to write down." And when I have asked "Why?" they have said, "We would know then what to get up for the examination." In the case of immature junior students coming from schools at too early an age—more particularly so in the case of Queen's Scholars who used to have only two years' education at a secondary school at the expense of the State and then came to us at the age of sixteen—I find that they cannot at first learn from my lectures and the library reading, because they have always been previously accustomed to get their work strictly parcelled out for them. One such student, who eventually became one of our best graduates in honours, told me that the first year was useless, and that every lecture she attended made her feel more and more despondent and what a very ignorant person she was. She required four years to take her pass degree. Some people probably thought that our system was wrong in that it did not give her a degree in the minimum time. She afterwards told me that the delay was the very best thing that could have happened to her, because at the beginning of her second year she had come to understand what kind of work would be expected in a university class. College Councils are apt to be satisfied if the students get through the examinations, and, if a number did not get through, it would certainly lead to inquiries in connection with the teaching. A university has a noble duty to perform in directing the ideals of its students. It seems to me that we must direct the teaching so that a student may learn to think for himself. When I came to Wellington I chose as my inaugural lecture a subject which I was advised to avoid because it might lead to controversy. I entitled it, "Research as the Prime Factor in a Scientific Education." I pointed out that we could not get real higher learning until the student was surrounded with what we might call the "research atmosphere"; that is, that both his fellow-students and his teachers must be in pursuit of knowledge with a real spirit of inquiry; and I pointed out the objections which are commonly raised. The objection which is commonly raised and which, like most commonly raised objections, is a sound one within limits—but only within limits—is that a person cannot begin to specialize until he has had a fairly broad preliminary training. That is a perfectly true statement, but it does not prevent every subject being put to the student in the spirit of inquiry. Examine our large text-books: you will find scarcely a chapter in which there are not points which are either not made perfectly clear or which are not open to question. That is to say, the statement is too sweeping, or in some cases the statement is absolutely wrong or too shallow, and the university professor, to do his duty, must draw attention to points of that kind. But I have had objections raised. I will give you one instance on the part of one who is now the headmaster of a large primary school. I was lecturing on a certain law and said that this law in the text-books—the elementary text-books—spoke of it as an accurate law; but if they would read larger treatises they would find that it was only approximately accurate for ordinary conditions, and that if tested strenously it was an absolute falsehood. This poor man came to me after the lecture and said, "I do not know what to do; I have always taught that to my boys as being the most accurate statement in nature, and it will perplex them tremendously if I now tell them it is not true." He said he did not think it was quite right for me to draw the attention of the class to the fact.

4. *Mr. G. M. Thomson.*] I do not think that is uncommon: it is a simple fact that people follow authority. A man has put something into a text-book twenty years ago, and everybody follows him. Is that not so?—That is so. I am merely saying that if we are to train a man to be a thinker we must draw attention to the exceptions of the law quite as strongly as to the laws themselves, which, after all, are only generalizations. If that attitude is adopted, the student concerned begins to come round and to pester the professor with questions. It means that the professor has to answer a lot of questions, and he is often put into the position of not being able to answer, because none of us know very much. It does not matter how much a professor has learned, he has only got a little way towards the complete understanding. What is to be done in such circumstances? I find the best thing to do, if it is a simple question, is to say first of all, instead of giving an answer, "Are you really interested?" And if the student says "Yes," I say, "If you will go into the library and consult such-and-such a book or treatise, you will find the matter put in such a way that you will understand it. Read the article, and then come back and discuss the question with me." That gets into the student the spirit of inquiry which no training for an examination can do. And what is the result? That in our science libraries up at the Victoria College, usually from 5 o'clock to 9 o'clock, there is scarcely sitting-room for the students—they are consulting works of reference. Similarly in the lectures themselves I have always considered it my duty to say, "Here is the general statement, but it is not enough for you; such-and-such references must be read in the library in order that you may properly understand how the discovery was made." And there is no difficulty, if such ideas are put earnestly before the student, in getting him to go into the library and turn up the scientific journals and books, and work at those things himself. It means that a man learns to help himself, whereas if he is spoonfed for an examination by means of a complete set of notes derived from his teacher, his most useful faculties remain untrained. That is the difficulty. I have met honours students trained with non-research ideals who, if asked for the authority for a statement, would not know how to try to find out upon what evidence the statements had been made. They did not even know the names of the journals in which the work had been published. Now, it often happens that a student comes along with some question which by means of a few hours' work in the laboratory he can answer for himself. And there is nothing that I know of which stimulates a man so much in his reading and improves his intellectual calibre as attempting to solve a problem for himself. I might give you my early experience if you will not think I am too egotistic in talking of myself. My early experience of chemistry was under Sir Edward Thorpe, now Director of the Chemical Department of the Imperial College of Science and Technology. I had worked for two years and