

EDUCATION COMMISSION.

EVIDENCE BY SIR SAMUEL WAY.

UNIVERSITY AND SCHOOL OF MINES.

PROFESSOR CHAPMAN'S VIEWS.

The Education Commission sat at Parliament House on Friday, when there were present Mr. T. Ryan, M.P. (chairman), the Hons. F. W. Coneybeer (Minister of Education), J. Cowan, M.L.C., and A. W. Styles, M.L.C., and Mr. F. W. Young, M.P.

The Chancellor of the University (Sir S. J. Way) said he had been connected with the University from its inception. He became the Chancellor in 1883. The gift of Sir Walter Hughes of £20,000 was intended for a Union College, but it was found that the gift was too large, so an association was formed for the establishment of the University, and then Sir Thomas Elder gave £20,000 for the purpose. They owed a great deal to his late colleague (Sir W. H. Bunday) for the successful carrying through of that undertaking. Letters patent in 1881 empowered them to grant degrees in arts, law, science, medicine, and music. From the outset they worked upon the practical application of science to the wants of the community as the purpose of the University. Their constitution was the most democratic in Australia.

The Chairman—I would be glad to think that the Adelaide University is the more democratic, but you will find that the Queensland and Western Australian Universities are infinitely more democratic. In both the executive can appoint the majority of members of the council.

The Chancellor—But I do not think that is more democratic than an elective body. Continuing, the witness stated in regard to applied science in 1878 Mr. Angas gave £4,000 for an engineering scholarship, the object being to enable men who had graduated at the University in science to go to Europe or America for the purpose of obtaining a complete education in advanced engineering. In regard to the constitution of the senate, he was sure they would welcome in that body a representative of the Chamber of Commerce and the Chamber of Manufactures, or any body of that kind. The professorships were founded as follows:—Four at the establishment, namely—(1) Classics; (2) English language and mental and moral philosophy; (3) mathematics; and (4) natural science. In 1883, medicine. In 1886 they completed their arrangements for the full medical course. In 1884 a chair in chemistry was founded, and Professor Tate taught botany and chemistry; but there appeared to be an impression that the office was a sinecure.

The Chairman—That is just what I was going to ask you. A suggestion has been made that had not some other institution started work Professor Tate would have been in idleness. What is your opinion?—He taught, quite apart from any other institution, and made most valuable contributions to the cause of science. We are also deeply indebted to Professors Stirling and Watson. It would be impossible to exaggerate the value of the work of Professor Rennie.

The witness added that in 1884 the Chair of Music was founded, and a professorship of law in 1890, in place of the lectureship of 1883, and he was perfectly sure that there was no branch of learning in which the advantage of training was so perceptible. The people could not do other than gain by extending the advantages of the University to the general community. The professorship of history was founded in 1902. He did not think that the University of Adelaide suffered by the fact that their professors left to take up other and higher positions elsewhere, because young and brilliant men felt that their careers were not closed by accepting a professorship at Adelaide. He admitted it would be an advantage if they could give their professors more time for research work; but repudiated the idea that the Adelaide University was a sweating institution. The witness referred in detail to the duties of the different professors.

The Chairman—Does your experience show that any amendment of the original Act is desirable?—If the Commission recommend it, yes; as to the representation on the council, and undoubtedly we want to amend it by authorising the degrees in engineering. We can teach and are teaching engineering, but we cannot give special degrees. We can only give a degree in science, with a diploma in engineering. Referring again to the constitution of the University, the witness said he favored representation and public bodies interested in education.

Mr. Styles—The modern idea is that the University should be representative of as many public bodies as possible. Is that so?—I am in favor of allowing anybody that is interested in any form of education to be represented on the elective body of the University.

The Chairman—That matter has been discussed in Sydney, where there is a demand for the representation of the Trades and Labor Council. Are you aware of that?—I know no politics. If the Trades and Labor Council is a political body I would vote against its representation on the University Senate, but if the Trades and Labor Council is an industrial body, and interested in technical education, I see no reason why it should not be represented.

The Minister of Education—It's an industrial body pure and simple.

The Chairman—Then you see no objection to the representation of industrial bodies?—Not the slightest. Care would have to be exercised that the council did not become too unwieldy. If the Commission had not been appointed, they would have sought one or two amendments of the constitution. They would have brought these forward some years ago if they had been assured of a sympathetic reception of the proposals. During the last 30 years they had passed through periods of great financial stress, and the University, with other educational institutions, was, by some people, looked upon as being beyond the requirements of the community. Mr. Williams was elected a member of the council because of his position as Director of Education, but if his health broke down he would be entitled to hold the position until the termination of three years. The council favored direct Government representation on the council of the University. Some months ago Professor Mitchell suggested that this representation should consist of an addition to the council of four ex-officio members, namely, the Minister of Education, the Treasurer, the Director of Education, and the Under Treasurer.

The Chairman—We may have misunderstood the president of the School of Mines when he was before us the other day. His contention was that engineering should be under the control of the School of Mines. Now you are asking for a professorship of engineering, to cost £900. We would not be right then in assuming that the University has hitherto been neglecting that work, and that had it not been for the School of Mines no engineering would have been taught?—Oh, no, Professor Chapman is at the head of that school, which includes mathematics.

We are quite safe in saying, then, that although you have not a professorship in engineering, that work has not been neglected, but that, on the other hand, the University has been doing it for years?—Yes, that is so. Professor Chapman was the lecturer in engineering, but when the classes were redistributed we gave him the title of professor of mathematics, because that is the endowed chair.

With reference to the chair of agriculture, you will have noticed that the Government have secured the services of Professor Lowrie. If he were attached to the University would not your requirements be met?—To some extent. We already have a course in agriculture, and the work done at Roseworthy is accepted as part of the course for the degree. Several

students have already graduated in that subject.

We were told the other day that the teaching of agriculture at Roseworthy was of an elementary nature, and that it was not so good or so thorough as at the School of Mines. I am wondering whether the University would rather say that instead of having Roseworthy men on their staff they would prefer men from the School of Mines. Is that so?—I do not know what they are doing in agriculture at the School of Mines, but I do know we are glad to accept the work done at Roseworthy as being of service towards the degree.

The Chancellor added that no one recognised more fully than he did the great service rendered to the cause of technical education by Sir Langdon Bonython and the School of Mines. Sir Langdon Bonython had been the leading spirit in the movement, and had really supplied the motive power. He was sure the president of the School of Mines Council would have an undying reputation for what he had done. The course of engineering at the School of Mines, for instance, was a professional course, and had enabled many young men to embark upon useful and honorable careers, not only in South Australia, but in Western Australia, New South Wales, South Africa, and elsewhere. The University was working in that direction, but it did not occur to anybody to establish that course, though he could safely say that Sir Langdon's admirable idea was loyally and efficiently

seconded by the University. Right from the commencement they had supplied what might be called the backbone of the teaching, for instance, chemistry, geology, physics, and mathematics. The students had also had practical instruction in mining from Professor Chapman.

The Chairman—I presume you have read the Education Bill of last year. Can you say if the University and the Education Department combined could do the work now carried on by the School of Mines, and perform it as economically and efficiently?—It would not be right for me to answer that question categorically without giving careful consideration to the subject. I will say, however, that the School of Mines is carrying out a useful and noble work that is not covered by the University, particularly the teaching of artisans to become efficient workmen. Apprenticeship has declined, and the School of Mines now furnishes that instruction to a very large extent. If the School of Mines did nothing else, that alone would amply justify its existence.

Professor Mitchell, M.A., professor of philosophy at the Adelaide University, gave evidence at length on the question of entrance, qualifications, and examinations at the University. With regard to extension lectures, it would be found that they had been more successful in South Australia than in Victoria and New South Wales. All the lecturers favored the movement, which aimed at the encouragement of reading rather than entertainment. On the question of the Rhodes scholarship, it was unfortunate that Rhodes scholars should stay away from the State after their work at the home University, but that was balanced by the greater stimulus among other students.

Professor Chapman, M.A., professor of mathematics at the Adelaide University, in answer to Mr. Styles, said the University did not abolish the chair of engineering. When Professor Bragg left, witness was appointed to take charge of the department of engineering and mathematics. There was a discussion as to what it should be called, and eventually he was made professor of mathematics. In his opinion the highest technical education should be given in conjunction with the highest scientific instruction. For instance, a man who was taking up mining ought to receive the advantage of the very best instruction in such subjects as geology and mineralogy. Likewise a student in electrical engineering in its higher branches should have a knowledge of the developments in electrical science as unfolded in advanced physics. Similarly a student in metallurgy should clearly have the best training in chemistry, and so on. The University should be the centre of scientific research. The greatest engineering schools of America were located at the universities, and most of the British universities now taught engineering. Many of them were equipped with magnificent laboratories.

Mr. Styles—Will your remarks apply to agriculture as well?—Precisely the same principles will apply to agriculture. Of course, we do not want to put an ordinary farmer through a degree course, but in a country like this we ought to have provision to turn out experts in agriculture. The requirements for such a course ought to be at the University, as the students would require advanced knowledge of chemistry of the soil, manures, botany, biology, and especially bacteriology. All these are essentially university subjects. The 1900 regulations provided for the B.Sc. degree by taking university subjects in addition to agriculture and viticulture, the two latter to be studied at Roseworthy College, which had been affiliated with the University. The highest technical instruction was given by the University and the School of Mines conjointly in the four engineering subjects. From the first the University tried to avoid the unnecessary duplication of work with the School of Mines. It was essential that students for engineering should have a knowledge of the behaviour of materials, and consequently the University purchased a testing machine at a cost of £800. Mining engineering was taken up by the University because it was not then taught at the School of Mines. Under an agreement with the latter the University lecturer on mining delivered lectures to all the students at the School of Mines. Thus the latter institution had the use of his services for nothing. The agreement between the School of Mines and the University was the only solution of a difficulty, and in that respect was satisfactory, but it was a most unsatisfactory thing upon which to build a permanent system of education. There were two institutions side by side and the natural result of their development had been that they had become rivals to some extent in the teaching of higher technical work, though a common-sense agreement between the two councils had reduced friction to a minimum. The several branches of engineering were closely related, and should be under one control, in order that