

by supersonic techniques. In the Division of Electro-technology, besides work on electrical measurements and standards, the dielectric properties of materials have been investigated with particular reference to the mechanism of dielectric loss. In the Division of Radiophysics further advance has been made in the knowledge of the radiofrequency radiation which reaches the earth from the sun, from radio-stars and from the galaxy, as well as in our understanding of the processes by which natural rain occurs; and a new programme of radio and radar aids to navigation was introduced, including microwave direction-finding and relay radar. The Organization has also been co-operating with the University of Melbourne in research on nuclear physics and cosmic rays under the direction of Prof. L. H. Martin.

LABOUR TURNOVER AND ABSENCE IN GREAT BRITAIN UNDER FULL EMPLOYMENT

IT is generally believed that rates of labour turnover and absence in Great Britain have been higher under full employment than they were before the Second World War, and constitute a substantial obstacle to industrial efficiency; but hitherto there have not been records in sufficient detail to reveal the course and causes of turnover and absence in a particular setting. Accordingly two monographs* published by the University of Birmingham Faculty of Commerce and Social Science—"Labour Turnover under Full Employment", by Dr. Joyce R. Long, and "Absence under Full Employment", by Hilde Behrend—are important. They report and analyse the experience of factories in the Midlands, employing between them upwards of sixty thousand persons, mostly in engineering and metal working. The collection of this material was made possible through the Midland Advisory Council on Industrial Productivity.

Each monograph sets out what evidence there is for the difference between recent working and that of the interwar years. Such evidence is scanty; but, so far as it goes, it shows less difference than common report suggests. A survey by the National Institute of Industrial Psychology¹ in 1937 gave annual turnover-rates of 18 per cent for men and 51 per cent for women in a sample of London firms, and 11 per cent for men and 34 per cent for women in a Leeds sample. Records for 1949 collected by the British Institute of Management give rates of 21–24 per cent for men, and 38–41 per cent for women. Rates vary so much from firm to firm that generalizations from samples are hazardous; but these inquiries at least show considerable overlap between the pre-war and post-war ranges. As regards absence, the only continuous record is that for the coal miners, and, though the percentage of possible shifts missed has been around 12 of recent years as against 6 before the War, Miss Behrend in her monograph shows that this is due to a rise in the number of possible shifts rather than to a fall in attendances, which remain fairly steady, now as in the interwar years, around 4.7 shifts a week.

* University of Birmingham Studies in Economics and Society. Monograph A.2: Labour Turnover under Full Employment. By Dr. Joyce R. Long (pp. 134). Monograph A.3: Absence under Full Employment. By Hilde Behrend (pp. 137). (Birmingham Faculty of Commerce and Social Science, 1951.) 15s. each.

The main finding of Dr. Long's study of turnover is perhaps that the rate of turnover depends on the type of worker rather than on the type of firm, and that some types of worker have high rates of turnover whereas the majority are stable. She calculates a stability-rate, defined as the percentage of a firm's employees who have not left it during a certain period, and finds that the same firm may have both a high stability-rate and a high turnover-rate. Herein lies much of the explanation of the negative relation which she shows has generally held between unemployment and turnover: turnover is lower when unemployment is high not because all types of labour change jobs less often than, so much as because the unemployed contain a high proportion of types whose turnover-rates are habitually high. The characteristics associated with such rates are chiefly youth, lack of skill, and coming to work from a distance. Long service may be a source of stability; but it is hard to separate this influence, for those who have stayed on will be those who were more stable initially. Women usually show higher rates than men; but much of this seems to depend on lack of skill rather than on sex, for men doing unskilled work often have rates as high as the women, or higher. By contrast with these personal factors, the conditions of employment, such as the size of the firm, the level of pay and the working environment, show no clear association with the turnover-rate, though some differences between the rates of otherwise similar groups of workers are attributable to the state of personal relations in the plants, and especially the quality of supervision.

The special contribution of Miss Behrend's study of absence is the means it proposes for measuring controllable and uncontrollable absence separately. One element of the uncontrollable part is 'unavoidable' absence due to sickness, accidents and family affairs; but Miss Behrend holds that there is a further element which likewise is largely beyond the power of management to control because it is inherent in the nature of the work and of the labour force this work attracts. A sample of daily absence-rates shows marked differences between one day of the week and another, with Friday usually the lowest, and a given plant or department seems to have a characteristic and persistent weekly pattern: Miss Behrend suggests that it should take its Friday-rate as the measure of the uncontrollable absence specific to it, and the excess of absence on other days as the measure of controllable absence (see *Nature*, 165, 831; 1950). More particularly, she proposes a 'Blue Monday' index, giving the shortfall of Monday's attendance below Friday's as an indication of the workers' attitude to their work. In a study of two companies she finds that the 'Blue Monday' index is not correlated with the total absence-rate, for this depends mostly on sickness and workers' ages, whereas the 'Blue Monday' index singles out voluntary absenteeism. This is high among short-service workers and where work is unskilled or is reckoned to impose psychological strain, but it does not seem to be associated with other working conditions.

These studies collect evidence on an important problem on which exact information has hitherto been scanty in Great Britain. Their analysis of it is thorough, suggestive and directed towards practical application. It shows how collaboration between industry and the universities in this field can yield results useful to industry.

E. H. PHELPS BROWN

¹ *Occupational Psychology*, 12, Nos. 3 and 4 (1938).