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ACADEMIC AND PROFESSIONAL INCENTIVES

IN its report on "University Finance in Great Britain", dated July 1943, the British Association Committee on Post-War University Education recorded the view that the question of university salaries was the essence of the situation and should be given priority over almost everything else. The salaries of university staffs of all grades were, in the opinion of that Committee, hopelessly inadequate in competition with the world outside, and in the lower ranges, in some universities, inadequate to afford a reasonable standard of life under prevailing social conditions. In the older universities, the salaries of the non-professorial staff were considered not inadequate in the lower ranks, except for the few who devote themselves almost wholly to research. At the provincial universities, however, the average salary of the non-professorial staff was not more than £450-475 a year, as against £600-1,000 for Cambridge (omitting demonstrators and faculty assistant lecturers).

The British Association Committee asserted bluntly that we can expect neither to attract to the university staffs the pick of their graduates nor to have a satisfactory standard of performance on such salaries; and it recommended an adequate number of senior lectureships and readerships carrying salaries of £700-1,000 a year. Beyond this, however, it was of the firm opinion that in the existing organisation of our society, all whole-time professors in all British universities should receive at least £1,500 a year at 1938 values. "The reputation of our universities," it was urged, "depends more on the quality of their professors than on any other single factor. For the sake of university teaching and research we should make it more easy to retain our very best men, and to attract outstanding men back from the outside world when they are still at the height of their powers."

Somewhat similar proposals were advanced by the Association of University Teachers in a report on "University Developments, 1944", adopted by the Council of the Association in December 1943, namely, a basic salary of £1,500 for professors, and salaries in the range £800-1,100 for senior lecturers and readers. These proposals were afterwards criticized by Bruce Truscot in "Redbrick and these Vital Days", who suggested that the basic salary of £1,500 for a professor was too low though not necessarily at the beginning, and that the British Association Committee's own recommendation implies a basic figure of £1,800. The general level of lecturers' salaries proposed by the Association, however, he regarded as too high; and he urged that the principle of a salary scale for the professor is of vital importance and one which will be of real service in dealing with the difficulty that in certain subjects such as medicine, and possibly engineering, it may be necessary to pay considerably higher salaries in view of outside competition.

It is true that outside competition should not be the sole factor to be considered in determining

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professorial salaries; but it is from this point of view that some recent observations of Dr. C. E. Raven in addressing the Senate of the University of Cambridge, on resigning the office of vice-chancellor on October 1, have received publicity which has somewhat distorted them. Dr. Raven recalled that, when putting forward proposals for the stipends of its professors, the University was warned by the University Grants Committee that £1,450 was the maximum professorial salary which the Treasury would recognize. Dr. Raven said that it seemed plain that if the maximum income in academic life was so seriously below that obtainable not only in medicine and at the Bar, but also in the Civil Service and indeed almost all other professions, the universities could scarcely expect to induce men of the highest abilities to stay with them.

This, however, was not all. If professors were limited to such a rate, and there was to be any ladder of promotion, junior teaching officers could be given scarcely a living wage—certainly not a wage on which to marry and bring up a family. Dr. Raven referred particularly to the position of men who, after six or more years in national service, had gained fellowships or been elected to junior teaching posts, and who at the age of thirty were receiving salaries little different from those offered in 1939 to men of twenty-three. In view of the cost of living, it seemed inevitable that unless the university could improve its scales of pay, it would lose an increasing number of men.

That view, of course, ignores the other incentives which induce men and women to take up an academic life; but such incentives can scarcely operate if the salaries offered in the early years of academic life do not enable men and women to sustain modest standards of living such as those laid down by the Association of University Teachers in the memorandum issued before the War, which presented reasoned arguments for a minimum stipend of £500 for a married teaching officer to do his whole duty by a university and its students. The disparity between such academic salaries and those offered in industry is considerable and may well lead to untoward distribution of man-power if uncorrected. Dr. Raven, indeed, directs attention to one specific example of disparity which was obviously in the mind of the British Association Committee when its report was written; the findings of the Spens Report on the Remuneration of Consultants and Specialists, to which Dr. Raven refers, accentuate this disparity. As Dr. Raven suggests, it is on the face of it absurd that whereas the stipends of the majority of Cambridge professors do not rise above £1,550, a specialist appointed to the staff of a hospital is to be guaranteed a salary rising to £2,500 at the 1939 value of money. If the salaries of university teachers of medicine are raised to the figures specified in the Spens Report, the resulting anomalies in the scientific departments of a university will be intolerable as well as absurd.

The universities are clearly facing something of a dilemma, even if the terms may not be precisely as Dr. Raven suggests. The disparity between the pay of chemists in industry and in the universities is

well known, and the professorial limit of £1,450 is a good deal less than a man of the highest ability could expect to earn, even if more laboriously or precariously, in the Civil Service or at the Bar, quite apart from industry or medicine. It has been made abundantly clear in discussions on scientific manpower and on scientific and industrial research during the last decade that any policy which denuded any one sector of national life, whether the universities, the Government service or industry, of its proper proportion of the new talent leaving the universities, would have untoward repercussions on the well-being of the nation as a whole.

The problem or dilemma is thus not one for the universities alone, and it must be considered against a much broader background than that of finance. As regards the latter, it should be noted, moreover, that in a written answer to a question in the House of Commons on November 4, Mr. Glenvil Hall stated that in assessing grants to the universities, the University Grants Committee recognizes certain standard rates of salary for professors (other than clinical professors). Allowances are, however, made to enable institutions to pay higher rates of salary where the institution considers the rate of salary should for any reason be above the standard. The distribution of this additional remuneration is left entirely to the institution concerned.

These arrangements, Mr. Glenvil Hall added, were made after consultation with the Treasury, and they seem to leave the universities rather freer than Dr. Raven implies to compete with the non-academic world on its own terms. It does not follow, however, that the universities are bound to do so, unless there is real evidence that first-class men are deserting the universities in significant numbers to earn high salaries elsewhere. So far as chemists are concerned, the evidence suggests that even the offer of considerably higher salaries is not attracting to industry all the men needed for research or production. Moreover, Dr. Raven's statement that £1,450 is the maximum salary has been challenged elsewhere; in the civic universities, it is stated that the typical range of professorial salaries is £1,450 to £1,750, apart from the full-time clinical professors, who receive £2,500. Even this range of salaries is not much inducement for a highly trained man with great influence in the community at the peak of his career; and it must be admitted that in spite of the rise in the salaries of university teachers since 1939, neither in leisure nor in money are they, and particularly the professors, as well off as they were before the War. Nevertheless, it is reasonable to ask whether the universities actually know of men who would have taken their more important posts had it been possible to offer another two hundred pounds or so. Such evidence is imperative before the universities take any steps to restore the balance between clinical professors and non-teaching specialists, or between clinical and non-clinical professors, which the recommendations of the Spens Report so obviously upset.

Whatever course the universities adopt, even if they fall back on a general upgrading of all professorial salaries, the repercussions are likely to be

far-reaching. Admittedly, comparison between academic salaries and those current in the medical profession is invidious and a poor basis for framing policy. It illustrates, indeed, the embarrassments that may arise from bringing, without careful preparation and forethought, hitherto unplanned and unco-ordinated parts of the economy under the ægis of the State. Quite apart from the rise in salaries in a profession already comparatively highly paid given by the institution of the National Health Service, there has simultaneously been a considerable retardation of the operation of the economic factors which would normally restore the balance. Meanwhile, the nation may well find itself in the near future with a plethora of medical and a great scarcity of the scientific workers, technicians and administrators upon whose services industrial productivity and development depend.

The financial incentive is, of course, not the only one. It is often not the most important motive that influences a man or woman in choosing between an academic life or a career in industry, medicine or another profession; but it is essential that at the lower levels, where a difference of two hundred pounds or less may be a decisive factor, the minimum salaries must be such as enable the maintenance of a standard of living compatible with the full discharge of academic responsibilities. The sense of vocation is not entirely lost, and the idea of rendering public service can still influence the choice of profession. Part at least of the immediate task is to dispel the misconceptions which have, for example, made young scientific workers reluctant to enter industry; for few who have gone into modern industry on the research, production or management side have been unable to find satisfaction for their ideal of public service as much as in academic life, the Civil Service or in independent professional practice.

Adequate salaries at the lower levels should be a first consideration in any national policy. If the universities can be satisfied that at those levels there is no longer the risk of some promising scientific worker, for example, who would fill a professorial post with great distinction in a couple of decades if he remained in academic life, being attracted to another career solely on financial grounds, the most important step towards safeguarding the future will have been taken. Nor is the question one for the universities alone. It should also have the attention of the professional bodies, for it is bound up with that question of mobility of staff and the interchange of workers which is now generally recognized as fruitful for creative work. The question of incentives and conditions of work in one particular profession or occupation cannot be considered entirely without reference to those which prevail elsewhere.

These questions need to be examined from a broader angle than has often been done in the past. In a stimulating discussion on the large laboratory in nuclear research at the Princeton Bicentenary conferences, Prof. E. P. Wigner suggested that one important advantage which the university possesses over other institutions is the constant influx of new people to whom the basis of each idea has to be

explained and by whom it may be challenged. A comparatively rapid turnover at both the top and the lower levels of at least a part of the staff in a large laboratory or institution might, he suggested, have a vitalizing effect and help to avoid the stagnation which tends to infect such institutions.

Such migration and interchange is, of course, greatly hindered by existing disparities in salary scales, apart from the new tensions which the Spens Report threatens to introduce. Discussions on superannuation schemes have already emphasized the same point, and there are other obstacles such as housing difficulties which are partly financial and partly material. The time is ripe for a broad approach to the whole question from a national point of view. The subject well merits a considered statement by such a body as Nuffield College, giving due weight to the altruism which often determines the choice of profession, as well as to the financial and other material incentives. Such a statement might well be a most important contribution to the solution of the long-term problem of the distribution of the nation's trained man-power in ways which at once afford satisfaction to the idealism and sense of vocation of the individual, and the needs of the community for service in specific fields.

LARGE-SCALE EVOLUTION

Neuere Probleme der Abstammungslehre
Die Transspezifische Evolution. Von Prof. Dr. Bernhard Rensch. Pp. vii + 407. (Stuttgart: Ferdinand Enke, 1947.) 26.20 R. marks.

DR. JULIAN HUXLEY has already directed attention to this book in a short comment published in *Nature* of October 9, p. 562. It is, as he pointed out, a worthy companion of the series of monographs by Dobzhansky, Simpson, Mayr and Huxley himself, which have in the last few years elevated evolutionary theory to a new plane of precision and completeness. It is particularly interesting to be presented at this time with a general discussion which was written in Germany during the War, when communication with English-speaking men of science was at a minimum. The general similarity between Dr. Bernhard Rensch's conclusions and those of the books mentioned above is very striking, and demonstrates that there is a wide consensus of agreement on the new advances in our understanding.

Rensch's work is mainly devoted to that part of evolutionary theory which has always presented the greatest difficulties of interpretation in the past, namely, the large-scale evolutionary changes which relate widely differing species, genera or families. The argument advanced is that, so far as our present knowledge goes, these can be adequately explained by the three main factors—mutation, selection and chance—which produce the minor diversities within species. The book is introduced by a short summary of the evidence for the action of these factors within species and of the nature of the intra-specific differentiation which they bring about. It then passes on to a discussion of the nature of major evolutionary change, which is classified into two broad categories: kladogenesis, or the branching of evolutionary