

versity under the condition that they afterwards entered the agricultural service, he was resolutely opposed. This inducement, like the provision of pensions under the Civil Service scheme for the retention of officers in the service, he regarded as coming within Sir James Currie's definition of "attracting candidates by means of well-baited but otherwise poor booby-traps."

Various other means of stimulating recruitment to the overseas services were discussed. It was pointed out that various post-graduate scholarship schemes in existence have been successful in this regard. Those scholarships provided by the Government, tenable at the Imperial College of Agriculture at Trinidad, have already provided a number of officers for the colonial agricultural services in the Tropics. The scheme of the Empire Cotton Corporation has also been successful in obtaining men for cotton research in various territories. On the other hand, no success has so far attended the efforts of the Australian Commonwealth Government to obtain recruits for certain biological services by the grant of similar scholarships. The Commonwealth offered post-graduate scholarships to the value of £300 a year for two years, with £150 travelling allowance, in addition to the payment of all special fees in connexion with study. Some of these scholarships were offered to enable students to specialise in mycology and genetics. On the completion of their course, they were to be guaranteed at least three years employment under government at a minimum salary of £400 for the first year, £450 for the second, and £500 for the third. No applications were received for these scholarships. This was attributed to the past neglect of the agricultural services by the Australian Government and the failure of the people of Australia to appreciate the need for agricultural research.

Generally speaking, the discussion on training and recruitment was disappointing. It is true that much that needs saying has been said several times already in the past twelve months at gatherings of Imperial delegates, so that it was difficult to escape the platitudinous. But since every representative of the Home Government present subscribed to the view that the Imperial Agricultural Research Service must provide an attractive career for first-class men, if it is adequately to fulfil its prescribed functions, it is reasonable to expect that they should have defined its attractiveness in specific terms, and stated what further financial provision the Government is prepared to make, and what financial support has been

promised or is expected from the Dominions and non-self-governing Dependencies, for the effective carrying out of the schemes submitted to the delegates for their consideration. It is to be hoped that some definite statement of this character will be made before the break-up of the Conference.

Cambridge under the New Statutes.

THE Vice-Chancellor, in his recent address at the commencement of the academic year at Cambridge, referred to the heavy strain which has fallen during the past year upon the administrative officers of the University—the Registrar, the Secretary of the General Board, the Treasurer, and, we may add, the Vice-Chancellor himself—and upon the members of various boards and committees. When 1000 pages of ordinances have to be recast to meet the requirements of new statutes, the labour involved must necessarily be extremely heavy. It may not be without interest to inquire after a year's working how far the results obtained justify not only last year's work, but also the heavy work involved over a period of years by the labours of the Royal Commission and the subsequent Statutory Commission.

What are the gains of the new scheme? The first one that strikes the eye at once is the feeling of security that the younger married 'don' has gained through the existence of a pension scheme of the same type as holds in the other universities of Great Britain. This means a comparative freedom from serious financial anxiety, and it makes easier the free interchange of teachers between Cambridge and other universities. Coupled with this is the advantage to the University which must accrue from a scheme which ensures the retirement of the teaching staff on reaching an age limit. Opinion will vary as to the proper age for retirement and the benefit that comes from a rigorous compulsory scheme, but it is clear that the scheme is, on the whole, a definite improvement on the old order of things.

Financially, many teachers in the University also benefit by the increased stipends which the annual grant to the University secured by the Commission has made possible. University stipends still lag behind the corresponding figures for professional careers outside, but the disgrace of the charity pittance awarded in the past to distinguished teachers has been stopped. It is for the University to watch that fresh developments are not marred by inadequate financial arrangements. This may check some of the valuable growths which in the past have come from poor beginnings; an

enlightened policy should see to it that such growth should be encouraged, but with a start on a better basis.

The real gain of the Commission is that the University has now secured control of the development of its educational policy to an extent that was impossible before. The General Board of the Faculties, with its control over the finances of the purely teaching side of the University, has become the most important body in the University. The faculties, acting through their appointment committees, have control of the appointment of new teachers and are not so dependent as before on the chance appointment by the colleges of members of college staffs. It is significant of the change how many of the vacancies of the past year in lectureships have been filled by candidates from outside Cambridge. This widening of the field must be a pure gain to the University.

This would not be the case if the chances of promotion of the best sons of Cambridge to office in the University were blocked by the new scheme. It may be that the process of co-operation between faculties and colleges in making their staff appointments has not yet been fully explored. The ideal scheme by which the University and the college should each take its share in supporting the man who divides his time between the two of them may take some time to hammer out, but the new statutes make such a scheme possible and practicable. Goodwill and organisation will do the rest.

Among other gains requiring mention are the opening of most University prizes, scholarships, studentships, and teaching posts to women, the improved financial position of the University Library, the easing of University taxation on the smaller colleges—here it must be admitted at the expense of the larger and richer foundations—and the official recognition of research as part of the University's duty.

There are necessarily difficulties, and here and there doubts and regrets. It is incumbent on those responsible not to let organisation become dominant and not to press the professors with too much departmental administrative work. The Vice-Chancellor, we believe rightly, attributed the comparative lack of discussion of recent changes in the ordinances to "a disposition to settle down to work and to put the new Statutes of the University and the Colleges to the test of practice." The University may well spend a year or two in rounding off the fruitful work of the Commission and making quietly the further changes which experience shows to be desirable and necessary.

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Catalysis.

- (1) *Die Katalyse in der organischen Chemie*. Von Paul Sabatier. Nach der zweiten französischen Auflage, übersetzt von Dr. Berthold Finkelstein. Mit einem Literaturverzeichnis für die Jahre 1920 bis 1926, bearbeitet von Dr. Hans Häuber. Pp. xi + 466. (Leipzig: Akademische Verlagsgesellschaft m.b.H., 1927.) 24 gold marks.
- (2) *Catalysis in Theory and Practice*. By Eric K. Rideal and Prof. Hugh S. Taylor. Second edition. Pp. xv + 516. (London: Macmillan and Co., Ltd., 1926.) 20s. net.

CATALYSIS is a subject which has always excited the interest of chemists—sometimes, indeed, their prejudices and passions. There is one point, however, on which they are probably all agreed, namely, that the association between the catalyst and the substances the reactions of which it catalyses is of so specific a nature that it is proper to apply the term 'chemical.' On the other hand, to understand the mechanism of the large class of chemical reactions which take place in contact with solid catalysts, it is necessary to inquire into the physical nature of the interfacial region where the surface catalysis takes place, and this introduces all the phenomena of 'adsorption.' For some purposes it is more important to know about the adsorption equilibria than about the nature of the forces which hold the adsorbed molecules to the surface; and there has occasionally arisen a quite unnecessary distinction between 'chemical' and 'physical' theories of catalysis. In recent years, however, Langmuir has done much to dispel the idea of any such antithesis.

The truth about catalysis has many aspects, one or other of which becomes of predominating importance according to the problem under consideration.

There are two great objects: one is to arrive at an understanding of the nature of chemical change in general, and the other is to be able to control specific reactions for particular ends, possibly industrial. The two books under review are quite different in scope and method. That of Rideal and Taylor is of a quite general character, and deals with both the chemical and physical aspects of catalysis and with its industrial applications; that of Sabatier is written entirely from the specific chemical point of view.

(1) "La Catalyse en chimie organique" is already well known to most chemists either in the French edition or in the English translation by Prof. Reid. It is an inexhaustible source of