

# TRAINING IN INDUSTRY

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# TRAINING IN INDUSTRY

A REPORT  
EMBODYING THE RESULTS OF INQUIRIES  
CONDUCTED BETWEEN 1931 AND 1934  
BY THE ASSOCIATION FOR EDUCATION  
IN INDUSTRY AND COMMERCE

EDITED BY

R. W. FERGUSON, B.Sc., A.R.C.S.

HONORARY SECRETARY OF THE ASSOCIATION FOR  
EDUCATION IN INDUSTRY AND COMMERCE, 1919 TO 1930  
EXECUTIVE CHAIRMAN OF THE ASSOCIATION, 1931 TO 1934



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## NOTE ON THE WORK OF THE ASSOCIATION FOR EDUCATION IN INDUSTRY AND COMMERCE

FOUNDED in 1919, under the Presidency of the first Viscount Leverhulme, the Association, familiarly known as the "A.E.I.C.," was designed primarily to establish contact between British firms carrying on schemes of Education and Training for their employees. In the constitution the principal aim of the Association was stated to be "the encouragement of definite educational work in industrial and commercial undertakings." This "encouragement" has taken various forms. The Annual Conferences, for example, have provided abundant opportunity for interchange of views, and discussion of mutual difficulties, between representatives of member firms—Directors as well as those responsible for education and training departments.

Addresses by leaders in business or in education have suggested new lines of activity and given a very real impetus to inquiries which were subsequently pursued by specially appointed committees. The work of these committees has been perhaps the most characteristic feature of the Association. To them has fallen the detailed and difficult business of collecting information bearing on the questions under investigation. Such information has been analysed and grouped in appropriate synthesis, so that a clear picture of the educational methods of various firms and the results achieved has ultimately been made available, not only to members of the Association, but to anyone whose interests were affected or involved.

Most of the reports resulting from these inquiries have hitherto been published in pamphlet form: a few have achieved a more limited circulation as stencilled documents. A list of the printed reports and other publications of the Association appears here as an Appendix.



**X            NOTE ON THE WORK OF THE ASSOCIATION**

Even in the new conditions under which the A.E.I.C. is now a part of the larger organization—the British Association for Commercial and Industrial Education—these publications may still be obtained, by anyone interested, on application to the Honorary Secretary of the B.A.C.I.E.

We would make it clear that, in the new conditions here indicated, the work performed by the A.E.I.C. will not cease. "The encouragement of definite educational work in industrial and commercial undertakings" forms the Terms of Reference of a Committee on Staff Training which is a part of the new organization (B.A.C.I.E.). That Committee is largely composed of persons having first-hand experience of the kind of work indicated above.

The gathering of essential information on Education *in* Industry and Commerce, and its issue in appropriate form will therefore be continued.

## ACKNOWLEDGMENT

CORDIAL thanks are due, and are here tendered, to the forty members of the A.E.I.C. who contributed material for this Report and who, in most instances, revised their memoranda subsequently to ensure that the information presented is in accordance with present practice and arrangements. Without their generous co-operation and assistance the compilation of the Report would have been impossible.

The following gentlemen have also rendered most valuable service by reading the manuscript and making important constructive suggestions—

Mr. J. Knox (Messrs. Lever Brothers, Ltd.).  
Mr. Percival Leech (Messrs. Reckitt and Sons, Ltd.).  
Mr. H. W. Locke (Messrs. Rowntree and Co., Ltd.).  
Captain P. J. Pither (Messrs. United Dairies, Ltd.).

Mr. A. Abbott, C.B.E., and Mr. J. Wickham Murray have kindly read the proofs and pointed out various ways in which the value of the Report might be materially increased.

REGINALD W. FERGUSON

*September, 1935*

# TRAINING IN INDUSTRY

## CHAPTER I

### GENERAL INTRODUCTION

THE original Inquiry on which this Report is based commenced over three years ago, but supplementary Inquiries, referred to in subsequent paragraphs, were carried out in 1933 and 1934 to ensure that the information given was brought up to date as far as possible.

Early in 1931 the Council of the Association for Education in Industry and Commerce (now a constituent of the British Association for Commercial and Industrial Education) attempted to make some differentiation between what may be called the internal and the external sides of training for business purposes. Much public attention was then being given to such questions as the qualifications of recruits to industry, the methods of training, and the kind of education best suited to develop these recruits for the ultimate occupation of responsible posts. The Council passed a minute from which the following sentence is extracted: "The adaptation of entrants to business ways, effort and enterprise is the crucial process in determining their suitability for business, and this process should be carried out by business in business."

This question of "adaptation" will become all the more acute in the future. Whereas, in the past, apprenticeship was comparatively straightforward, now the problem is to secure adaptability to changing conditions and new methods.

While it will be noted that in passing this resolution the Council members affirmed their belief in the peculiar value of the practical training imparted in an industrial concern, they fully realized and appreciated the enormous importance of the commercial and technical education

usually obtainable in institutions conducted by public education authorities. Further, as the Council proceeded with the Inquiry amongst members of the Association to which this resolution gave rise, it became increasingly evident that no strict differentiation is practicable between training and education within the Industry itself, and the education provided by the technical or commercial college, and that any attempt to separate them into watertight compartments would be unwise. This view was concisely stated in the following terms in one of the replies received to the first Inquiry: "The selection of a man for intensive training is often dependent on his work at external classes. For whilst in some cases a man is definitely trained inside the business for a certain job, well in advance of the time when he will be required to take it up, in other cases men virtually appoint themselves to various positions through qualifying by means of external classes. Such men are given the necessary opportunities of inside experience before being promoted."

No attempt was made to define the exact type of training being investigated. Members of the Association were encouraged to include in their replies training schemes designed for many purposes, and applicable to employees of widely varying ages, and in many different sets of circumstances. It was understood that those responsible for the Inquiries had in their minds all forms of training likely to furnish evidence of suitability (or otherwise) for a business career, which are also intended to develop the faculties and create the mental attitude deemed to be essential for the ultimate assumption of business responsibility.

The Inquiries were subject to various limitations. In the first place, constructive replies were received from only about forty firms. These firms, however, represented a wide range of trades, occupations and industries. They also included a number of the largest and most highly organized employing bodies in this country (as will be seen from the Appendices). The Council were fortunate

also in receiving one memorandum on the methods of training carried on by an important firm in India. It seemed wise to confine the Inquiries to Association members, and this restriction explains what might otherwise be regarded as serious omissions.

The second limitation was imposed by the fact that the Association had already instituted several allied Inquiries, and had published printed reports on "Education for Higher Positions in Commerce," on "Education for Foremanship," and on "Vocational Training for Manual Workers in the Engineering Industry."<sup>1</sup> For this reason the references in the present report to questions discussed with some fullness in those earlier publications are necessarily brief.

On the other hand, matter derived from Conference addresses and discussions, or from various investigations embodied in Association memoranda, or from an experience of education in Industry extending over twenty years, has been freely utilized wherever it was felt that such material would either form connective tissue for the report, or provide a background to the question of industrial and commercial training.

A third limitation—more difficult to define—is traceable to the reluctance shown by many firms and their educational advisers to describe efforts which they consider to be experimental or tentative, or perhaps even temporary in their character. In one or two cases firms preferred that their contributions to the Report should be so worded that neither the firm nor the industry in which they are engaged could be identified. This point is again referred to at a later stage.

To a few of those who responded to the Inquiries the terms of reference appeared controversial. One large concern, for instance, whilst subscribing generally to the view that "the adaptation of entrants to business ways is the crucial process in determining their suitability for business," does not consider that such processes should

<sup>1</sup> See Appendix XV.

necessarily "be carried out by business in business." Difference of opinion, however, is inevitable and even, to a certain extent, helpful.

It is impossible, even with repeated revision, amendment, and introduction of new matter, to keep a report of this description up to date, and to ensure that the schemes referred to will be operating exactly as described when the report appears in print. Three years have elapsed since the first Interim Report was submitted to a General Meeting of the Association, and it is hardly necessary to recall that these three years have been exceptionally critical in Industry and Commerce. Changes in methods of organization and control, together with abnormal economic conditions, might have materially altered the policies of many companies in regard to recruitment, training, selection for promotion and other problems which a scheme of education in industry or commerce is designed to elucidate.

In 1933 and 1934 all the important references in the Report, and all the appendices, were submitted for revision to those who had contributed them two or three years earlier. There were thus virtually two Inquiries (1931 and 1933-34), and the remarkable point brought out by the second investigation was that the schemes of training and education under review showed no appreciable decline, arrangements temporarily in abeyance being counterbalanced by new developments and improvements made in the light of experience. The memorandum received quite recently from a very well-known distributing house begins with the following paragraph—

Throughout the recent years of difficult trading, no attempt has been made here to reduce the Staff Training Department. In fact, the express policy of the Management has been and is to put more pressure into the training of the Personnel, and the new Training Department is conclusive proof of this.

It would thus appear that even the rather long interval between the first Inquiry and the final revision of the Report has served a useful purpose.

Throughout the Report no systematic distinction has been made between training for office workers and training for those employed in manufacturing departments, though the points of difference are frequently mentioned by individual firms. Nor have the methods employed in the engineering and allied trades been treated as something essentially different from those adopted by firms not primarily devoted to engineering. Two important engineering concerns have, however, contributed Appendices. An Association Report on "Training of Manual Workers in the Engineering Industry," in which several types of Apprenticeship Schemes were fully described, has already been mentioned.

While no separate chapter is devoted to the question of "recruitment" there are numerous references—particularly in the Appendices—to methods used in selecting new employees.

It must be remembered that the Report is a statement of fact and a record of experience, *not* an exposition of theories, and that questions which—like Vocational Guidance and Vocational Selection—seem to be covered adequately and systematically by some other Association or Institute are not discussed in this Report.

## CHAPTER II

### TYPES OF TRAINING INCLUDED IN THIS REPORT

THE Inquiry on which this Report is based was deliberately expressed in rather general terms, and those to whom it was addressed were encouraged to mention in their replies anything that seemed relevant. As a consequence the types of training described by those firms which responded vary enormously in character, and to a certain extent also in their immediate aim and purpose. The diversity of the information supplied is made evident by a glance at the Appendices outlining the training schemes of fourteen well-known concerns. It would be quite impossible to reduce these schemes to anything like a common denominator, but the synopsis given in later paragraphs outlines briefly what will be found in the Appendices and also indicates the main sub-divisions of the Report itself, in which much of the valuable material contributed by member firms appears as lengthy quotations.

### STAFF TRAINING DEPARTMENTS

The methods by which the training is controlled and organized vary almost as widely as the details of the training imparted. Even the phrase "training department" is used in different senses. There are factories in which a training room or training department means simply a section of the works in which new employees, or employees being transferred to a new occupation, are instructed in the correct methods of carrying out the apparently simple manipulative processes on which they are to be engaged. On the other hand, the training department may be—as in a large distributing house—a series of rooms suitably furnished and equipped, together with a specially qualified training staff of as many as half a



dozen persons. The members of the training staff have a wide responsibility in introducing new employees to the general policy and organization of the firm in addition to the technique of the particular work which they are taking up. The idea in this case is apparently to give the new employee a correct general impression of the firm's business principles and traditions, as well as a working knowledge of its standard procedure.<sup>1</sup> The initial training in cases such as these is usually followed up by group meetings, by the detection and correction of errors, and in other ways. This conception of a training department is elaborated in Appendix III (Harrods Ltd.).

In several instances the firms making substantial contributions to this Report carry on wide and comprehensive schemes of education, administered by a Works Education Department, but in other cases the oversight of the educational activities is entrusted to the Employment Department, or to an office that exists primarily for some other branch of personnel management.

### TYPICAL WORKS EDUCATION SCHEMES

Attempting a brief generalization applicable to various manufacturing firms, we find that the schemes of training and education (it is impossible to demarcate accurately between the two) fall into the main categories outlined in the following paragraphs.

In some cases there is a Day Continuation School or its equivalent, providing the general foundation for subsequent training.

Alternatively, there may be a series of regulations under which all young persons are expected or required to take up suitable evening studies, and with this may be coupled incentives of some sort to encourage regular attendance and steady work.

<sup>1</sup> To a certain extent the "Initiation Schools," arranged by a few firms for new employees, have a similar objective but, being confined to juniors, are much less ambitious in character, and the information given is expressed in simpler terms.

This leads naturally to a policy by which educational achievements receive suitable recognition. Further reference to this is made in one section of the Report.

As a supplement to the provision made either by the company or by the Local Education Authority for general education, and possibly concurrent with it, we find in many cases arrangements made by the firm for courses of internal lectures, group meetings, discussion circles or conferences. To this part of the subject, also, a considerable section of the Report is devoted.

Turning to training on quite different lines, we have several interesting examples of the means adopted by firms to provide that range of varied experience without which the acquisition of theoretical knowledge from classes or lectures would so often prove insufficient—"a balloon without ballast."

This aspect of the question is discussed under the heading of "Training by Systematic Variation of Experience." It is certainly one means by which the present tendency to extreme specialization may be to some extent overcome. Several contributors to the Report describe Trainee or Pupilship Schemes, and to these various references are made.

As a background to all this there is generally a wide range of other activities carried on among employees by the Education or Training Department. In no two cases are these exactly alike, and, as a matter of course, a Works Education Department does many things, either generally or for individual employees, to which only passing reference can be made in the abridged descriptions that constitute the Appendices to the Report. It is probably a safe generalization that a Works Education Department should be a service department, its resources in the way of advice and information being at the disposal of any employee or group of employees seeking to take advantage of them. It is a matter of common knowledge that many young men and young women have spent time and money unwisely on courses of study

which they would probably not have undertaken had they received sound advice beforehand.<sup>1</sup>

### “EXTERNAL” EDUCATION IN RELATION TO “INTERNAL” TRAINING

Although this Report is primarily concerned with training *within* the industry, we must not underrate the essential part played by public educational institutions, and the co-ordination of external education with internal training. Though the classes may be carried on by the Technical or Commercial Colleges, the motive for attendance is often found within the industry—hence the intimate connection. These external aids to training are specially important in the case of small firms and others who are not in a position to operate training schemes themselves. There is no doubt that the facilities available at public institutions could be used by such firms to a far greater extent than is the case. Surely it is the duty of someone in every well-organized business house to bring the existing local facilities for part-time education, principally in the evenings, before the notice of all who ought to be interested. Even in the larger towns the resources of the local colleges and institutions are not so fully understood as they ought to be.

Help in this direction is specially important when given to young persons in the ranks who wish to qualify themselves for work of greater difficulty or responsibility. It is most essential that, wherever possible, exact information be given, both about educational institutions with their classes, lectures and courses, and about professional bodies of good standing, and the examinations which lead to membership of these bodies. Information and guidance necessarily lead up to the particular methods by which the firm recognizes systematic and successful study. The well-thought-out and comprehensive scheme

<sup>1</sup> The functions of a Works Education Department were outlined in an article by the Chairman of the A.E.I.C., published in *The Journal of Adult Education*, October, 1933, and reprinted in pamphlet form.

of recognition adopted by one important company is described in an Appendix. But here again the methods adopted vary considerably, as between one firm and another.

At the present time great importance is rightly being attached to salesmanship, and to the training required for work of this description. While no attempt is made here to traverse the ground so fully covered by the Government Committee on Education for Salesmanship, it seems expedient to include several brief paragraphs describing the means by which certain firms train employees in a knowledge of their products before appointing them to positions as traveller or representative. The principle underlying these training methods is obviously the belief that anyone attempting to sell his firm's products (whether they be machines or bottles of milk) should have some accurate knowledge of them, their preparation and properties, and the organization behind their distribution.

The methods of training and education described in five of the Appendices have characteristic features which differentiate them from those found in even the largest of ordinary business houses in this country. For the first time this Association has been able to publish particulars of educational work in India, and the memorandum on "Technical Education in Jamshedpur" is of unusual interest. (Appendix VIII.)

Again, it is well known that British Railway Companies have accepted responsibility for the training of their enormous and widely scattered staffs. Three Appendices describe the training schemes of three leading companies, and there are various references elsewhere to the educational activities of these companies. (Appendices XI, XII and XIII.)

#### **SCHEMES OF A NATIONAL CHARACTER**

There are also training schemes conceived not for the staff of a single company, but for persons employed by a

## TYPES OF TRAINING INCLUDED IN THIS REPORT 11

number of moderate-sized units, federated or associated for this and other purposes. These schemes are national in their character and studies on parallel lines may be undertaken at many centres, distributed so as to meet the requirements of the industry. An interesting example of this type is the training organized by the National Federation of Launderers. (Appendix X.)

Of outstanding importance is the Education Scheme of the Gas Industry, of which the tenth Annual Report appeared in 1933. Full particulars of this national scheme are available in pamphlet form,<sup>1</sup> but in appropriate chapters of the present Report will be found some account of how the largest of the Gas Companies avails itself of the arrangements planned for the entire industry. (See Chapters III, V, VII and X.)

### THE CONTINUED EDUCATION OF THE ADOLESCENT WORKER

Although not referred to at length in other parts of the Report, there are two frequently occurring branches of education which call for special mention at this point. These are the physical training department and the Day Continuation School or its equivalent. Systematic instruction in gymnastics and—less frequently—swimming forms a very important part of the typical works education scheme, and has a value in many directions other than the mere acquisition of good physical development. In some cases firms beginning to experiment in the education of their employees have introduced physical training first of all. This gymnastic instruction may have been a development of the works athletic club, or, as is usually the case where a separate education department exists, an integral part of the works education scheme. In many factories and business houses provision is made for physical instruction for employees of all ages, in addition to the more regular and even com-

<sup>1</sup> The Institution of Gas Engineers, 28 Grosvenor Gardens, London, S.W.1.

pulsory classes provided for juniors between certain age limits.

But where a Day Continuation School is carried on, instruction in gymnastics and swimming to junior employees usually forms a part of the school curriculum, thus providing a most valuable supplement to the tuition given in the classroom, the laboratory, or the workshop.

It has been proved beyond question that systematic physical training, by properly qualified instructors, during the adolescence of junior industrial workers, minimizes the tendency to stunted growth, flat-foot and curved spine which are apt to afflict young persons who have to stand for long hours at machines.

In 1930 the Association for Education in Industry and Commerce invited its member firms to express their opinions on the value of the Day Continuation School as an instrument in adolescent education. Thirteen firms contributed to the useful symposium of views and experience resulting from this invitation. The schools described varied widely in size, in type, in management, and in the age limits between which attendance was required. In some cases the firm maintained the school themselves in part of their own premises; in other cases the employees were sent to schools for which the responsibility rested almost entirely with the Local Education Authority; and in at least one case the school was managed and maintained by the Education Authority, but in buildings specially erected for the purpose by the firm supplying the majority of students. The duration of attendance seemed to vary between a minimum of two years and a maximum of five, while the number of hours per week attended also varied, one complete working day (or the equivalent of two half-days) being perhaps the time devoted to school attendance in the greatest number of cases. There is probably no type of education in which the co-operation of employer and Education Authority can be arranged more directly or with a greater advantage to all concerned.

Attendance at a Day Continuation School is important for another reason, and one which closely concerns the subject of this Report. Several of the pioneer schools associated with industrial concerns have been in full operation for many years, and have long since emerged from the experimental stage. Some of them were commenced 16, 18, 20 or 21 years ago. Thousands of students have profited by the schemes for attendance, and among them are many of the young men and women striving to fit themselves for responsible posts with their respective firms. As a connecting link between the education of the ordinary day school and whatever specialized promotion training may be available at the age of, say, 20, the value of the Continuation School is obvious. At the same time, it is interesting to find that the curriculum of the leading Day Continuation Schools is in no case narrowly vocational.

Indeed, if the syllabuses are carefully examined, they will be found to embody—so far as is possible within the limits of time and circumstances—a liberal education in the full sense of the term.

That the Day Continuation School may play a considerable part in the training and promotion policy of a firm was clearly indicated by Mr. George Cadbury in a letter to *The Times* (dated 15th January, 1935). Mr. Cadbury said—

Sixteen members of our Higher Management Staffs have graduated through the Day Continuation School; fifteen men with University Degrees attended the School in their early years with the Firm; twenty-two men have gained high technical qualifications following on their career at the School; ninety-six of our Sales Representatives have passed through the School, all having gained their positions in competition with outside candidates.

Important examples of schemes for attendance at Day Continuation Schools are those carried on by Cadbury Brothers (Bournville), Lever Brothers (Port Sunlight), Tootal Broadhurst Lee Company (Bolton), Reckitt and

Sons (Hull), Mather and Platt (Manchester), Boots Pure Drug Company (Nottingham), W. & R. Jacob (Dublin), and C. & J. Clark (Street, Somerset).<sup>1</sup>

Of the *Statutory* Day Continuation Schools, contemplated in the 1918 Education Act, the only remaining example is at Rugby, but even in this case the active support of local employers has doubtless contributed much to the marked success of the school.

Closely allied to the Day Continuation School, though differing from it both in organization and in curriculum, is the Works School for Apprentices, fully described in Appendix IX by Messrs. G. and J. Weir, Limited, Cathcart, Glasgow.

Limitations of space prevent any lengthy discussion of the Day Continuation School question in this Report, but the practical value of *continuity* in adolescent education cannot be too strongly emphasized. The firms mentioned above, in building up their educational policy, have fully realized this fact. Expressed in another way "the Day Continuation School prolongs for boy and girl wage-earners the precious years of youth, with its school ways, school companionships, and school discipline for mind and body."

<sup>1</sup> For an account of the D.C.S. movement, see *Day Continuation Schools*, by A. Abbott, C.B.E., and R. W. Ferguson. (Sir Isaac Pitman & Sons.)



## CHAPTER III

### ATTENDANCE AT EXTERNAL CLASSES, BOTH GENERAL AND TECHNICAL

SPEAKING on Careers in Industry and Commerce at a meeting of the Association for Education in Industry and Commerce, Sir Francis Goodenough said: "For many years a steadily growing number of employers have realized that for the fullest and best development of industry it is of the highest importance that most careful and thorough attention should be given to the education, training and development of the human factor in industry." Vital as this development may be to the employer or to industry generally, it is of peculiar importance to the business entrant hoping to prepare for the ultimate assumption of responsibility.

In the work of preparation many factors can assist and many methods may be adopted. In special cases there may be a definite "trainee" or "pupilship" scheme, but more often there is nothing so systematic, and the employee must make the most of the opportunities that come his way. Viscount Leverhulme, addressing the Cardiff Business Men's Club, said: "Industry is full of examples, even to-day, of men who began their working life at the lowest rung of the ladder, and who have risen to positions of great responsibility, but no one has risen who finished his education on leaving school."

#### "OPPORTUNITIES" IN BUSINESS

*The Journal of Careers* has published many informative articles on "opportunities" in the service of various large-scale business houses. But "opportunity" has an individual as well as a general application in commerce and industry. Consider the cases of two typical juniors. One will do his work just well enough to escape serious censure, whilst complying with the letter rather than the

spirit of the firm's educational requirements. Another youth, probably of similar type and origin, gives to his work that little bit extra in either quality or quantity that makes all the difference between excellence and mediocrity. At the same time he utilizes as fully as possible the resources of the company's education scheme, and afterwards supplements these by more advanced studies directed towards some recognized and appropriate goal. This youth makes full use of the opportunities offered; the first does not. But this aspect is often overlooked by those who discuss the chance of "getting on" in the service of some particular firm and who are only too ready to blame the employer because a certain young man fails to secure promotion. After all, the question of training is, to some extent, the old story of the horse and the water.

In view of the admittedly close relation between internal training and external education, it seemed desirable that one section of the Report should deal with incentives to attendance at external classes, both general and technical, and should briefly survey the relation between training *within* industry and that given in public technical and commercial classes.

From the standpoint of industry it is possible to visualize three zones of educational activity. First, we have the general technical and commercial education which Local Education Authorities provide. In the second place, there is the education instigated, inspired and assisted by commerce or industry, but conducted by public institutions. This may be held to include courses leading up to the examinations of various professional, technological, and scientific bodies, or following curricula laid down by some industrial federation or similar body. In the third place, approaching more closely to the centre of gravity of this Report, there are forms of training and education in which commercial and industrial concerns act on their own responsibility, without necessarily making any direct reference to the education

obtainable outside, but at the same time assuming that employees take advantage of external classes as a background to the more specialized training imparted "within the industry itself."

### THE PART PLAYED BY TECHNICAL AND COMMERCIAL COLLEGES

Of great consequence in this connection is the fact that technical and commercial colleges are undoubtedly moving towards a more complete realization of the requirements of industry. The programme of any important commercial college is in these days a far more comprehensive affair than is realized by many business people even in the town in which the college is located. It is still possible to find men in business who imagine that the outlook of the local commercial college is limited to shorthand, book-keeping and a few simple "tools" used by the ordinary clerk! Of colleges not under public control, some have reached a standard of efficiency which enables them to supplement usefully the work of municipal institutions.

A good many enterprising firms have more or less extensive programmes of evening classes of their own and—less frequently—part-time day classes, of quite a general character, recognized in some cases by the Board of Education as an Evening Institute or, if held in the daytime, as a Works Day Continuation School. Such classes, however, are only briefly referred to in this Report. They have been the subject of fuller memoranda issued by the A.E.I.C.<sup>1</sup>

### INCENTIVES TO STUDY IN EVENING CLASSES

"Recognition by employers of educational effort on the part of employees," although already discussed at some length in earlier reports, is summarized in the next Chapter because, as elsewhere stated, "the selection of a

<sup>1</sup> See Appendix XV.

man for intensive training is often dependent on his work at external classes." Moreover, the material collected for this Report contained, almost without exception, references to the encouragement given by many progressive industrial and commercial houses to young employees—and, in varying degrees, to employees of all ages—to take the fullest advantage of provision made locally for technical and commercial education. This form of educational enterprise is clearly outlined in the following communication from the General Manager of the Gas Light and Coke Company—

It is the policy of the Directors to encourage all employees to improve not only their technical, but also their general education, in such a way as would best serve the interests of both the company and the individual employee.

Assistance is given by the payment of class, laboratory, and examination fees, subject to the requirement of regular attendance at classes, and travelling expenses are also paid where the attendance at classes takes an employee out of his normal way between the office and the home. Arrangements have also been made whereby the Company buys books or instruments that may be necessary for students, and is repaid by them on the instalment system.

The taking of single subjects where group courses are available is not usually approved, neither is help given when an employee wishes to take correspondence classes, unless the circumstances of the case are exceptional.

As I said above, the education scheme is not limited to helping those whose work is of a technical nature; assistance is also given to promising members of the clerical staff who wish to take such examinations as that for the B.Com. of the London University, or those of the Chartered Institute of Secretaries, and similar bodies.

Certain classes of employees whose work is of a technical nature are encouraged to obtain Degrees or pass the examinations under the Education Scheme of the Institution of Gas Engineers, and although this is not in all cases strictly a condition of employment, the prospects of promotion depend very largely on the passing of the appropriate examination. This applies chiefly to the Technical staff of the Chief Engineer's, Gas Sales, and Distribution Departments, and, to mention one example, an Assistant in the Laboratories would have little or no chance of promotion to the rank of Chemist if he did not obtain a Degree in Science.

This statement represents in general terms the attitude of many member firms towards publicly controlled educational activities which, after all, are very closely connected with schemes of training conducted strictly within the industrial organization itself. In practically every communication received, a similar policy in regard to attendance at part-time classes is either specifically mentioned or implied.

The reference to "group courses" in the above quotation is important. In the old days students could take single subjects connected with their trades. The group course linked theory with practice by compelling a study of principles as, for example, the association of Mechanical Drawing and Workshop Arithmetic or Practical Mathematics with Engineering Science in one course.

Quite apart from encouragement given to employees, either collectively or individually, to pursue their studies at suitable institutions, there are many ways by which the technical or commercial college itself can be encouraged. Employers do not always take the active part they might in visiting the classes, in serving on advisory committees, in making known the educational needs of their industry, or in giving or lending equipment. Admittedly, all these things are done by many firms and in many places, but there is room for extended activity, and by means such as these the employer can prove to the employee that he really believes in education.

The very practical memorandum circulated among proprietors and managers of laundries by the National Federation of Launderers, and reproduced in Chapter X, has an interesting bearing on this point. Other effective aids to evening study are: departmental canvassing by the Works Education Officer, and short meetings in the works, a member of the firm presiding while a persuasive and well-informed representative of the L.E.A. speaks and answers questions.

## CHAPTER IV

### RECOGNITION OF EDUCATIONAL EFFORT

REALIZING the importance of co-operation between business houses and local educational institutions, the A.E.I.C. some years ago conducted an inquiry into the recognition of educational effort on the part of employees.<sup>1</sup> It was hoped that by analysing and comparing the policies of various firms some guidance might be given to other employers wishing to co-operate with the schools of the district, and willing also to show their appreciation of studies undertaken by employees.

In its simplest form this co-operation with external classes consists in bringing before the notice of employees the educational facilities of the district and in returning fees to those who attend appropriate classes with some degree of regularity. In the past a scheme for the return of fees has probably been the first step taken by an employer who wished to show his interest in his employees' education. In its most complete form this recognition takes cognizance of successes in a large number of properly graded and well established examinations of undoubted standing, as well as of the means adopted to prepare for these examinations. Between these two extremes there are many forms and degrees of encouragement and recognition.

It must be admitted that examinations are not the only, and perhaps not even the best, test of conscientious part-time study, but to the employer who has little contact with educational matters and who lacks skilled advice, success or failure in well-known examinations provides a convenient—although not altogether reliable—standard of judgment.

<sup>1</sup> "Recognition of Educational Effort: Report on Inquiry into the recognition of Examination Successes and return of fees paid by employees." A.E.I.C., 1929 and 1930.

**IS UNDUE WEIGHT ATTACHED TO EXAMINATION  
SUCCESSSES?**

Quite recently a writer in *The Human Factor* stated that "examination success counts more than ever towards getting a job." In many quarters undue weight is certainly attached to examination successes and some employers have been criticized for restricting their choice of new employees—particularly for office work—to those who have matriculated or obtained a School Certificate, overlooking the fact that the School Certificate and Matriculation examinations were designed primarily for a different purpose. Into this highly controversial question of School Certificate and Matriculation it is impossible to enter here, but until some more suitable evidence of attainment is provided many employers will continue to use Matriculation as their standard, in the absence of any other with which they are equally familiar.

Equitable recognition of successes gained by persons already in employment provides the employer with an even more difficult problem. With the best of intentions it is impossible for the average business man to discriminate between innumerable public examinations, either in regard to their strictly educational value, or in regard to their bearing on the occupations of the students concerned. The employer probably tries to find out what other firms do in similar circumstances, and frames his own policy of recognition in the light of information collected from various sources.

A case harder to judge is that of the student who, for several years, pursues a carefully planned group-course at the local technical or commercial college, but who takes no examinations other than those arranged internally by the college authorities. The appropriateness of the course attended and the thoroughness of the work done are surely the real criteria by which the student's efforts should be assessed, but an accurate estimate of these things means expenditure of time and trouble on

the part of the employer or departmental manager, as well as a somewhat detailed first-hand knowledge of the institution attended. And so "the path of least resistance"—which may also be the safest or even the only practicable path—is once more followed, and the employee is expected to produce, as concrete evidence of progress, the certificate of some reputable examining body.

A further difficulty may be created by variation in the standard of assessment. Students have been known to take, in the same year, the internal examination at the end of the course at the local college, and the professional examination for which that course was a preparation, to acquit themselves very creditably in the one and badly in the other. Such cases are, no doubt, extreme, but they have been known to occur.

#### **METHODS BY WHICH SUCCESSFUL STUDY IS RECOGNIZED**

Even when one considers those studies in which success is vouched for by the gaining of a well-known certificate or diploma, there is wide variation of both principle and practice in the methods of recognition. For instance, there are single subject examinations and there are examinations in groups of subjects, frequently leading by stages to the diploma or associateship of some professional or scientific body. In providing incentives to study one employer may concentrate on the group examination; another will offer rewards for successes in single subjects. Sometimes eligibility to receive recognition is limited by conditions of age, occupation, or length of service.

Evidence collected in the Inquiry already mentioned suggests that methods of reward fall broadly into four categories. The first, and probably the simplest, is the payment of honoraria on a scale graded to suit the difficulty of the examination or, possibly, the closeness of its bearing on the daily work of the employee. Even



where this method is adopted the values of the honoraria vary surprisingly, as between one firm and another. There has been, however, during the past few years an interchange of opinion between prominent companies using this method which may lead to some approximation towards greater uniformity, both in the values of the rewards and in the lists of examinations recognized. One of the most complete schemes of this description is given as an Appendix<sup>1</sup> to this Report, but the schemes of some other firms are similar. The list of examining bodies approved by Messrs. Lever Brothers is almost identical with the lists adopted by several other manufacturers.

The second method of recognition, which may be regarded as a variation of the first, consists in merely refunding the examination fee, together with the whole or part of the fees incurred in preparation for the examination. As this preparation is frequently by correspondence the tuition fees, as well as the examination fees, may be quite substantial.

The third method of reward may seem easily justified, but it is also easy to criticize. It consists in giving a wage increment to the successful student. It may be urged that the qualified employee is of more value to the firm than the unqualified. But this argument is liable to fallacies and, in any case, the employer is endowing the successful candidate for a long time—conceivably even for his entire period of service—on the strength of something achieved during his comparative youth. Considerable experience of education in industry suggests that recognition of this kind is expensive, and in extreme cases quite unjustifiable.

#### UTILIZATION OF EDUCATIONAL RECORDS

The fourth method, which is practised by some very large concerns, is to record duly the particulars of

<sup>1</sup> Appendix VI: Lever Brothers, Ltd., Port Sunlight: Scheme of Prizes and Awards for Continued Education (September, 1931).

academic successes on the service records of the individuals concerned. This may mean a great deal or it may mean very little. It will only be of real value to the students if successes are notified to their departmental heads, and if the records are carefully and sympathetically referred to when promotions are being made or advancements granted. If the information is permanently pigeon-holed and not utilized, its influence on the subsequent careers of the students is not great. Very serious discouragement may even be the result if records are compiled, only to be put away and forgotten or ignored. If reports are asked for they should be used.

As regards the utilization of educational records it may be of interest to mention the exact procedure adopted by Messrs. Cadbury Brothers. In this firm the Employment Department (1) gets out an annual list of examination successes; (2) draws the attention of the Directors concerned to successes gained by employees; (3) records the information in the various appropriate files; (4) again draws attention to them at the time of the Annual Wage Revision.

So long as an employee is in attendance at the Day Continuation School and is systematically called up at Junior Wages Revision, it is fairly easy to obtain all the desired information about educational achievements. Employees above this age are invited to complete a form, or otherwise give notice of any success that they may attain. Pass lists are also scanned for the names of employees.

The procedure of Messrs. Reckitt & Sons is similar and includes—

1. Immediate notification of successes to the Directors specially concerned.
2. References in the annual report of the Company's educational official. This report includes a complete list of the year's successes and is sent to every Director.
3. Recording of successes on "classes" file card.
4. Recording of successes on "individual" record card.

The individual records are always referred to when promotions, selection for special training, etc., are being considered.

Because of the many diverse factors that must be taken into account in making promotions, the methods adopted by these two companies are probably as effective as any that can be devised.

Possibly the ideal course for general adoption is a combination of all four methods of recognition described in this chapter, or a compromise between them. On the other hand, the privilege of being selected for special internal training, or for a period of full-time study or foreign travel, is perhaps of greater value to the successful evening student than any of the more tangible and immediate rewards discussed in earlier paragraphs.

#### **ENDORSED CERTIFICATES IN COMMERCE**

The Board of Education scheme of Endorsed Certificates in Commerce will provide a suitable objective for many commercial students who were not attracted by the examinations of existing professional bodies, and will often simplify the employer's task of equitable recognition. The participation by school or college in the award, and the emphasis laid on regular attendance in an approved course, as distinct from mere examination success, should safeguard the thoroughness of the work done, while endorsement by the Board insures national standard and national currency. The fact that no professional body acts as "third party" in granting these certificates differentiates them from the National Certificates for which many technical students prepare. If, as a consequence of this scheme, more commercial students were permitted to attend part-time day classes a further important advance would be made.

## CHAPTER V

### TRAINING BY LECTURES, DISCUSSIONS AND CONFERENCES

It is difficult to maintain a clear distinction between the Lecture Course and the Discussion Circle, as the one merges into the other, and in some cases lectures alternate with informal discussions. There is an increasing tendency for the formal lecture to be superseded in importance by the discussion or the conference, although several firms and federations arrange fairly extensive lecture programmes.

It may be asked why work of this kind is not left entirely to the technical colleges and other institutions carried on by Local Education Authorities. Broadly speaking, all general education and even the ordinary technical and commercial subjects should be entrusted to publicly maintained schools and classes. But there are circumstances in which, for some special reason, the more direct participation of the employer is necessary. When instruction in the organization of a particular industry is required, or detailed information on the processes carried on in that industry, it is not always possible for a public institution to provide lecturers or teachers having the highly specialized knowledge and practical experience. Arrangements may, of course, be made for college lecturers to spend some time in works familiarizing themselves with processes, and there are instances in which this method has been successfully adopted, as in the Laundry Industry, but it is not generally applicable. Nor are firms always willing that their technical officials should take on college lectureships.

### LECTURES AND DISCUSSION CIRCLES ARRANGED BY FIRMS

As will be seen from some of the illustrations mentioned later, only prolonged experience in an industry,

with specialization in some particular section of it, enables the lecturer to deal authoritatively with the more intricate points of industrial technique, and to answer confidently the difficult questions put to him in the discussion which should always follow the lecture. These questions and answers are of special importance and interest when lecturer and questioner are members of the same organization.

Lectures for foremen, and courses on industrial administration for potential executives, afford perhaps the best examples of the way in which the well-staffed firm—or group of firms—can conduct training of this nature. Some of the advantages are obvious. An internal course, for instance, can be carried on under the conditions of time and place most convenient to those who wish to attend, and some of the best results have been achieved in courses held at the request of a particular grade or section of employees. The syllabus, also, can be so framed as to have the closest possible bearing on the industry with which the students are connected, although, as will appear from the examples quoted below, it is highly advisable to broaden the basis of the course by including a certain amount of economics and industrial organization, treated quite generally.

Training for Foremanship is briefly considered in a later section of this Report.

It is not proposed to discuss here the holding of Works Evening Classes in subjects which are normally provided by the local Education Authority, although several extensive programmes of such classes are organized by firms contributing to this Report, and there may be quite good reasons for providing ordinary evening classes at the works.

The Inquiry of 1931 brought to light particulars of many schemes ranging from quite formal lecture courses through more or less official study groups and conferences, to discussion circles and meetings organized entirely by the particular sections of employees taking part

in them, and additional information was obtained in 1933-34. Details will be found in the various appendices, but several points of contrast or resemblance may be mentioned here.

It is noteworthy that very few—if any—of these arrangements had ceased to function between 1931 (the time of the Inquiry) and 1933, when each Appendix was revised by its author. Methods may have been changed in the light of experience, but the central ideas remain. An interesting case is that of the Supervisors' Voluntary Training Course, conducted for some years by a London manufacturing firm (see Appendix XIV). Although the earlier courses arranged by this firm were, in a sense, voluntary, the approach was made by the Company. Now the approach to the Supervisors is made by the Joint Supervisors' Committee. This increasing measure of autonomy—or, shall we say, of spontaneity—is important. A works department responsible for educational arrangements must avoid the tendency to become bureaucratic if the best results are to be achieved. Formerly the course was attended by twelve supervisors and eight outstanding employees who were not supervisors: now it is limited to twelve supervisors only. This change confirms the experience of some other companies, which is that employees of a particular grade often discuss with greater freedom in the absence of persons holding positions of either greater or smaller responsibility. In other words, foremen like to confer with other foremen: charge-hands with other charge-hands; and so on.

A third modification of method in the course mentioned is that an informal discussion is to take place after each lecture and visit instead of the supervisors being expected, as formerly, to submit written reports. The subjects included in the programme were selected by the supervisors themselves.

The syllabuses of this course, and of many others designed for similar purposes, are open to one or two criticisms, which, as it happens, are quite easily met.

A title such as "Costing" or "Psychology" may appear in the syllabus, while the time devoted to it—perhaps two or three evenings—seems quite inadequate. It is obvious that, in these circumstances, and for the type of student concerned, the lecturer cannot do more than introduce the subject in broad outline to his audience, drawing their attention to some of the more important directions in which Costing or Psychology, as the case may be, bears on their daily work and links up with other sections of the course they are attending. Students who wish to pursue the subject beyond the limits imposed by this necessarily sketchy mode of treatment can generally find evening classes in which much fuller and more systematic study is possible.

#### **THE CLASS LEADER OR TUTOR IN WORKS TRAINING COURSES**

Another criticism is that a course to which many different lecturers contribute, each dealing with his or her special branch, tends to discontinuity and loses definiteness of aim. In some cases this difficulty has been completely overcome by the appointment of some suitable person as a kind of class leader or tutor, to help in the discussions and provide the connective tissue (although giving few, if any, of the lectures).

The method of the class-leader has been successfully applied in several training courses arranged by Messrs. Cadbury Brothers, Limited, Bournville. In one instance the course is held during working hours and attended by selected girl clerks who are already doing fairly responsible work, and who aspire to further promotion. In addition to lectures describing the general principles of Office Organization and the procedure adopted in each of the main offices of the firm, prominence is given to the general relation of the offices to the manufacturing departments, the interdependence of the two sides of the business being one of the main factors in determining the curriculum. Economic History, Economics and

Psychology are introduced to some extent, and entrusted to special lecturers, but, in the great majority of the subjects discussed, the lecturer is a Director or a Departmental Head who speaks on a subject of which he or she has knowledge based on long practical experience. Prizes have been awarded for the most complete and best kept notebooks. Although no promise of promotion is given or implied, attendance at the course is generally regarded as an avenue to ultimate advancement.

If a class of this description realizes its aim, it should enable students to see the various sections of the business in true perspective, and to visualize the relation between producer, distributor and consumer.

#### POTENTIAL EXECUTIVES IN THE LAUNDRY INDUSTRY

A scheme with similar ultimate aims, but conceived and carried out on quite different lines, is the "Young Launderers' Movement." This movement, which is said to be "fathered and mothered" by the National Federation of Launderers, is really distinct from the systematic educational work described in Appendix X under the title of "Technical Education in the Laundry Industry." The Young Launderers' Movement originated in—and still centres round—the Young Launderers' Congress. The general idea of the Congress can best be conveyed by quoting from the notice displayed in *The Federation Journal* for August, 1933—

All young executives and trainees for management are urged to attend the tenth Young Launderers' Congress, to be held in the Chatsworth Hotel, Matlock, from Friday evening, 29th September, to Tuesday evening, 3rd October. . . . Senior Launderers are also urged to encourage any young people connected with their businesses to attend this useful gathering.

The programmes of these Congresses were formerly published in *The Young Idea*, a small magazine duplicated in the offices of the Federation and circulated among the



scattered young executives. Recently *The Young Idea* developed into an eight-page printed pamphlet called *The Young Launderers' Supplement* issued with the monthly *Federation Journal*.

The policy of the Young Launderers' Movement includes the establishment of local groups, intended to function quite apart from the Congress, though doubtless deriving inspiration from it. Naturally the most successful of these groups is in London, where the young people hold well-attended monthly meetings at the Federation headquarters.

Short references to Staff Lectures occur in the memoranda furnished by several other companies contributing to this Report, while the term "Discussion Circle," or its equivalent, also appears frequently. Sometimes the scheme has in it an admixture of the social element, which, rightly used, may be of considerable value, as in the Progress Club of Boots Pure Drug Company.

#### DISCUSSION CIRCLES AND FOREMEN'S MEETINGS

Lectures are given throughout the winter to the apprentices at the works of Mavor and Coulson by members of the staff. These are held in the evening. The training scheme of this company also includes educational visits, meetings with foremen, and a Discussion Circle. Members of the staff are sent to attend conferences and to visit other firms. When visits to factories and places of interest are arranged for the apprentices, members of staff may participate also.

As a matter of fact, illustrative visits play an important supplementary part in the lecture or discussion circle schemes organized by many firms.

Messrs. Mavor and Coulson's Discussion Circle and Foremen's Meetings are thus described by the company—

We have had in existence a discussion circle, which meets once a week; it is attended by the young men in our business, who

have had a good technical training, but who desire to develop points of view on general questions. At each meeting four members of the group are asked to put forward subjects for discussion at the next meeting. These four subjects are put to the vote, and the one receiving the most votes is the subject for discussion at the next meeting. In this way every member has a say in the selection of subjects discussed, and is therefore more inclined to take an interest, and to study it before the meeting.

We believe there are possibilities in this method, and the attendances have been well maintained.

A monthly meeting is held, at which all the foremen and the management attend. (This is additional to a weekly "production meeting.") The meeting with foremen is largely educative and is arranged to ensure that the firm's policy receives the same interpretation in every department, and so that the foremen may receive guidance in the carrying out of their work. The subjects placed on the agenda include Accident Prevention, Suggestions, Examination of Plant, etc., New Home Office Regulations, points raised at meeting with representatives of the men, and similar matters.

#### **"THE BUSINESS CIRCLE" AND "THE MANAGERS' CLUB"**

Turning to a firm engaged in work of quite a different character, we find the method of conference and discussion freely used by the Spirella Company of Great Britain. The memorandum received from this company includes the following references—

Although these are not primarily educational in function, we have two other means whereby we endeavour to train the members of our business who hold positions of some responsibility. We have what we call a "Business Circle." The total membership of the Business Circle is now about 130, and is composed of: All directors, factory managers, forewomen, supervisors, and foremen on the maintenance side of the works; sales, departmental, and office managers, correspondents and secretaries—in fact, all members of the personnel who are responsible for the work of one or more under them.

Business Circle meetings are held after office hours once a month during the winter months—October to March—of each year, and while they are mainly social in character, at these meetings some point of interest to the business is discussed; a debate is held; or else a lecturer is engaged to talk on some topic of general interest, after which the meeting is thrown open for discussion.

The Business Circle has an annual business meeting, at which the activities of the past year are reviewed and a new Committee elected for the coming season. Any member of the Business Circle is eligible for office, and the voting is done by ballot among the members themselves. This Committee is entirely responsible for the management of the Circle during its year of office, and arranges the social and business programmes, subject to approval by the Executive.

We have found that there is a tendency for the factory and office workers to remain very definitely apart. They never get an opportunity of meeting to hear one another's difficulties and points of view, and this Business Circle is an endeavour to bring together the factory and office workers so that they may better know each other, talk over business matters with one another, and ultimately have better understandings of one another's personalities, difficulties, ambitions, etc.

This Business Circle has what I might call one further stage of development, known as the "Managers' Club." The Managers' Club consists of members holding the more responsible, senior positions throughout the office and factory. These members, therefore, as you will appreciate, must necessarily also be Business Circle members, but the seniors thereof. The Managers' Club meets as often as may be necessary, but its appointed times are once a month for the winter months.

The Managers' Club takes the form of a dinner at a local hotel, and following the dinner, matters of policy connected with the business are discussed, and where it is thought advisable these matters will again at some later period be talked over with the members of the Business Circle.

The Managers' Club again provides an opportunity for social intercourse, and we find it particularly useful as a means of introducing to the senior members of the English Company visiting managers from our various other branches abroad.

Both the Business Circle and the Managers' Club encourage—and provide opportunities for—the members to talk in public before their fellow members; the Executive pursue this policy with an educational intent, as they believe that the art of easy public speech is a definite asset in business.

In the same memorandum attention is drawn to the Committee system, through which all the departments are linked up. Summaries of all matters brought forward by the various committees are, by means of analysed minutes, presented to the executive for consideration. Obviously, such an arrangement must have considerable educational value, even though it be planned in the first instance for an entirely different purpose.

### THE TRAINING OF A DECENTRALIZED STAFF

When the staff of a company is more or less decentralized, special methods must be used. These are necessarily intensive in character, if employees are assembled at headquarters for training or instruction. For instance, Boots Pure Drug Company hold periodically a course of one week's duration which consists of lectures by Directors on the policy of the Company and by Managers on the work of their respective departments. Opportunity is given for discussion. Here, also, visits are paid to offices and departments under the leadership of a guide who is competent to explain methods and processes. This course has been attended by a number of selected persons from shops, offices, and works. One result is to show how the various parts of the firm are linked together in one large and comprehensive whole.

For a limited number of those employed by the same company, there is the "Progress Club." Stated briefly, this is a lunch club, held fortnightly during the winter months. Members are nominated by Directors and hold their membership for three years. Lunch is followed by lectures and discussions. About half of the lectures are given by members of the firm on their own departments; the remainder being given by outside speakers on matters of general interest. Membership of the Club is generally confined to the Nottingham staffs. A longer account of this club and its activities will be found in an earlier Report published by the A.E.I.C.<sup>1</sup>

<sup>1</sup> "Education for Management" (Appendix III).

### OTHER EXAMPLES OF WORKS LECTURES

Lectures appear more than once among the methods of training adopted by Reckitt and Sons (see Appendix IV). In certain cases juniors attend lectures given by Departmental Managers, in addition to the systematic education received in the firm's Day Continuation School, between the ages of 14 and 18.

For senior employees there is the Staff Association, comprising heads of departments, assistants and foremen. Fortnightly lectures are given, alternately by the Company's staff and by outside lecturers. Officials of the firm generally speak on some phase of their own work, while the lectures given by others usually form a course in some subject of interest to all business men.

The many-sided scheme of Personnel Training in the Metropolitan-Vickers Electrical Company, Manchester, includes a section described as "Training for Professional Employment." After indicating the theoretical and practical provision made in two distinct apprenticeship courses of an advanced character, the account states that the young men attend a series of weekly lectures given by members of the company's staff which are held at the works during the evenings. These lectures cover a works course, dealing with practical workshop problems, together with lectures by the managers of the various sections of the works in turn. Those receiving this training are encouraged to attend foreign language classes arranged for groups of three or four students.

The company also attaches importance to the experience gained by service on the Council of the Apprentice Association. It is considered that the experience gained by the officials of such a body in the handling of its affairs, in negotiation and in the organization of its activities, has a high value and forms a definite part of the training schemes. The Apprentice Association Council governs matters of mutual interest, arranges visits to other works, inter-section sports, social activities,

etc. It also controls the apprentice magazine, *The Rotor*, which is issued quarterly. (See Appendix VII.)

### EDUCATIONAL ARRANGEMENTS ON GREAT RAILWAY SYSTEMS

The training arrangements of great railway companies belong necessarily to a different category from those of any ordinary firm or factory, however large and highly organized. They must be studied in the Appendices if an adequate conception is to be formed (see Appendix XI, London, Midland and Scottish Railway; Appendix XII, London and North Eastern Railway; Appendix XIII, Great Western Railway). It is, however, important to mention at this point some of the classes and lectures for railway employees conducted exclusively by the companies themselves, which are distinct from those provided by—or in co-operation with—Local Education Authorities, University Colleges, and other public bodies.

Particulars are given by one of the leading railway companies of classes for instruction in the methods of goods and passenger station working. These are held at convenient centres throughout the system. An ingenious arrangement—one which would be appreciated by many men working irregular hours in other occupations<sup>1</sup>—is that whereby the lesson is repeated the following week in order that staff working early and late in alternate weeks can conveniently attend for a full course. The syllabus comprises a series of forty-eight lessons spread over two sessions. In addition to the instructional classes, special lectures are given at convenient centres on nearly every branch of railway activity. The lecturers and instructors are in all cases members of the Company's staff who possess a wide experience of the subject on

<sup>1</sup> Quite recently, in a well-known Midland factory, arrangements were being made for a series of fortnightly talks, embracing all aspects of the company's policy. The foremen and supervisors attending the inaugural meeting decided unanimously that it would be an advantage to have each "talk" given twice in order to accommodate the three shifts. The times chosen were 8 a.m. and 3.30 p.m. on every alternate Wednesday.

which they are required to speak. After each meeting questions are invited and discussion encouraged. No fee is charged and travelling facilities within a reasonable radius are given to those desirous of attending. It is interesting to find that this strictly internal arrangement has been supplemented by co-operation with a number of local educational authorities who provide instructors on other subjects suited to the needs of railway employees.

A highly specialized, but none the less important piece of equipment is the miniature, electrically worked railway, used for instruction classes on signalling at the Victoria Station, Manchester. It is understood that there is similar equipment at one or two other places.

#### INFORMAL DISCUSSIONS AND DEBATES

Provision for *informal* discussion is made also in the training schemes of these three railway companies. For example—

In certain of the larger centres of the (London and North Eastern Railway) system, the staff have formed Debating and Lecture Societies for the discussion of any subjects affecting railway operation or organization. As will be appreciated, the range of subjects is a very wide one, and the existence of the societies has proved to have had a very beneficial effect upon the staff from the educational point of view. The societies are not controlled by the Company officially in any way, but the Company's Officers take a prominent part in the way of preparing lecture papers and initiating discussion, as well as by their frequent attendance at the meetings, and they render, by the offer of essay prizes or in other ways, any assistance they can in furthering the objects of the Societies. The Company also provide meeting rooms for the periodical discussions of the Societies.

In the communication from this company reference is made also to the help received from Institutes, Libraries, Literary Associations, and popular Lectures—as well as to many other educational enterprises.

From the London, Midland and Scottish Railway Company very similar evidence is forthcoming—

Locomotivemen's Mutual Improvement Classes, which are well attended by members of the Motive Power Department, are

regularly held at a large number of stations. At these meetings lectures are given on subjects having a very direct bearing on the men's vocation, and most useful and interesting discussions take place. At practically all the larger centres there are railway institutes, supported by the Company, at which members of the staff meet for social and educational purposes. Some of these institutes contain excellent libraries, and lectures and debates are a regular feature.

Lecture and Debating Associations are encouraged also by the Great Western Railway Company. Here, too, reference is made to certain correspondence courses which are arranged for the benefit of staff unable to attend ordinary classes.

Whatever be the true place of correspondence tuition in our educational system, there is no doubt that in several scattered organizations correspondence courses, directed by the industry itself, have been found serviceable for more or less isolated employees. Correspondence tuition is mentioned by the National Federation of Launderers, and by United Dairies, as well as by the Railway Companies.

To those engaged in educational work for some moderate-sized organization, whose employees are probably concentrated in one town, possibly even in one building or group of buildings, it must appear a task of enormous difficulty to frame an education scheme for a staff whose numbers run into six figures, scattered over a large area of the British Isles. Full details of the railway companies' schemes are given in the appendices previously mentioned, and these must be carefully studied if an adequate conception is to be obtained of the scope and methods.

### TRAINING ARRANGEMENTS IN THE GAS INDUSTRY

In the educational arrangements of the Gas Light and Coke Company provision is made, not merely for formal classes, but also for discussions of quite an informal character. Technical classes are conducted by members of the Company's instructional staff as a supplement to the



external classes, mentioned elsewhere, which employees are expected to attend. (See Chapter III.)

In the Company's lecture room cinematograph apparatus has been installed with great advantage.

Employees of the Company also utilize the educational facilities of the British Commercial Gas Association, and those which are provided in a somewhat different way by the London and Southern District Junior Gas Association. The arrangements are outlined by the Gas Light and Coke Company in the following paragraphs—

Under the auspices of the B.C.G.A., Salesmen's Circles have been formed, the object of which is, as the name implies, the training of those engaged on the sales side of the industry. Meetings are held once a month during the winter, and lectures are given on technical and semi-technical matters of which it is desirable that salesmen should have knowledge. Discussion follows after each lecture to provide an opportunity for the interchange of ideas, and for the obtaining of further information on points arising out of the lecture.

Members, and more particularly junior members, of the Company's technical staff are encouraged to join the London and Southern District Junior Gas Association, in which case it is necessary for them to have some definite qualification such as the Ordinary Certificate in Gas Engineering or Gas Supply of the Institution of Gas Engineers. This Association meets once a month during the winter, when papers on technical matters are read, followed by discussion.

In Chapter X will be found an account of "Refresher Courses" arranged by the same Company.

### **CONFERENCE AND DISCUSSION IN THE DISTRIBUTIVE TRADES**

An important application of the conference method is found in some of the leading retail stores. "Group Meetings," for example, take a prominent place in the Training Department activities of Harrods Ltd. In Appendix III particulars are given of weekly, fortnightly, or monthly meetings provided for nearly a dozen groups or sections of the staff, ranging from assistant buyers and assistant executives to hairdressers and lift operators.

### THE "CASE" METHOD OF INSTRUCTION

In accounts of lectures, discussion circles and talks, attended by foremen and others, reference is frequently made to the "case" method of instruction in which those present discuss what action should be taken, or what ought to happen, in some hypothetical but quite probable combination of circumstances. Experience shows that when works lectures or discussion circles are arranged, with an experienced official as lecturer or leader, "cases" arise quite naturally in the discussion. Nearly always some member of the audience puts a question on these lines: "In our department recently . . . What should have been done, Mr. Blank, in a case like that?" And so real "cases" take the place of hypothetical ones.

Naturally, the value of such discussions depends largely on the degree of sympathetic understanding between lecturer and questioner.

But the full application of the case method involves much more than the impromptu discussion of a question raised—possibly on the spur of the moment—at the end of a lecture. It requires preparation and study of the problem, by individual students, prior to the meeting at which it will be considered. Many firms can supply cases, derived from their own experience, suitable for use in public classes where this method of training is employed.

## CHAPTER VI

### THE PART PLAYED BY SYSTEMATIC VARIATION OF EXPERIENCE

IN the Inquiry of 1931 some importance was attached to schemes whereby promising young men and women enjoy successive opportunities, either with their own or with associated firms, for systematically varied experience, calculated to broaden their outlook on the business in which they are placed. It was hoped that arrangements of this kind would form a considerable section of the report. This mode of training is no novelty, having been mentioned many years ago at an early conference of the A.E.I.C., but in the replies sent in to the Inquiry it received less prominence than had been expected. Perhaps this is due to the fact that training by means of systematically varied experience is an individual rather than a general question. To quote one reply: "It would be inaccurate for us to talk about our scheme of training within the factory: we consider the requirements of each individual." In other words, an itinerary of experience is usually planned for one person and generally requires adaptation or modification before being extended to others.

Another factor was the natural reluctance of some firms to publish full details of any arrangement which might require considerable modification before being accepted as part of the firm's normal training policy. On the other hand, inter-departmental transferences may have been regarded as matters of ordinary business routine rather than as a form of training. Whatever be the reason, it is interesting to find that a few contributors to the Report—especially to this section of it—preferred that their names should be omitted.

### A SCHEME FOR SELECTION AND TRAINING OF POTENTIAL EXECUTIVES

The well-thought-out scheme described in the following paragraphs is a case in point—

We select boys who have been to a public school or who have a good record in the ordinary secondary schools, and submit them to a test by the National Institute of Industrial Psychology. If the test shows that they have an aptitude for the work we have in mind and particularly for training as leaders of men, they are first taken into our works offices, which are separate from the commercial office, and there they deal with the collection of statistics and records (of which we have a great variety). They then spend some time in the "standards office," which deals with our manufactured products, and become familiar with the physical and chemical tests which are applied to our products, after which they spend some time in the planning office to enable them to get thoroughly conversant with the operations in the works and particularly of routing.

Afterwards they are sent into the works, and are put in the care of our most competent workmen to learn the various processes through which our raw material passes and its treatment right up to the finished article. Following this, they spend some time in each of the finishing processes and so on to the dispatch end. Each young man stays in one section long enough to be able to do the job "on his own" without special assistance, then he passes on to another section, and so on.

Upon the completion of training in the mills, each trainee is assigned to one of the regular under-managers, who is made responsible for him. The trainee accompanies the under-manager in his "round" of the mills, and takes over, as far as is possible, the clerical work connected with reports and records. He thus obtains a good grounding in the art of management, and is ready, in case of a vacancy arising, or illness amongst the staff, to take over the larger duties.

During all this period we give every encouragement to our trainees to take advantage of any educational facility which bears on their work. Towards the end of the training period we endeavour to send them to a Technical Institute which specializes in training for our particular industry.

These arrangements are a good example of what one might expect to find in the policy of most well-organized concerns, namely, systematic provision for selecting and

training young persons, in numbers sufficient to meet future executive requirements.

Here is another illustration from a business of a different character—

For those who are likely to be appointed to positions of management, we always put the young men through a full course of factory training, starting at the commencement of the mixing of the dough, right through the processes of the cutting machines, baking, etc., to the finished article, and find it to be of very great advantage by their having practical experience of the various processes, so that they in turn can supervise the work and instruct others efficiently.

During the holiday season we put some of the younger managers to take the place of travellers while on their holidays, so as to let them see something of the selling side also.

#### LIMITATIONS IMPOSED BY GEOGRAPHICAL AND ECONOMIC CONDITIONS

In a factory somewhat isolated from large towns and also from other works, the problem presents itself differently, as is apparent from the next quotation—

On the other hand, in the isolated conditions in which we are working, it is not easy to give these local boys a wide enough experience and outlook. We should like the opportunity of exchanging them with promising young people of a similar age for a year or two's experience in some other well organized business. We have not up to the present been able to arrange this.

The well-known shipbuilding firm associated with the name of Sir Archibald Denny, referring more particularly to the office employees, says: "As far as these are concerned I may say that we endeavour to give all our lads as much of a general training as possible, that is, to put them round the different departments in our minor houses. In view of certain connections we have with India and other places abroad we have frequently found situations for members of our staff overseas, and, generally speaking, I think I may claim that their training here has contributed in no small measure to their success in their new spheres." The letter from which this quotation

is taken emphasises that both the business and the town in which it is located are of moderate size, and this is, of course, a factor in the problem.

This quotation, in common with many others made originally in 1931, was submitted to its author for verification during the subsidiary inquiry of 1933-34. The comment was that "during the last few years we have been unable, due to the limited amount of work going through our yard, to fully extend these training facilities to our young men. We certainly endeavour to give the young members of our staff a good general training, and when we again increase our staff we hope to revert to our former arrangement."

A further example of training by variation of experience is tersely summarized by another company in two sentences: "A system of transfer from office to office is in operation for a selected few with a view to administrative work. The period spent in each office depends on the type and variety of work therein."

From the information available one forms the general impression that this privilege of "Varied Experience" is in most instances restricted to "a selected few."

#### INTERCHANGE WITH ASSOCIATED COMPANIES

Regarding the staff of Messrs. Unilever Limited and Lever Brothers' London House, it is stated that "As far as possible transfers are made from one department to another, so that the brighter members of the staff can gain a wide knowledge of the business. This applies not only to the Head Office, but transfers are also effected between the Head Office and associated companies."

The moving of employees from one department to another, on what are really educational grounds, takes place in the works of Reckitt and Sons, where also some individuals who are qualifying for higher positions are brought from branches to the Head Office for further experience. Similar interchanges have taken place with associated firms. Another method adopted by Reckitt

and Sons (and, doubtless, by other firms) is the appointment of a skilled worker to train a group of learners. The very close association between external education and internal training, under the same company, is further illustrated by the following extracts from their memorandum—

The selection of a man for intensive training is often dependent on his work at external classes. For whilst in some cases a man is definitely trained inside the business for a certain job, well in advance of the time when he will be required to take it up, in other cases men virtually appoint themselves to various positions through qualifying by means of external classes. Such men are given the necessary opportunities of inside experience before being promoted.

Even a well-qualified specialist, newly appointed, may be advised and helped to qualify in other directions, with a view to future developments.

In another concern where the function of Planning has been raised to a position of great prominence, it is considered that some time spent in the Planning Office is a valuable incident in the training of young men who are really destined for more permanent positions in other departments. In the same factory, the experiment has been tried of giving experience in manufacturing departments for, say, six months, to young men in some of the offices, chosen on a basis of temperamental suitability.

The provision of diversified experience is again mentioned in communications from two organizations so dissimilar as the Tata Iron and Steel Company, India, and the Little Laundries.

#### ✓ AN EXAMPLE FROM THE TEXTILE INDUSTRY

Should the method of systematically varied experience become practically automatic it will probably develop weaknesses. In minds of certain types, the knowledge that the sojourn in one department is for a very limited period, and that it will be followed in any case by transference to another kind of work, must create an atmosphere of unreality. This view seems to find support in

the following extract from the memorandum of Tootal Broadhurst Lee Company, Limited. Referring especially to "Merchanting," the Head of the Company's Education Department says—

As the organization and procedure of most of the cloth departments is fairly uniform, the earliest training of a youth or of a university apprentice consists of giving him the first stage of work in a department, and passing him into succeeding stages by promotion, on ability alone, for the next higher stage. Training is not given as a progressive experience automatically, but is obtained as service and by promotion on ability. This may not appear to be an organized training as distinct from progress; but the system of giving special apprentices a defined period in different departments and on each job in one department was found to be defective, and has been discarded in favour of the above system. The objection to the latter system is that entrants do not feel the urge to work their way up, and they do not appreciate the value of small economies and of competitive effort. On attaining ability for one of the higher grades of departmental work, as "first man," "second man," etc., under a manager, a youth may be transferred to a higher grade of work in another department with a view to his taking further responsibility in that department later.

#### **PROLONGED PRACTICAL EXPERIENCE ESSENTIAL**

Somewhat unconventional, but at the same time quite sound views on this question are stated in a confidential letter from a Director of one company.

Our practice, as far as special training is concerned, is to select a limited number of boys of superior educational attainment, character, and intelligence, with a view to training them as managers. This training involves a four-year course of actual work on the machines, etc., in the various departments.

We consider that a detailed knowledge of practical work—acquired by prolonged personal work—is essential. Although paid at a different rate, and in the matter of holidays, etc., treated as staff employees during their period of training, these trainees are in every way "on all fours" with factory workers. They have to clock on, clock off, and for the purposes of work and discipline are entirely under the manager of the department in which they may at the time be working. We do not dry nurse them, or "try to lead them to being interested in their work by giving them plenty of variety" or any nonsense of that sort. I think that a



good deal of the "spoon-feeding," mind-study, and vocational training which we hear about to-day creates slipshod, lazy managers rather than the reverse. If fellows have to be coaxed and psycho-analysed into doing their jobs, it is almost certain that they will not do them well."

A case in which the initiative may be taken by the employee desiring a wider range of experience was mentioned by Messrs. Rowntree and Company in the Interim Report of 1931. The following paragraph explains the position. It refers primarily to girls holding the Company's Secretarial Certificate, or equivalent qualifications.

Any clerk of 25 years of age or under who has obtained four Royal Society of Arts Advanced Certificates or passes examinations of equal value, or who has the Company's Secretarial Certificate, may apply to be transferred to any other department in order to gain further business experience. Such transfers will be made at the discretion of the Staff Office and in the interests of the Company.

#### THE RESPONSIBILITY OF DEPARTMENTAL HEADS AND SUPERVISORS

The comparative scarcity of information on this aspect of business training may be due to the wide difference of interpretation put upon the inquiry by the firms approached. For example, an official of one company, having a good reputation for progress in educational matters, says: "I am afraid we have nothing to contribute to the inquiry on Training within the Industry as this is left entirely to department heads and supervisors."

Perhaps, after all, the "varied experience" method of training plays a larger part than the evidence suggests, but the variation is not necessarily either automatic or systematic. It may not be altogether neglected, even if it is not specifically mentioned, and where it appears to be lacking, its absence may be due to the fact that there is no call for it, or to one of the reasons indicated in an earlier paragraph. Probably, however, many departmental heads and supervisors are giving—more or

less subconsciously—opportunities and facilities that really cover the ground, but it has not occurred to them to set out their practice in such a form that it could rank as a training scheme for the purpose of this Report.

#### **SOME DIFFICULTIES INHERENT IN THIS METHOD OF TRAINING**

Two difficulties which sometimes arise in applying the method of training discussed in this chapter are indicated briefly in the two paragraphs which follow. They are mentioned on the suggestion of one member of the A.E.I.C. who has prolonged experience of Education in Industry.

First, there is—perhaps naturally—an unfortunate and unfair tendency in some quarters to retain very promising men who excel in the work of their department. There is thus a danger that the firm's scheme for variation of experience may be less energetically pursued in practice than in theory. Where this retardation exists, determined efforts on the part of the management may be needed to ensure that youths of outstanding ability are moved on with the rapidity merited by their qualifications.

In the second place, as the proportion of really well-educated youths and girls in industry increases, it may sometimes be necessary to inquire whether the officials controlling these young persons, though possessed of indispensable technical knowledge and long experience, have themselves reached a sufficient standard of education and breadth of outlook to understand and deal tactfully with the trainees committed to their charge. Nothing could be more regrettable than for the young man from public school or university to assume an attitude of intellectual superiority towards those who, for the time being, direct his work and teach him the business, or for the staff controller to be out of sympathy with educational and academic qualifications.

## CHAPTER VII

### TRAINEE AND PUPILSHIP SCHEMES

THE pupilship system seems to occur chiefly in the engineering industry, and particulars of several schemes intended for graduates, or for other suitably qualified young men, have been published elsewhere. That of the Queen's Engineering Works, Bedford, is a case in point.

In this Chapter several schemes are described and these are taken from quite a variety of industries. The amount of detail given depends on the completeness of the information furnished by the Company carrying on the scheme.

#### PUPILSHIP SCHEMES IN THE GAS INDUSTRY

Two examples in an industry closely allied to engineering are described by the Gas Light and Coke Company. This body has instituted a Pupilship Scheme in connection with gas sales and another in the Chief Engineer's Department. Of the former scheme, which is intended for well-educated boys between 16 and 18 years of age, it is stated that the pupils are given opportunities of seeing all branches of the work undertaken by, or relating to, the Gas Sales Department. The experience given is most varied and comprehensive, and at a certain stage the pupils are expected to obtain ordinary and higher grade certificates in Gas Supply of the Institution of Gas Engineers.<sup>1</sup>

Engineering pupilships in the same company are open to candidates of not less than 20 years of age who have taken a good degree in engineering or science. After varied and practical training, the engineering pupils are, during their last year, attached to the Distribution and Gas Sales Departments in order that they may be able to study the various problems that arise in connection

<sup>1</sup> See reference to Education Scheme of the Gas Industry on page 11.

with the distribution and supply of gas to consumers. They are expected to obtain the diploma in Gas Engineering of the Institution of Gas Engineers.

#### **TRAINEE SCHEME OF MESSRS. UNILEVER AND LEVER BROTHERS**

At the London section of Messrs. Unilever, Limited, and Lever Brothers, Limited, there is in operation a Trainee Scheme summarized in the following paragraphs—

Candidates are selected straight from the universities and given a three-year intensive course at Associated Companies, at home, abroad, and at Head Office. These men are trained to fill executive positions.

The scheme is not confined to men coming direct from the universities only. Candidates who are already members of the staff of Head Office or one of the Associated Companies may be put forward, and, if they are selected, they are also given a course of training to fit them for executive positions.

It will be seen that every effort is made to train progressive members of the staff, and that no trouble is spared to find those men who are eventually to fill important positions in the organization and thus solve one of the most difficult problems with which industrial concerns are faced to-day.

#### **TRAINEE SCHEMES OF MESSRS. MORLAND AND IMPEY, LTD.**

Messrs. Morland & Impey, Ltd., of Northfield, Birmingham, submitted for the purpose of this Report extremely detailed information regarding their system of training. The synopsis prepared from this material has been approved by a Director of the Company. The scheme falls naturally into three sections. The first and second dealing, respectively, with Executive Trainees and Junior Office Staff are summarized here: in a later section of the Report references are made to the third, which concerns Sales Staff and Salesmen.

EXECUTIVE TRAINEES working for Messrs. Morland & Impey are divided into three groups. Group A has a period of training for three years; Group B a training of one year and a half; Group C comprises members of

Group A and Group B who take a University course or the new London School of Economics Business Administration Course as a part of their training.

Members of Group A must have attended a public school until the age of 17 or 18, and passed an examination of matriculation standard; their age on entry may vary from 18 to 21. Those in Group B come between the age limits of 22 and 24 on entry, and must have obtained a satisfactory University degree, following a public school education. Members of both groups enter into an agreement with the Company. All groups have to pass the Company's doctor for physical fitness.

Trainees in Group C may vary in age on entry from 22 to 25, and are required to have obtained outstanding reports from their departmental heads during their training of eighteen months or three years. Then the Company will pay for the trainee to take a two-year business course at a University selected by them or at the London School of Economics.

After the period of training has been completed the Executive Trainee will, if satisfactory, be appointed to the Junior Executive Staff under one of the following classes—

1. Non-managing positions in offices.
2. Non-managing positions on the selling side.
3. Managing or Executive positions.

The managing or executive position is one which entails the control over a number of people, or includes the functions of planning, organizing and administering the policy of the Company. For example: Assistant to Works Director; Assistant to Managing Director; Cashier; Mail Order Manager; Stock Room Manager; Time Studies Manager; Buyer; Dispatch Manager.

After the completion of training it may be found inadvisable, owing to the trainee having insufficient experience, to appoint him to an executive position, or there may be no immediate opening, in which case the trainee will be engaged on routine work in a non-executive

post for a period of not more than two years. In this category are positions as assistant in one or other of the following sections of the business: Sales Department; Mail Order Department; Factory Control Department; Time Studies Department; Dispatch Department; Accounts Branch.

There are four grades of staff in this company; General Clerical, Senior Clerical, Executive and Managerial. The trainee will be appointed automatically to the general clerical staff, and if he consider himself eligible for appointment to a higher staff he will make application to the Staff Grading Committee.

**JUNIOR OFFICE STAFF.** Under the same company, boys and youths between 16 and 21 years of age are taken into offices. They are required to have had a Secondary School education and must be able to produce satisfactory school reports. One of the conditions of service is that the employee agrees to attend the Day Continuation School for one day per week until he reaches the age of 18. Attendance at school is counted as work done and is paid for as such. (The same privilege of attendance at day classes is given the other boys who are employed either in works departments or as apprentices to skilled trades).

#### **TRAINING IN A SMALLER CONCERN**

One of the characteristics of the Laundry Industry is the relatively small size of most of the units. Special interest, therefore, attaches to the following communication from Miss E. B. Jayne, Managing Director of Little Laundries, Ltd.

I receive pupils, usually girls of 16 to 18 years of age, just leaving school, for a three-year apprenticeship course of training. They receive no salary for the first three months which is a strictly probationary period.

At the completion of the probationary three months they are granted a holiday of two or four weeks as desired,

and then enter as apprentice workers receiving a suitable weekly Wage.

They are transferred from department to department, learning the work everywhere and becoming commercially efficient in each before transferring to another, and are expected when efficient to fill any temporary vacancy which may arise. As soon as possible they are given a measure of responsibility as "charge hand" over a section, watching and charting the progress of output, and gradually brought on to higher positions as sub-administrators.

During the three-year course they attend classes organized by the National Federation of Launderers on methods of laundering, and other lectures on industrial matters such as organized by the Welfare Institute or Industrial Welfare Society. At the end of the three-year course they are expected to be competent to take a position as assistant manageress or forewoman in charge of a department.

Further information about Training in the Laundry Industry will be found in Chapter V ("Young Launderers' Movement") as well as in Appendix X.

#### **THE TRAINEE SCHEME OF MESSRS. ROWNTREE & CO.**

The Trainee Scheme of Rowntree & Co. has been fully described for the purpose of this Report, and the account given below was recently revised to ensure that it corresponds accurately with present conditions.

*Trainee Scheme.* This scheme is an attempt to provide for the firm's future requirements in the way of trained and capable executive officers. The direction and control of the scheme is in the hands of one director, who is advised by a committee known as the Staff Development Committee, composed of senior executive officers drawn from each main branch of the business.

Trainees are recruited both from existing staff and from outside, the usual age limits being from 17 to 25, although certain exceptions have been made. They are finally chosen by a committee of directors and managers, who separately interview each selected applicant and award marks in respect of a number of listed qualities, grouped broadly under the headings of personality, intelligence, and education. Allowance is made in cases where special qualifications are desired, as, for instance, older applicants who have had some specific business experience. Candidates are also given a psychological test and are required

to pass a medical examination. Appointments are made definitely on a probationary basis, trainees being required to sign an agreement stating that their contract is terminable at any time, subject to one month's notice on either side. The probationary period is three years, during or at the end of which the Company may terminate the contract if it comes to the decision that the candidate is unlikely to become a successful executive officer or salesman.

The trainee is intended to get a thorough grasp of the general work and routine organization of one of the main branches of the business, those showing aptitude for any particular function being selected for training in that function. Care is also taken to give trainees a knowledge of the Company's policy and practice by means of courses of lectures on these and related topics, and regular meetings of the trainee staff, at which business conditions are reviewed and matters of current trade interest are discussed. All trainees, with the exception of those engaged in purely clerical work, e.g. accountancy, are expected to spend a certain period working in the factory. In addition to the training in the general work of the department, trainees are given frequent opportunities to do special jobs, and to "sit in" at meetings of various committees, to attend trade exhibitions and industrial conferences, and wherever possible to fill temporary vacancies, such as replacing travellers on holiday, or members of other staffs who may be away from work. The progress of trainees is carefully watched by the Staff Development Committee. A departmental report on each trainee is sent in every six months. These, together with reports from the Staff Office and the Education Officer, are discussed by the Development Committee. Trainees who obtain a series of consistently bad reports are dismissed.

It is expected that by the end of the probationary period of three years trainees will be placed in suitable positions. The scheme has not yet been in operation sufficiently long to show how this will work out in practice, but our experience so far indicates that permanent positions are available for trainees before their training has been completed. Appointment to such a position, however, does not remove the trainee from the control of the Staff Development Committee. This normally would not occur until a man had reached the age of about 27, or a position of some responsibility.

#### **METHODS ADOPTED BY RAILWAY COMPANIES AND BY A LARGE ELECTRICAL COMPANY**

Although described in somewhat different terms certain arrangements of other companies may be appropriately



included in this chapter. These are "Traffic Apprenticeship" and "Civil Engineering Graduateship" on the London and North Eastern Railway System, "Engineering Pupilship" on the London, Midland and Scottish System, and "Training for Professional Employment" in the service of the Metropolitan-Vickers Electrical Company.

*Traffic Apprenticeship: L.N.E.R.* The Company have a limited number of positions known as Traffic Apprenticeships to which young men are appointed in two main ways—

(i) By special selection from candidates straight from Universities or Public Schools; and

(ii) By means of an annual competitive examination from the staff.

An equal balance of appointments from these two methods of recruitment is aimed at. The Traffic Apprentices undergo a special course of training covering a period of three years, during which time they are mostly supernumerary to the establishment and see something of practically every phase of traffic commercial and operating work. Throughout the training period their work and progress is specially supervised by Committees of the Departmental Officers, and they receive salaries which are in the nature of a subsistence allowance. The programme of training covers short spells respectively at small country stations, large parcels and goods offices, yardmasters' offices, dock offices, engine sheds, district passenger, goods, operating and locomotive running offices (including visits with district inspectors or canvassers), as well as some time in head offices.

*Civil Engineering Graduateship: L.N.E.R.* A small number of civil engineering graduates are accepted for a course of training in railway engineering work. The course extends over three years and, after a probationary period of six months, the men receive salaries as subsistence allowances in the same way as traffic apprentices. Their training is supervised by a committee of the Company's engineers.<sup>1</sup>

*Engineering Pupilship, L.M.S.R.* A very limited number of Pupils are accepted in the Works of the Chief Mechanical Engineer's Department, at about 21 years of age, for a course of training extending over two years, for which a payment of £100 has to be made. During the course they are paid wages at the rate of 40s. per week. Whilst an honours degree is not essential, candidates are required to be of a suitable educational standard.

<sup>1</sup> See also Appendix XII.

The training given covers all the shops in the particular section (e.g. Locomotive or Carriage and Wagon) in which they are specializing.

Engineering Apprentices, or Pupils already in the service, who are exceptionally well reported on and who have done well in their theoretical technical education, are eligible for consideration as Engineer Pupils under a higher scheme referred to elsewhere in this Report.<sup>1</sup>

*Training for Professional Employment: Metropolitan-Vickers Company.* Two apprenticeship courses are arranged for the training of recruits for ultimate professional employment.

1. Young men are recruited from universities or certain senior technical colleges who have obtained a degree or diploma in engineering. Two schemes of training under this heading are arranged—

(a) Those who come direct from a university after obtaining a degree.

(b) Those who are selected on leaving a public or secondary school to enter the works for a year's preliminary practical training and then proceed to a university, returning to the works during their summer vacation periods, and completing their final practical training after they have obtained their degree.

2. Those who are recruited from public and secondary schools who have attained at least matriculation standard of education are accepted in the works for an apprenticeship of four years' duration. These apprentices are required to attend the College of Technology, Manchester, or the Royal Technical College, Salford, throughout their apprenticeship, for part-time technical instruction, and monthly reports are obtained on their work and progress. Many of these follow special courses of training leading to the External Honours Degree in both Electrical and Mechanical Engineering of London University.<sup>2</sup>

<sup>1</sup> See also Appendix XI.

<sup>2</sup> See also Appendix VII.

## CHAPTER VIII

### TRAINING FOR ADMINISTRATIVE AND EXECUTIVE POSITIONS WITH SPECIAL REFERENCE TO FOREMANSHIP

IN the foregoing chapters of this Report the basis of arrangement has been the *method* rather than the *objective* of the training, but it is necessary to indicate how these methods can be directed towards the equipment of employees for holding positions of certain types. To do this fully would have involved the inclusion of chapters dealing specifically with Apprenticeship, Training for Clerical Work, Education for Management and Education for Foremanship. Apprenticeship was, however, discussed at some length in a previous Report of the A.E.I.C.,<sup>1</sup> and is also referred to in some of the Appendices. For these reasons only a few paragraphs of the present Report are devoted to Apprenticeship.

Comparatively little new information on training for ordinary clerical occupations was supplied in response to the Association's inquiries between 1931 and 1934, though the methods of office training adopted by various member firms are mentioned here and there, both in the body of the Report and in the Appendices.

Preparation for administrative and executive positions, as well as specific training for Foremanship, is in a somewhat different category. On two occasions the A.E.I.C. published pamphlets entitled "Education for Management," though it must be admitted that little or no attempt was made to indicate methods of preparation for the *higher* grades of management. That task would have been rather outside the provinces of the A.E.I.C., and would probably involve a more comprehensive and authoritative treatment than it could receive from any

<sup>1</sup> *Vocational Training for Manual Workers in the Engineering Industry.*

single association. The two A.E.I.C. Reports did, however, suggest lines of preparation for positions carrying quite a fair measure of responsibility, and the second Report included a serviceable bibliography of what may be called "management literature."

### TRAINING FOR FOREMANSHIP

The organizers of the Fifth International Scientific Management Congress, held in 1932, invited the Association for Education in Industry and Commerce to contribute a paper on Training for Foremanship. The lines to be followed by the Association in preparing its Memorandum were indicated by this prescribed title—

How to organize in the enterprise itself, the technical and mental preparation of the foremen in respect to the application of rationalization.

The Association having twice published Reports on Education for Foremanship, the Memorandum submitted to the Scientific Management Congress in 1932 was regarded as supplementary to the second of these. The substance of the Memorandum is reproduced here in an abridged form.

Education for Foremanship engaged the attention of the A.E.I.C. for over twelve years, and was the subject of frequent discussions, investigations, and reports. The first Report was issued in October, 1922, and was soon "out of print." During the years that immediately followed, schemes of training in industry developed in various directions and Foremanship Training certainly received more attention than previously. With a view to estimating the progress that had been made, the Council of the Association in 1927 asked one of their number<sup>1</sup> to carry out an inquiry. The results of this investigation were embodied in the second Report, issued in 1928, in which the subject of Foremanship Training

<sup>1</sup> Mr. Percival Leech of Reckitt & Sons, Ltd., Hull.

was discussed with some fullness.<sup>1</sup> (It should, of course, be understood that much of what is here said, regarding Foremen, is equally applicable to responsible Forewomen.)

The Council of the Association, to whom the question was referred by the British Provisional Committee of the Fifth International Scientific Management Congress, made two principal decisions. In the first place, it was agreed that the subject of Foremanship training should be discussed as comprehensively as was possible within the limits of a brief memorandum, and should not be confined to the "technical and mental preparation necessitated by Rationalization."<sup>2</sup> In the second place, it was felt that the whole subject of Foremanship Training in Britain is one that develops slowly. The position reached in 1928, summarized in the Report then published, had not changed materially in 1932, except in so far as the status of the foreman or forewoman had been affected by such factors as rationalization, increased mechanization and the fuller use made of functional management.

The importance of *adaptability* has already been emphasized in Chapter I. In the mental equipment of the foreman, or prospective foreman, it is an obvious necessity, if he is to keep pace with rapidly changing industrial conditions.

#### THE NEED FOR A RISING STANDARD OF EDUCATION

At the present time some employers meet this need—at least in part—by engaging men of superior education with the deliberate intention of promoting them, after a period of intensive and varied factory experience, to positions as foremen or departmental managers. This policy may tend ultimately to create functional rather than departmental officials—members of a production staff rather than foremen of the conventional type. Any scheme of Foremanship Training undertaken by a firm must, however, concern itself with those who attain

<sup>1</sup> See Appendix XV.

<sup>2</sup> See page 58.

control of their departments through the ordinary process of promotion, as well as those who have been introduced from elsewhere by reason of some special qualities or qualifications.

### **SOME GENERAL CONCLUSIONS IN REGARD TO FOREMANSHIP TRAINING**

Close contact with this question during twelve years enabled the Council of the Association to draw certain conclusions. These are based upon general impressions, and any attempt to be dogmatic would be out of place.

First: although the facilities for technical and commercial education are widely distributed and generally good, only a few colleges appear to offer any specific preparation for foremanship. While some actual or prospective foremen doubtless avail themselves of classes in such subjects as Costing, Economics, Transport and various problems of Industrial Administration, there must be many to whom the ordinary classes of technical or commercial colleges make little or no appeal. The special courses for foremen, based on either the "case" method or the "conference" method, which in recent years have met with marked success in a few institutions, have not yet become at all common.

Second: in the absence of any systematic public provision the responsibility for arranging educational courses specially adapted to the requirements of foremen seems to devolve generally on the employer, who may or may not accept it. If the duty is undertaken it may be discharged in various ways. For example, a promising young man may be sent to a full-time course in Industrial Administration. Alternatively, the employer may devise series of discussions, conferences or lectures, conducted either by lecturers engaged from outside the business or by experienced and responsible works officials or, preferably, by a combination of the two. By this method the advantages of training are much more widely distributed.

Third: the number of firms prepared to incur the

trouble and expense involved in making their own provision for foremanship training is relatively small, and present industrial conditions do not favour any considerable extension.

Fourth: theoretical preparation will avail little if it is not supported by sound practical experience, sufficiently long and sufficiently varied, including if possible some exercise of responsibility in minor executive capacities.

#### **EFFORTS TO ENCOURAGE THE MOVEMENT**

A voluntary organization, such as the Association for Education in Industry and Commerce, could assist the movement by systematically collecting evidence and experience from those who have attempted to deal with the question, and by disseminating the information so gathered among those that have the inclination to take up the work but are waiting for guidance.

Training by systematic variation of experience is generally applicable to those who are regarded by the management as the foremen and forewomen of the future. Those who cherish—perhaps more or less secretly—ambitions in the same direction, but who have not so far “caught the eye” of those in authority, do well to attend lectures or discussion circles on Industrial Administration and similar subjects, whether arranged by their employers or by the local Commercial or Technical College.

It would be difficult to answer with any degree of certainty the question: “Is specific Foremanship Training on the increase?” The answer is probably in the affirmative, but the supporting evidence must sometimes be sought in directions other than those of the class, the lecture, or the conference.

#### **THE INFLUENCE OF RATIONALIZATION AND OTHER PRESENT-DAY TENDENCIES ON TRAINING FOR FOREMANSHIP**

Foremen, by reason of their somewhat limited powers, are not likely, as a rule, to play any part in bringing about

the process commonly referred to as Rationalization of Industry. On the other hand, they may be called upon to assist in giving effect to changes necessitated by this process, and may find their duties or positions materially affected thereby. For this reason it seems desirable that both present and prospective Foremen and Forewomen should have Rationalization and other recent developments in the organization of industry explained to them in their appropriate economic setting. Two examples illustrating the educational treatment of this question have been supplied to the Association and these, curiously, came from firms engaged in the same industry.

In a full and valuable communication received from Messrs. Rowntree & Co., there occur the following paragraphs—

In addition to the main feature of our training, there are certain other features which have the same end in view. One of particular interest in connection with the terms of the present inquiry was a series of lectures extending over two Winter Sessions on "Rationalization in Theory and Practice." The course was specially designed to give to the Company's administrative staff a comprehensive and up-to-date account of the progress of Rationalization in England and Europe, available material being supplemented by first-hand knowledge gathered during a tour of the Rhine industrial area. Then we have had during the past three Winter Sessions voluntary evening discussion groups of foremen, which met weekly, and which were held to give members an opportunity of improving their powers of expression and reasoning, the need for, and the importance of which are emphasized in the report on the training for foremen.

The number of overlookers who attended the lectures on Rationalization was relatively small, but the fact that the time of meeting was somewhat inconvenient may partly account for this. Experience seems to indicate that in the ranks of foremen and forewomen, as elsewhere, there is a minority of keen alert men and women who strive after the ideal outlined by Mr. George Cadbury in his introduction to the Report,<sup>1</sup> and who take every opportunity to keep themselves well-informed of industrial developments. The majority are mainly concerned with their everyday work, which, however, they perform with a high degree of excellence and efficiency. Thus the real problem of this work

<sup>1</sup> Report on Education for Foremanship (A.E.I.C.).



of mental preparation of foremen is how to awaken an interest in the matters which, whilst not directly connected with the daily work of the factory, do actually affect it, and those engaged on it. The position is complicated by the feeling of insecurity, which such a trade dépression as the present one inevitably breeds in men who feel its effects without being able to understand them or their causes.

Men tend to shun the discussion of topics which may possibly increase their apprehensions and fears. There is, undoubtedly, some ground for the fear that Scientific Management and Rationalization in one way or another may re-act to the disadvantage of the foreman as such. The one may restrict his scope and authority, the other may take away his job. If this be the case the need for enlightenment is all the greater, so that the problem becomes mainly one of method.

It should be noted that in this company the term "overlooker" is roughly equivalent to "foreman."

The ideal referred to is that suggested by a former President of the Association in his Introduction to its 1928 Report. Realizing the magnitude and importance of the economic and industrial changes that were then imminent or already in progress, the author of this Introduction, Mr. George Cadbury, said—

A Foreman occupies a very important position between the management and the workers. To the management he represents the workers and their individual capacities and interests; to the workers he represents the management, passing out to them the instructions he receives.

and again—

There would seem to be a special appropriateness in the appearance of this Report on Foremanship at this juncture. Industry is passing through a phase comparable with that through which it passed a hundred years ago. The presence of well-informed foremen capable of interpreting these changes will simplify the tasks confronting managers and directors of our great businesses.

### HISTORICAL APPROACH TO PRESENT-DAY PROBLEMS

In another case the question of Rationalization and associated post-War problems has been introduced

historically as an important section in a syllabus of lectures dealing with "The growth and present state of British Industry." The students on whose behalf this syllabus was drawn up were largely of the prospective Foreman and Forewoman types and were employed by Messrs. Cadbury Brothers. The course was as follows—

**PART I. *Historical*—**

- 1760–1800. The Birth of Modern Industry.
- 1800–1830. Early Struggles.
- 1830–1870. The hey-day of *laissez-faire* and of the one-man business. England as the "workshop of the world." The development of modern banking. The effect of improvements in communications.
- 1870–1914. Competition from abroad. The Industrial and Commercial Development of France and Germany. Trusts and Cartels.
- 1914–1919. The War and "Mass-Production."

**PART II. *Present-day Tendencies*—**

The Application of Science to Industry—

- (a) Technical Research.
- (b) Scientific Management.
- (c) Advertising and Marketing.
- (d) Rationalization.

British Industry in the Post-War World.

Recent developments at home and abroad—Prospects of the coming decade.

Experience showed that the second part of this course lent itself to considerable expansion, while the first or historical part could with advantage be somewhat condensed to meet the wishes and requirements of students. There is much to be said for the historical approach to this subject, but the earlier phases must not be treated so fully as to destroy interest in the "Present-day

Tendencies" by relegating that part of the curriculum to the last few weeks of the session.

In a brief note from another Company with a highly developed education scheme, it is stated that "In our own Staff Association we have had a number of Lectures on Economics, some of which have touched on Rationalization; but although these lectures are attended by our Foremen we can hardly refer to this as definite training." The position here indicated is believed to be a common one.

#### THE GENERAL ATTITUDE OF FOREMEN TOWARDS RATIONALIZATION AND SCIENTIFIC MANAGEMENT

In this connection the following further extract is made from the communication already extensively quoted.

The Foremen of to-day, in a factory such as this, are, generally speaking, adults with little use for book learning or theories, but with keen interest in their jobs and in anything likely to help them to get better results in the workroom. In this case a course of lectures on Scientific Management or some similar topic may not be so effective for the "mental preparation in respect of the application of Rationalization" as a series of discussions on "How Scientific Management is going to affect us as foremen."

It is the usual experience of firms giving attention to this branch of industrial education that, as far as possible, the method of the conference should be adopted in preference to that of the class or formal lecture. Only by this means can the problems considered be given a close personal application. Every encouragement must be given for free discussion, and there must be no ground for suspicion that what a man says may be used to his detriment in some other connection. Whether the conference takes place in work hours or immediately after the closing time of the factory, will be determined by local conditions, but every reasonable incentive to regular attendance should be offered. Illustrative visits can become a valuable feature of the course.

### THE POLICIES OF VARIOUS COMPANIES IN SELECTING AND TRAINING PROSPECTIVE FOREMEN

It may be of interest to reproduce here the views expressed some time ago by two British Railway Companies and several manufacturing firms engaged in a variety of industries on the selection and training of prospective foremen. A fundamental principle accepted quite widely (but perhaps not in every case) is that the men selected must have had some experience in minor supervisory capacities such as "Leading Hand" or "Charge Hand." He must also give evidence of possessing such qualities as adaptability, tact in handling men, personality, organizing ability, and a thorough knowledge of the work to be done. At least one firm emphasises the view that organizing ability is of greater importance than a high degree of technical skill.

Further information on methods of selection and training is given in the quotations that follow.

(a) Foremen are recruited from men who have satisfactorily deputized for foremen in cases of holidays or illness.

Men are selected from those in the ranks who have shown initiative, resourcefulness, and efficiency.

Most suitable senior applicant is selected to fill vacancy, and prior to appointment must have passed through the various grades of the work he will be called upon to supervise. Must also be favourably reported upon by superior officers.

(b) In the Mechanical Engineering Department the more promising pupils and apprentices are interviewed by a special committee of the Company's officers with a view to transfer either temporarily or permanently to the Locomotive Running Department, which controls the operation of locomotives in traffic, as well as running repairs at engine sheds or depots throughout the system. At a number of these depots the men in many cases are nominated by the committee to start as supernumerary running foremen with a view to training for supervisory positions in the department.

It has always been our custom to pick out the most suitable man from amongst the trained members of our own staff. In such selection we not only take into consideration manual ability, but we also have in mind that such a man must be able to control his fellow workers.

(c) The great majority of our foremen have risen to their present positions by gradual stages, starting in many instances as youngsters in the departments of which they are now heads. Although there are some branches of work where we have to engage those who have learnt their knowledge outside these works, our general principle is to look to the workers themselves to provide in time responsible heads of departments.

(d) When selected for the position of foreman, the person is given a short training generally in the form of spending a few days with retiring holder of the position. When pronounced competent he assumes charge.

Opportunities are given to foremen for consulting with each other, and they are encouraged to develop qualities for leadership.

(e) The initial stage is to encourage all ordinary or premium apprentices to attend *Evening Classes* in technical subjects conducted by Local Educational Authorities at the various centres, except in the case of London, where instruction is provided at the Company's Mechanics Institute at Stratford. A limited number of the more promising apprentices are then allowed to attend *Day Classes* at Technical Colleges. A small number of scholarships for *full-time* courses at the University Engineering Colleges are awarded each year.

In this way the Company gradually obtain qualified men for supervisory and higher positions in the workshops, who during their apprenticeship, and subsequently, are moved freely from one section of work to another in order to gain a thoroughly practical knowledge of their work to combine with their theoretical studies. Temporary periods of duty in relieving foremen arising from vacancies, illness, or holidays, also afford valuable training for supervisory positions, and enable the Company to pick out the best type of men from all points of view for permanent appointment.

In the Locomotive Running Department also, it may be added that the men in the lower grades at many of the engine depots form *Mutual Improvement Classes* for studying the subjects connected with their work. The Company give every encouragement in the way of providing accommodation for meetings, as well as diagrams, models of machinery, or other materials. The more experienced men at the depots, such as drivers, frequently act as instructors, and in this way develop qualities of leadership which, in addition to a sound knowledge of the subjects, are essential for the good foreman or supervisor.

The Company have instituted instructional classes at a number of centres for Undermen and Gangers in order that they may gain a thorough knowledge of their work both on the practical

and theoretical sides. This, again, gives the men every opportunity of qualifying for promotion, and at the same time enables the Company to select the most suitable men for positions such as Permanent Way Inspector.

The Company in October, 1930, established a Signalling School at York, where special instruction is provided in reference to mechanical signalling, electrical signalling, and telegraph and telephone installations. This school enables men to be trained for taking up supervisors' posts involving an all-round knowledge of these specialized branches of work, and good results are already being achieved. In our Traffic Departments opportunities of training men for the higher positions are frequently provided in connection with reliefs, which assist materially in obtaining the best type of men for permanent appointment when vacancies occur.

### CHANGES BROUGHT ABOUT BY POST-WAR CONDITIONS

(f) Prior to the War we made one type of product which changed comparatively little, and we employed practically no men with any technical education.

Operatives were engaged from applicants who called looking for work, and foremen were those who had shown ability in the work they did and some initiative and willingness to take charge. Usually these men had been employed for a considerable number of years.

Since the 1920 boom our old business has fallen off enormously, and we have had to replace it by taking on new lines.

This has shown the necessity for foremen with broad views, and with a higher standard of education than previously was necessary. The replacement of foremen of the old type is a matter of very considerable difficulty.

We now consider that it is necessary to engage boys with a secondary school education, and for them to attend evening classes and part-time day classes in order to give them sufficient mental alertness to deal with the many problems that arise in connection with the new types of work which all departments are doing.

We co-operate with the Local Education Authorities and have engaged youths on the recommendation of school masters, with the declared intention of giving them training in our work so that, if they show reasonable ability, they will later qualify for foremen's positions.

This does not mean that it will be impossible for an elementary school boy who is engaged in the ordinary way to become foreman, but it will be increasingly difficult.

In our opinion it is impossible to say, without actual trial, who has qualities of leadership and initiative, but it is quite clear that in our works to-day a man must have a much better general education than hitherto to be a capable foreman.

Many of our foremen contrive to attend technical courses, but we have no special internal educational facilities.

A conference is held monthly when general matters are discussed, and trade papers and journals are available in our canteen.

We have quite recently tried interchanging foremen between departments for a week with the object of getting an original viewpoint. Some excellent suggestions have been made as a result, and all the men who have been exchanged agree that it has given them a better idea of the other department's difficulties. They suggest the period should be for a fortnight, and it seems to us that such an interchange is of material benefit to the firm.

(g) So far as training is concerned, the man of open mind is more receptive to the essentials of his trade, which in the future will undoubtedly include a more complete knowledge of human nature, enabling the individual rather than the group to be fully capitalized.

The most urgent problem we have to face in this programme of training refers to a wider view of the firm's activity as a whole, and the necessity of each foreman recognizing his own development in relation to the departments preceding and following. In association with this phase of development the successful foreman must be taught to recognize that "planning ahead" is far more necessary than of old, and that to keep pace with modern demand he must become a man of thought as well as a man of action, recognizing the responsibility he carries towards quality production in relation to quantity.

The successful foreman will not only recognize the weak spots in the men under him, but will intensively train towards perfection in process.

He will recognize that it is no longer sufficient to give an order, as intelligent application of effort is only possible by understanding "why" in the daily round of routine.

(h) We realize that this is becoming increasingly important at the present time, and the attention which the Association has given to this matter has been of great help to the writer. Obviously, a long period is required to make an efficient foreman, so that one can only speak of partly-trained men.

We have selected from among our boys certain who have characteristics which we think will help them to become good foremen.

They spend one or two years in the chief foreman's office and act as clerks and messengers for him. They thus become familiar

with the "lie" of the place, with the varieties of raw materials which we use, their preparation and treatment, and particularly of routing and transport.

If these boys show promise they are taken into the mills and start at the very beginning, acting as assistants to the men in charge of the different departments. There is this difference between these boys and those who are training for management: they are generally younger to commence with, and they stay in each department longer than the trainees for management. Furthermore, when they are old enough they actually take on a man's job until they are thoroughly efficient and can do the job without assistance. In addition, having had experience in the foreman's office, and knowing the processes anterior to and following that in which they are engaged, they are encouraged to make suggestions as to better methods of handling and treatment. Up to the present we have been very pleased with the aptitude these young men have shown.

#### RECENT INDUSTRIAL CHANGES HAVE NOT LESSENED THE IMPORTANCE OF TRAINING

The case for foremanship training is effectively stated in another extract from Messrs. Rowntree's memorandum.

It is desirable in considering this problem to take account of the fact that the present tendency in industry is to circumscribe and definitely limit the foreman's function in the organization, and to introduce specialized managerial assistants to take over responsibility for several of the technical branches of the work of the old-time foreman. His job tends to become mainly that of producing a given output with given materials, according to standard instructions within a stated period of time, with a given personnel which may be hedged about with factory rules and working agreements. Thus limited his job tends to become less important in itself, although it still may be a necessary step in a promotion scheme to higher ranks. Added to this tendency is the fact that advance of Rationalization will inevitably bring about a reduction in the number of foremen's positions, either by allowing them to lapse as they become vacant, or by demotion of the less efficient members of present staffs.

But having taken these points into consideration the problem of training is no less urgent and necessary.

Some of the opinions expressed in this chapter converge and lead up to a few important generalizations. For instance, we are told that "the successful foreman



must be taught to recognize that 'planning ahead' is far more necessary than of old" and that "he must become a man of thought as well as a man of action." Again, "to the workers the foreman represents the management, passing on to them the instructions he receives." In industry there is an increasing tendency towards specialization which, in its highest forms, must necessarily pass into the hands of a few individuals, holding positions of considerable responsibility. It follows that foremen, and other executives of similar status, must be prepared to adapt themselves frequently—sometimes at short notice—to new processes and procedure introduced by the management on the recommendation of specialist advisers. All this seems to emphasize the point made in the introductory chapter, and in an earlier part of this chapter, that *adaptability* is a matter of the utmost importance.

### HIGHER ADMINISTRATIVE POSTS

Reference has already been made to the prominence given to Training for Foremanship by the Fifth International Congress for Scientific Management (1932).

In the programme of the Sixth Congress of the same series (London, 1935) the Education and Training Section deals with "Methods of selection, education and training of personnel suitable for high administrative positions." This comprehensive subject is divided into four sub-sections: preliminary education; sources of recruitment and methods of selection; objects and methods of training and further education; avoidance of excess and waste of personnel selected and trained for high administrative positions.

The Education and Training Section of the Congress attracted twenty-four papers, from ten different countries.

## CHAPTER IX

### PREPARATION FOR SALESMANSHIP

SEVERAL members of the Association furnished brief particulars of the methods by which suitable employees are introduced to the technique of selling the goods produced by the firm.

#### TOOTAL BROADHURST LEE COMPANY

The merchanting side of this company's business falls broadly into three categories: (a) clerical, (b) producing cloth, (c) sales organization. The training appropriate to those on the sales side proceeds on the following lines.

As a preliminary to his work "on the road," a man transferred or appointed to the "travelling" selling staff is given a course of instruction, inside the works and warehouse, consisting of—

(a) Instruction on cloth manufacture, in addition to any technological instruction he may have received prior to his appointment as a salesman.

(b) Instruction given by the manager of each department whose cloth he has to sell, dealing with detailed information relating to the marketing of the cloth, i.e. as to suitability for wear or special markets, and the "guarantees" which are given with the cloth.

After this training "in the goods," the salesman is then introduced to the *art of selling* and the *science of sales organization*, under the direct supervision of the Sales Manager.

This is followed by a probationary course "on the road," which takes the form of accompanying a regular salesman in his daily routine and of practice in selling under his supervision. Later he is transferred to the reserve staff where he takes on temporary relief work;

when a territory falls vacant he is appointed to the regular staff.

In order to keep the staff salesmen up to date, they are brought into the House twice a year for "refresher" courses; during their absence from the "road" for these courses their work is done by the men in training. In sales organization they are given instruction in the organization of their work pertinent to sales service to their customers.

Salesmen for foreign markets are given experience in the Shipping Office, and usually "go out" in company with an experienced salesman in the market on their first journey.

#### **ROWNTREE & CO.**

As regards the training in salesmanship it is this company's practice to select youths and young men who appear to have the right type of personality, character, and education (and in the case of adults, experience), and to give them an intensive course of training in the Sales Department of the firm's headquarters. They are then appointed as auxiliary travellers on probation for a period of six months, at the end of which time, if they prove to be satisfactory, they are retained as auxiliary travellers and elected to permanent grounds when opportunity offers.

#### **TRAINING OF SALES STAFF AND SALESMEN AT THE WORKS OF MESSRS. MORLAND & IMPEY**

One of the avenues to promotion for juniors in the offices of this Company appears to be through the position of Sales Learner and suitable youths may be transferred to that section.

The sales learners section is recruited from those between 16 and 22 years of age who have not merely attended a secondary school and gained satisfactory reports, but who have also been favourably reported

on by the departmental managers of the offices in which they have worked. Attendance at the Day Continuation School until 18 years of age is again a condition of service and training.

The learner is trained with the definite object of his being ultimately a senior salesman. If he is considered satisfactory after his period of training he will be given a junior salesman's post on signing an appropriate agreement with the firm. The number of youths available from this source is necessarily small, and the main supply of junior salesmen comes from outside. Youths of grammar or public school origin, with 3-4 years' experience in general commercial office work, who desire to take up a salesman's life, are the type desired.

Junior salesmen commence between the ages of 19 and 23, being recruited from the sales learners. This is the last stage of the embryo salesman's training. If he proves satisfactory he may be appointed to a senior salesman's post, in which case a further agreement is signed, or he may be given an executive position.

A salesman trainee may be 25 years of age or upwards. They are usually of grammar school or public school type, and may or may not have selling experience. Alternatively, a young man may have had sound selling experience in similar lines with another firm. These trainees receive a course of trade training during from eight to twelve weeks—thereafter the usual salesman's agreement is signed.

A young man of this type is trained with the definite object of his being capable of promotion anywhere on the sales side where his talent may eventually lead him. If he is found satisfactory at the end of the probationary period, and if he is to be placed on the permanent sales staff, an agreement is signed. This can be terminated by either side giving one month's notice, and contains a two years' restriction clause regarding working for competitors on the territory on which he has worked for this firm.

**RECKITT & SONS**

With respect to salesmanship, a definite scheme of training has been established. Young recruits are first given a period of intensive training at headquarters, where they are made to follow the courses of actual orders through office, warehouse, and factory. When new lines are marketed, also, men are brought to headquarters for a special course of instruction.

The new salesman is then given practical training with an experienced man, and afterwards works his territory under a senior representative, with whom he is in close and constant touch. He is also in vital touch with headquarters, as he reports at least three times a week, and part of his work, in addition to actually selling the goods, consists in the placing of advertisements.

In connection with this he is encouraged to study advertising, so as to be in a position to make the very best use of all the selling helps that reach the trade through his hands. Certain selected men are encouraged to take the examinations of the Advertising Association.

**USE OF AN EDUCATIONAL TEST**

It is the custom of another firm to require all internal applicants for travellers' posts to pass a qualifying educational test. Preparation for this examination involves the reading of several prescribed books, the syllabus being revised annually. There is no doubt that the prominence recently given to Salesmanship in many quarters, coupled with the understandable desire to escape from monotonous factory work, tempts very many persons to present themselves for appointment as travellers, and some of them are quite unsuitable, on educational and other grounds.

The examination result, naturally, is only one of the many things that must be considered by those selecting future representatives, but it does serve to eliminate some of the unqualified. On the other hand, many persons

who show to great advantage in an examination would fail badly as commercial travellers.

#### **UNITED DAIRIES**

Salesmanship training of more than one type appears in the educational arrangements of this company. While the more general subjects are entrusted to teachers appointed by the London County Council, salesmanship is in the hands of the company's own officials. For junior employees, the instruction is largely given at schools of the London County Council, but senior employees can receive appropriate training in a model shop provided by the Company, to which assistants are sent from time to time for a week's course. The arts of window dressing, of counter display, and of salesmanship are taught practically, but part of the time is devoted to lectures on which notes are taken and papers set.

Appropriate training is given, both collective and individual, to those who aspire to be rounds salesmen. Among the subjects explained to the employees are the processes through which milk passes in an up-to-date bottling plant. A special manual has also been prepared for the information of these men.

#### **THE SPIRELLA COMPANY**

Highly specialized methods are adopted by this Company. The selling side of the organization is largely decentralized, and placed in the hands of many local representatives. With a view to standardizing the procedure of these representatives, an extremely detailed scheme of instruction, calculated to meet almost every conceivable situation, is circulated in pamphlet form among them. Courses of instruction at headquarters are also provided from time to time.

The view that those who aspire to sell a thing should have adequate knowledge of its manufacture and properties, finds abundant support in all the memoranda where this branch of training is mentioned.

If a business house exists primarily for retail distribution it is natural that salesmanship—understood in a slightly different sense—should supply the motive for most of the Training Department activities. It would be interesting to know when systematic training for retail salesmanship was first introduced. One concern appears to have arranged salesmanship classes thirty years ago.

## CHAPTER X

### MISCELLANEOUS MATTERS

#### (a) VARIOUS TRAINING METHODS FOUND SUITABLE BY PARTICULAR FIRMS, OR IN PARTICULAR INDUSTRIES

WHEN analysing the information on which this Report is based, one finds frequent references to training arrangements that cannot readily be included in any of the preceding chapters of the Report. These have been collected here, and the result is a chapter made up of sections having little connection with one another, but none the less important on that account.

#### TRAINING METHODS ADOPTED BY J. LYONS & CO.

In an address to the 1931 Conference of the Association for Education in Industry and Commerce, Sir Isidore Salmon described many of the methods by which his firm trains employees in very large numbers, and for a great variety of occupations. The title of the address: "Through the Mill to Success," clearly indicated the policy underlying and inspiring this training. The very interesting account which follows is abridged from the address and, at the "proof" stage, was submitted to the firm for verification.

Sir Isidore Salmon expressed regret at the lack of foresight shown by many parents in selecting careers for their children. (This regret is shared by other firms connected with the Association.)

The job where smart clothes may be worn and hands will not be soiled seems to be regarded as likely to give a social superiority outweighing other and more solid considerations.

Of course, this results in many workers arriving in time at a dead end with no outlet for ambition or opportunity for the development of ability. It is scarcely necessary for me to say there is a wide sphere and bright prospects in many trades which are overlooked by those seeking careers for their children.



Great importance is attached by J. Lyons & Co. to the policy by which business entrants, whatever be their probable ultimate destination, go through "a rigorous and constructive training," beginning on the lower rungs of the ladder.

Messrs. Lyons are not content to engage skill, ability and judgment from outside for the running of their very large organization. They realize that they have a vast store of these qualities to hand among the members of their own staff, and their training methods are designed to utilize and develop them for the benefit of the business itself and of the individuals concerned as well.

In his address Sir Isidore gave special prominence to the training of salesmen and of tea-room staff, as the following interesting quotations will show—

The training of salesmen presents especial difficulties because of the diverse nature of the work and of the districts covered. The agricultural areas require different handling from that required by industrial districts; the more select suburbs cannot be dealt with in the same way as thickly populated localities.

We divide this training into three categories—

1. The Learner Salesman—a special class taken into service on recommendation or nomination.
2. The training of salesmen who already have selling experience.
3. The training of salesmen who come to us with no experience at all.

The Learner Salesman takes a two- or three-year course divided between the Tea Agents Department, the Wholesale Bakery Department, the Confectionery Sales Department, and the Tea Dispensary at our Greenford Factory, by which time he is usually fitted for a definite position as salesman in one of the departments mentioned.

Those who have had previous selling experience are shown the working of departments with which they may come into contact in their task. They are shown over the bakeries which give them first hand information of what goes to the preparation of the goods they will sell. The hygienic methods pursued and the care taken in production give them a knowledge of and confidence in what they will offer to the public, and usually arouse a spirit of pride in the organization which they are joining. They are shown in the actual working how their orders are treated from

the time they are received at headquarters, until the goods are packed and dispatched by railway van. The training concludes with instruction in the Motor Department, and until passed out as an accomplished driver, with a fair knowledge of the mechanism each will have to control, they are not allowed to start work as salesmen.

Those with no experience at all are put through a similar course of instruction, but in addition have to spend some time with experienced salesmen, working different types of areas, before they are allowed to work alone. To promote initiative conferences of these travellers are held at intervals, when criticism is sought, problems discussed, and difficulties smoothed out or removed.

The teashop section of our business calls, of course, for a very different kind of training, and the many branches of catering in which we are engaged require teaching which varies considerably according to the particular work involved. Many people seem to think that in order to be an efficient waitress it is only necessary for a girl to put on a "Nippy" cap and apron. But the work of a waitress demands special efficiency, and the girls who have passed through our schools have responded wonderfully to their tuition. From our waitress staff have come some of our most valued servants—women who occupy important and responsible posts, which demand tact, understanding, and vision to ensure the smooth working of a huge organization devoted to personal service to the public.

Before a girl joins our splendid army of "Nippies" she must go to our school. There, while on probation and on salary, she is instructed and practised in the many details necessary to enable her to become qualified for her prospective job. She is taught the value of personality, deportment, tidiness, alertness, and general demeanour. She is shown how to carry a tray with the greatest degree of safety, how to change a tablecloth with the least expenditure of energy and the minimum of discomfort to those around, the proper places on a table for various pieces of china, glass, cutlery, the correct service for wines, spirits, and mineral waters, and the checking up of customers' bills.

This tuition is given at a centre through which some 8000 pupils pass in the course of a year. The curriculum is arranged for training not only new staff, but staff passing from one grade to another, including those promoted. It is necessary that everybody who is to assume any degree of control must be closely acquainted with our methods of working, and have an exact knowledge of departmental procedure. Therefore a highly important feature in this training centre is that those appointed to teach are picked members of the staff on the way to promotion.

These teachers spend one year in the centre before passing to higher positions.

Word of mouth instruction is amplified by practical demonstrations. There is a model teashop and a model teashop counter, as well as demonstration soda fountains. To these are added cinematograph displays in which the pitfalls are made obvious, and the precise elements of our teashop and higher services depicted. Nor are these demonstrations restricted to waitresses; manageresses and inspectors are given the advantage of training courses, and a somewhat unique part of the manageresses' training takes the form of a class in our laboratories. It will be realized that the reasons behind many of the instructions issued by our scientific staff regarding the hygienic methods of handling foods are not understood by the staff who have to carry out the instructions themselves. Therefore, the why and the wherefore are explained to the manageress at the laboratory itself, and the significance of the instruction demonstrated.

That the educational activities of this Company are not restricted to the vocational side will appear from this further quotation—

Business efficiency is not in our eyes the end-all of existence. We encourage our people to play well, and we believe that the majority of those who do play well and take a reasonable interest in healthy recreation are more able to tackle their daily tasks with zest.

We realize the importance of providing avenues for ambition to explore, and courses are arranged at Institutes where staff from certain departments can study folk dancing, literature, speech-making, history, social and economic problems, etc. The Principal in charge of this section is a University woman, and a fully trained teacher.

Our employees are encouraged to take personal pride in themselves, to report the slightest physical disability, and to take advantage of the many facilities for maintaining good health. The Lyons Club provides recreations ranging from chess to cricket, from dominoes to amateur theatricals, from rowing to debating circles, and from bowls to boxing. There are, indeed, in the Lyons Club nearly 20,000 members, who have what is probably the largest and finest sports area in the country.

#### REFRESHER COURSES

The Gas Light and Coke Company mentions these courses.

It is not always appreciated that once a man is trained

he does not remain so for an unlimited period. In the gas industry, where development is both rapid and varied, the best trained man soon becomes out-of-date, unless he can be kept abreast of the times. Especially is this so in the case of gas salesmen and gasfitters, who must be experts in their respective capacities. Keeping its employees up-to-date may not present much difficulty with a small company, but in a large undertaking employing a small army of men a more difficult problem is presented, to the successful solution of which this Company attaches very great importance. With this end in view, refresher courses are held by the Company at which theoretical and practical instruction is given in all the latest developments and in special points where experience shows that difficulties are met with.

To keep these courses thoroughly practical a special bureau analyses reports of these difficulties and keeps the instructors informed about them. These are amplified by the issue of a monthly bulletin, technical data sheets, and other technical literature.

Refresher courses are mentioned by some other contributors to this Report.

**(b) PRINTED OR STENCILLED MATTER AS AN AID  
TO STAFF TRAINING**

Pamphlets, leaflets, circular letters and other material suitable for distribution among employees, particularly those recently engaged, are a necessary adjunct to most schemes of training within the industry. In some cases, also the Works Magazine serves a similarly useful purpose.

From many examples of the leaflet class one may be selected which is issued to new girl employees at Port Sunlight, over the joint signatures of the Office Controller and the Principal of the Staff Training College. (An equivalent circular is provided for junior male employees). The conditions of subsequent advancement are there set out and reference is made to the facilities for attending day classes at the Staff Training College.

A short leaflet issued by Harrods emphasized the necessity for legibility in handwriting—an idea worthy of more general adoption.

Many firms use the Works Magazine as a medium for giving employees essential facts about the company's policy or processes. One good example is the series of articles in *The Beacon* describing with some detail the new factory of Boots Pure Drug Co. Similarly, in *Ours*, the attractive little magazine issued by Reckitt & Sons, there appear from time to time illustrated accounts of the work done in various departments. Many other instances of the same method might be quoted.

It may be argued that these printed descriptions make a less vivid impression than the lantern lecture or the conducted tour of the factory or store, now an accepted custom with some firms, especially as regards new employees. On the other hand, the printed account is permanently available for future reference, and is probably compiled with a high standard of accuracy and due sense of proportion.

All efforts of the kind described in this section have, as one of their objects, the enlargement of the employee's mental horizon, so that it includes some knowledge—superficial, perhaps, but accurate so far as it goes—of what happens in departments other than his own. Where an Initiation School is held for new boys and girls the first step in this direction is provided by the illustrated lectures and conducted visits forming important parts of the programme.

In the United States instruction of this kind received recognition—as did training for Foremanship—a good many years ago. One recalls a pamphlet, entitled "Selling the Organization to the New Employee," which described various methods of imparting quickly the information essential to employees recently engaged.

It is refreshing to turn to a circular on staff training directed, not to the employees whom the firm (or firms) wish to train, but to the employers themselves and to

their more responsible officials. Such a memorandum is issued by the National Federation of Launderers, and the essential parts of it are here reproduced from *The Federation Journal* (April, 1934)—

**HOW LAUNDERERS CAN CO-OPERATE WITH  
LAUNDRY CLASS LECTURERS TO MAKE THE  
CLASSES AS USEFUL AS POSSIBLE**

1. Get to know the Lecturers. You will find they will be glad of your co-operation.
2. Invite them to your laundries.
3. Let them know they will be welcome in future when they want to investigate any practical problem.
4. Visit meetings of the class occasionally by arrangement.
5. Make it possible for your people to attend regularly and punctually even if it means inconvenience.
6. Show your people you take an interest in their work at the class. Make a practice of inquiring from them the next morning as to the nature of the subjects dealt with, etc.  
Ascertain whether your people have understood all that has been taught. You may find that they need further explanations, or perhaps that they want a little assistance in improving their knowledge of arithmetic or other general education. Do what you can to assist them and let the lecturer know of these difficulties.
7. Arrange as far as possible for students to know something about the work of departments, other than the one in which they are actually engaged.
8. Do not belittle the importance of theoretical knowledge given at the class.
9. Do not expect the lecturer to teach actual laundry processes. That is your business. The lecturer's business is to *explain* the processes.
10. If possible recognize in some tangible form the securing of a certificate.
11. Consider the possibility of inducing workers not suitable for the Laundry Chemistry Class to attend at least one evening class, in order to continue their general education.

The authors of this memorandum are certainly to be congratulated on the extremely frank and practical nature of the advice given.

To bring their activities before the notice of employees, firms carrying on extensive education schemes adopt a

variety of methods. Messrs. Rowntree & Co., for example, publish and distribute in the form of a handy (pocket-size) booklet their "Educational Programme" for each session. Messrs. Cadbury Brothers issue an "Educational Supplement" with the September number of the Bournville Works Magazine, which is supplied to every employee. And, of course, many other publicity and propaganda methods are employed also, in the hope of "bringing the horse to the water."

(c) ACCOMMODATION FOR STAFF TRAINING IN  
WORKS AND BUSINESS HOUSES

When some group or grade of employees desires a course of lectures or a series of meetings for discussion, it is not always easy to find entirely suitable accommodation within the business premises and available at the right time. This difficulty has been satisfactorily overcome by a number of firms, but the rooms at the disposal of students are not always described in the same terms. The question of lectures and meetings in the evening is much simplified if the firm has an educational building, such as a Day Continuation School, or Institute, or a block devoted to various social and recreative purposes, in which suitable rooms are at the disposal of older employees when not otherwise occupied. For example, in the works of Messrs. Reckitt & Sons, Hull, the Francis Reckitt Institute, which was given by one of the Directors to provide accommodation for social and educational work, is used for practically all activities of this description carried on by the Company. The staff association lectures and classes in various subjects, as well as many meetings, take place on these premises, which during the day-time accommodate the Continuation School, dinner-hour lantern lectures, and other activities of a social or recreative character.

In the same way, the Staff Training College of Messrs. Lever Brothers, Port Sunlight, furnishes suitable

accommodation for a great variety of educational work among employees of all ages.

Similar arrangements are made in the Day Continuation School buildings connected with the Bolton factory of Tootal Broadhurst Lee Co., and at Bournville the extensive Day Continuation School buildings, erected some years ago by Messrs. Cadbury Brothers, are a centre of much educational work carried on in the evenings by the Company's education department. The large social block in the Cocoa Works of Messrs. Rowntree & Co., York, serves the same purpose.

In the Gas Light and Coke Co. a large proportion of the training and educational work is conducted in the workshops, laboratories, etc. at Watson House, but there is also a training centre at Stratford for the Eastern Section, and centres at Brentford, Brentwood, Grays and Southend for part-time training. Moreover, a good proportion of the training takes place on the district throughout the whole of the Company's area, in which case the men and boys are attached to the various District Offices.

In addition, there is a certain amount of training work carried on at the Company's various manufacturing works, where apprentices are accepted for training in various crafts, and also at the Stove and Meter Works at Haggerston, Harwood Terrace, Fulham and Pound Lane, Willesden.

Training in an organization so widespread as a Railway Company must be largely de-centralized, and accommodation has to be secured in many different towns. The Appendices contributed by three great companies bring out this point clearly.

Incidental references to meeting places for classes and lectures will be found in other sections of this Report.

In a retail distributing house the problem may be of a different character. For the work of staff training at Harrods, admirable rooms are available, these having been furnished and equipped in an up-to-date manner,



with due regard to both educational and business requirements.

By a system of movable partitions, quite large meetings can be held for the discussion of questions that are important to employees of certain grades, and the rooms are conveniently situated close to the Staff Manager's office.

But the accommodation for staff training in industrial and commercial concerns is by no means limited to classrooms, workshops, and laboratories. As already stated, realistic provision is made in some cases, for example, the model teashop, model teashop counter, and demonstration soda fountain used in the training scheme of J. Lyons & Co.; the model shop with provision for instruction in window and counter display provided by United Dairies; and the miniature electrically worked railway utilized in instruction on signalling by the L.M.S. Railway Co. at the Victoria Station, Manchester. In a number of factories and business houses cinematograph apparatus is available to illustrate the theoretical instruction given to members of staff.

# APPENDIX I

## MESSRS. ROWNTREE & COMPANY'S SCHEME OF TRAINING WITHIN THE INDUSTRY

### ENTRANTS

THE bulk of the entrants into the Cocoa Works may be grouped roughly according to age and educational attainments—

(a) 14-15: elementary school children engaged for factory work which is relatively unskilled.

(b) 16-20: secondary and public school girls and youths who are engaged as technical apprentices, office juniors, or office trainees.

(c) 20 upwards: university graduates engaged as trainees, or adults with special qualifications, e.g. chemists, salesmen.

### SELECTION

Those in group (a) have to pass psycho-physiological and medical tests to ensure a minimum standard of mental capacity and physical health, and in the case of girls especially, their aptitude for various types of manual work. Those in groups (b) and (c) are required to pass medical and psychological tests, and in some cases educational tests as well, the standard being graded according to the type of vacancy. During the past two or three years the recruitment of youths and young men for the offices has been restricted to those engaged under a special "trainee" scheme, and details of this scheme will be given under a separate heading.

### TRAINING

The training of factory workers, i.e. those in group (a), is intended to place them in possession of the best technique, and is organized in a very definite way. It is not proposed to explain this, by reason of the limitation placed upon the present investigation.

Girls in group (b) usually begin work in the messenger service, in which they learn the general layout and the personnel of the factory. After about nine to twelve months in this work they are transferred to one of the following branches of office work: calculating machines, shorthand and typewriting, or general clerical work. In making such transfers the result of the selection test and the tastes of the individual girls are taken into account.

Graded practical training is given in the office departments, and girls are required to attain certain minimum standards of proficiency in both the theory and practice of their work by the age of 20, i.e.

*(a) General Clerks and Machine Operators*

Royal Society of Arts Intermediate Certificates in English, Arithmetic, and two other approved subjects.

**NOTE.** It is possible that this clause may be altered in the near future to allow "cultural" instead of commercial subjects to be taken in approved cases.

*(b) Shorthand Typists*

The Company's Grade II Shorthand Typists' examination, consisting of the following tests—

- (1) Knowledge of English language (2 hours' paper).
- (2) Shorthand: 100 words per minute.
- (3) Typewriting: 50 words per minute, together with MSS. and display work (about one hour's paper).

*(c) Comptometer Operators*

The Comptometer Diploma of Messrs. Felt & Tarrant.

Shorthand is compulsory for all juniors.

Classes in shorthand, comptometry, and typewriting are held after work hours, whilst intensive training for special work is given periodically. In cases where juniors are engaged in work which does not train them for senior posts, they are given training in some other branch of office work, such as book-keeping or typewriting, or the manipulation of calculating or printing machines.

These are the requirements which junior girl clerks are expected to fulfil. General clerks are recommended to continue their studies up to the advanced stage of the Royal Society of Arts examinations. Shorthand typists are recommended to qualify for the Grade I Shorthand Typists' examination and the Company's Secretarial Certificate.

**SECRETARIAL COURSE FOR GIRL CLERKS**

As its name indicates, the Secretarial Certificate examination was designed with the object of providing a standard of ability and attainments for such posts as secretaries to Directors and Divisional Managers. The ordinary commercial examinations in themselves were felt to be hardly comprehensive enough, either in scope or subject-matter, for this purpose. It is not to be expected therefore that suitable classes for the examination would be included in the prospectus of classes organized by the Local Education Authority. For the benefit of clerks who wished to prepare for this examination, a series of special courses has been held at the Cocoa Works during the last three or four winter sessions. The series includes English, Secretarial Practice, and Rowntree Organization, Policy and Practice. In addition to these, clerks attend the usual classes in shorthand and typewriting. Although no definite time limit is set, the course in effect takes about three years to complete.

**"TRAINEE" SCHEME**

This scheme is an attempt to provide for the firm's future requirements in the way of trained and capable executive officers. The direction and control of the scheme is in the hands of one director, who is advised by a committee known as the Staff Development Committee, composed of senior executive officers drawn from each main branch of the business.

Trainees are recruited both from existing staff and from outside, the usual age limits being from 17 to 25, although certain exceptions have been made. They are finally chosen by a committee of Directors and Managers, who separately interview each selected applicant and award marks in respect of a number of listed qualities, grouped broadly under the headings of personality, intelligence, and education. Allowance is made in cases where special qualifications are desired, as for instance, older applicants who have had some specific business experience. Candidates are also given a psychological test and are required to pass a medical examination. Appointments are made definitely on a probationary basis, trainees being required to sign an agreement stating that their contract is terminable at any time, subject to one month's notice on either side. The probationary period is three years, during or at the end of which the Company may terminate the contract if it comes to the decision that the candidate is unlikely to become a successful executive officer or salesman.

The trainee is intended to get a thorough grasp of the general work and routine organization of one of the main branches of the business, those showing aptitude for any particular function being selected for training in that function. Care is also taken to give trainees a knowledge of the Company's policy and practice by means of courses of lectures on these and related topics, and regular meetings of the trainee staff, at which business conditions are reviewed and matters of current trade interest are discussed. All trainees, with the exception of those engaged in purely clerical work, e.g. accountancy, are expected to spend a certain period working in the factory. In addition to the training in the general work of the department, trainees are given frequent opportunities to do special jobs, and to "sit in" at meetings of various committees, to attend trade exhibitions and industrial conferences, and wherever possible to fill temporary vacancies, such as replacing travellers on holiday, or members of other staffs who may be away from work. The progress of trainees is carefully watched by the Staff Development Committee. A departmental report on each trainee is sent in every six months. These, together with reports from the Staff Office and the Education Officer, are discussed by the Development Committee. Trainees who obtain a series of consistently bad reports are dismissed.

It is expected that by the end of the probationary period of three years trainees will be placed in suitable positions. The scheme has not yet been in operation sufficiently long to show

how this will work out in practice, but our experience so far indicates that permanent positions are available for trainees before their training has been completed. Appointment to such a position, however, does not remove the trainee from the control of the Staff Development Committee. This normally would not occur until a man had reached the age of about 27 or a position of some responsibility.

#### TRAINING OF SALESMEN

Candidates for an ordinary position as salesman should be about the age of twenty-two, and they should have had experience with a good-class retail or wholesale confectionery or grocery firm. They are first interviewed by a Divisional Sales Manager, and asked to fill up a special application form. If they pass this stage they are then interviewed by the Headquarters Sales Manager, whose interview is supplemented by a special psychological test. Those who are definitely selected are then given a short period of intensive training at headquarters, which includes a few days in the Sales, Advertising, Demonstration, and Visitors' Departments, together with a tour of the factory. This is followed by about a month under the direction of the local superintendent who places them with regular salesmen, and gives them opportunities of doing some minor sales work—showrooms, and so on. At the end of this month they go out definitely as auxiliary travellers, starting with experience with a show van, taking minor calls, then as sick and holiday reliefs and assisting in special sales campaigns. This part of the training may take from two to four years, according to the man's aptitude for the work and the opportunity for promotion. A constant check is kept on their work and selling costs, and their progress is reviewed every six months. If found to be satisfactory they are finally appointed as vacancies arise.

#### GENERAL

One important factor in this training work is the Company's policy of promotion, and its practice of advertising inside the works vacancies on the administrative staff. Equal opportunity is offered to all employees to rise to positions of responsibility, and, other things being equal, first preference is given to an existing employee. Success in passing approved examinations is, of course, taken into consideration by the Company when making promotions to the higher grades.

The Company also seeks to provide or arrange reasonable opportunities for the education and training of employees who wish to qualify for promotion. The application of this policy has the effect of bringing to the notice of the management possible candidates for higher posts who might in other circumstances be passed over, and by publishing the opportunities available it stimulates the ambitious young men and women to qualify themselves for promotion. They are further encouraged to do this by

a special arrangement, under which any clerk of not more than 25 years of age who has obtained four R.S.A. Advanced Certificates or passed examinations of equal value, or who has the Company's Secretarial Certificate, may apply to be transferred to any other department in order to gain further business experience. The Company has, moreover, an educational grants scheme, the purpose of which is to assist clerks who might be debarred for financial reasons from pursuing these advanced studies.

## APPENDIX II

### SCHEME OF TOOTAL BROADHURST LEE COMPANY FOR TRAINING WITHIN THE INDUSTRY

INTERNAL training for positions of responsibility in the works has not materially changed since the evidence was given for the "Report on Education for Management," issued by the Association in 1925.

On the merchandising side of the business the chief occupations are (a) *clerical*—including correspondence (home and foreign), accounts and statistical work, (b) *producing cloths*, i.e. determination of texture, finish, colour, and design (to be executed by the works), laying-in stocks of these cloths in advance of a "season," and responsibility for the sale of the cloths; (c) *sales organization*: by representatives calling on buyers in the retail and wholesale trades at home and abroad.

#### CLERICAL

Girl correspondence clerks have usually received a secondary school education, and on engagement are placed on probationary work under tuition, in a special department (a section of the education department) for a few months. During this time they are "lent out" for short periods to various departments, as required, for temporary work during absence of staff clerks or in times of extra work. With this experience they become acquainted with various styles of dictation and composition, together with technical terms about cloth, and with names and places at home and abroad. Clerks who have received "outside" tuition in a foreign language are given opportunities to undertake occasional correspondence in that language.

#### MERCHANTING

As the organization and procedure of most of the cloth departments is fairly uniform, the training of a youth or of a University apprentice consists of first giving him the first stage of work in a department and passing him into succeeding stages by promotion, on ability alone, for the next higher stage. Training is not given as a progressive experience automatically, but is obtained as service and by promotion on ability. This may not appear to be an organized training as distinct from progress; but the system of giving special apprentices a defined period in different departments and on each job in one department was found to be defective, and has been discarded in favour of the above system. The objection to the latter system is that entrants do not feel the urge to work their way up, and they do not appreciate the value of small economies and of competitive effort. On attaining

ability for one of the higher grades of departmental work, as "first man," "second man," etc., under a manager, a youth may be transferred to a higher grade of work in another department with a view to his taking further responsibility in that department later.

As "first" or "second" man to a manager, the youth would be introduced to the selection of new designs, and to negotiations with cloth manufacturers and finishers in the buying of cloth, or with customers in the selling of the cloth offered to the market.

#### SALESMEN

As a preliminary to his work "on the road," a man transferred or appointed to the "travelling" selling staff is given a course of instruction, inside the works and warehouse, consisting of—

(a) Instruction on cloth manufacture, in addition to any technological instruction he may have received prior to his appointment as a salesman.

(b) Instruction given by the manager of each department whose cloth he has to sell, dealing with detailed information relating to the marketing of the cloth, i.e. as to suitability for wear or special markets, and the "guarantees" which are given with the cloth.

After this training "in the goods," the salesman is then introduced to the *art of selling* and the *science of sales* organization, under the direct supervision of the Sales Manager.

This is followed by a probationary course "on the road," which takes the form of accompanying a regular salesman in his daily routine and of practice in selling under his supervision. Later he is transferred to the reserve staff, where he takes on temporary relief work; when a territory falls vacant he is appointed to the regular staff.

In order to keep the staff salesmen up to date, they are brought into the House twice a year for "refresher" courses; during their absences from the "road" for these courses their work is done by the men in training. In sales organization they are given instruction in the organization of their work pertinent to sales service to their customers.

Salesmen for foreign markets are given experience in the Shipping Office, and usually "go out" in company with an experienced salesman in the market, on their first journey.



## APPENDIX III

### TRAINING DEPARTMENT ACTIVITIES AT HARRODS LTD.

THROUGHOUT the recent years of difficult trading, no attempt has been made here at Harrods to reduce the Staff Training Department. In fact, the express policy of the Management has been, and is, to put more pressure into the training of the personnel, and the new Training Department is conclusive proof of this.

The new premises comprise nine rooms, one of which, the large lecture hall, can be divided into two, three, or four rooms by means of soundproof partitions. Special lighting devices have been introduced in the lecture hall to give to the meetings colour in more ways than one. New metal furniture has been used to furnish the rooms, so that the whole atmosphere is one of modernity, and the first impression of the store received by all new members of the staff is one of up-to-date efficiency, which, however, is tempered with the warmth of personal attention and understanding which are essential qualities of the staff of any Training Department.

#### OBJECT IN TRAINING

The aim of our training is to teach the staff to think for themselves, to visualize their work in its relation to other departments, and through co-operation with other sections to take an interest in the activities of the store as a whole. To achieve this result, the training must be varied constantly, so that it appeals to the imagination of the staff, being presented in such a way that they not only learn but enjoy learning. The following is our scheme of training put as briefly as possible—

*Training Department.* The personnel of the Training Department numbers seven. The personnel of the store is well over 6000. It is therefore apparent that a certain amount of the training must be decentralized, i.e. done through the executives of the different sections. In describing the work, therefore, it is simplest to divide it into two sections, centralized and decentralized.

#### CENTRALIZED TRAINING

This falls into three groups—

1. Initial Training.
2. Group Meetings.
3. Research and Error Follow-up.

1. *Initial Training.* All new members of the staff report to the Training Department, buyers and executives alike, as well as staff for Selling and Non-selling Departments.

To the selling staff training in system is given every morning of the first week (this embodies instruction in the use of the various books, an explanation of the store organization, history and layout, and a tour of certain departments which affect them). At the end of their second and third weeks they return to the department for a review in system and store directory respectively so that at the end of three weeks we feel that they are familiar with the store organization and layout.

Non-selling staff come up for one morning only for a discussion of store organization and layout. Instruction more detailed than this cannot very well be given by the Training Department, as the needs of the non-selling sections vary so tremendously, and new employees are usually assigned to a senior who trains them in the special work of the department.

We have already mentioned the importance which we attach to the promotion of the feeling of personal attention being extended to the staff by the personnel section and executives, and in this connection we may mention that the Staff Manager makes a point of interviewing all new employees personally during their first week of employment.

2. *Group Meetings.* Group meetings we have found to be extremely valuable in promoting the feeling of co-operation within and between departments, and we have therefore developed this aspect of our training to a very great extent. The subjects discussed and the method of conducting these discussions vary, of course, with the status of the group, but their main value lies in the fact that they help the staff to lose the purely departmental attitude towards store problems, and to think of things from a store-wide point of view.

The following group meetings are held—

Assistant Buyers . . . . .	Weekly
Assistant Executives (Non-selling) . . . . .	Fortnightly
Cashiers . . . . .	Monthly
Contingents . . . . .	Weekly
Demonstrators . . . . .	Fortnightly
Hairdressing Staff . . . . .	Weekly
(Store Events discussed)	
Junior Selling Group (Girls) . . . . .	"
Junior Student Group (Boys) . . . . .	"
Lift Operators . . . . .	"
Selling Representatives . . . . .	"
(A six months' course for Salespeople selected by Buyers)	
Telephone Order Clerks . . . . .	"

A recent and interesting development of the work this year has been the group meetings held with the non-selling sections, such as Advertising, Bought Ledgers and Marking-off Room, Correspondence, Mail Orders, Sales Ledgers, Staff Restaurant and Workrooms, and these have served to bring the non-selling staff into closer contact with the selling staff.

*Students.* Special training schemes have been organized for students under two categories—

(a) University graduates take a two-year course, including the merchandise system and the selling system, and prepare themselves during this time for an executive position.

(b) Students from 16–18 years of age of good education take the selling system, and then work out a three-year course in different departments, with a view to working in one of them eventually.

(There are only men in these groups.)

*Contingents.* We have a group of saleswomen, mostly University graduates, who come under the immediate supervision of the Staff Controller, as a "Flying Squad" for special selling events or to replace staff away ill. They acquire experience in different departmental systems through being placed in many different departments by the Staff Controller. Each contingent is given one week's initial training in the Training Department in system, selling, and so on. Thereafter they meet once a week in the Training Department with the contingents' group to discuss organization, salesmanship, fashion, textiles, etc.

"*Big Bangs.*" With a staff of seven in the Training Department, it is obviously not possible to maintain direct contact with a staff of six to seven thousand through the group meetings only, and in order to make contact with the entire staff we organize from time to time special "Big Bangs," partly as a stimulus to the staff and partly as a means of publicity for the department.

We have one of these campaigns about every six months, running it always on different lines. At one time members of the Management addressed the staff on "Friendliness to the Customer." Another time a special show of Christmas merchandise was displayed in the Training Department, and talks given on Suggestion Selling.

*Fashion Studies.* At the beginning of each season special fashion studies are organized for the fashion staff, so that they are acquainted with the style trends not only in their own merchandise, but also in allied merchandise. In this way we feel we are ensuring that the customers receive better service from a fashion point of view.

3. *Research and Error Follow-up.* This branch of our training speaks for itself. Through the group meetings we have encouraged the assistant buyers and executives to report to us difficulties encountered by them, and they have learned to realize that individual cases of error are of greater value than mere generalities. For that reason we are notified by them of errors and system difficulties, and are so enabled to do individual follow-up work.

#### DECENTRALIZED TRAINING

*Departmental Meetings.* In order to avoid the danger of training becoming too theoretical and divorced from the needs of the departments, we have developed our decentralized training to

quite a great extent. Departmental meetings are held in the departments every week by the buyers and assistant buyers alternately, the meetings being devoted to Merchandise and aspects of Service respectively.

The subjects of these meetings are suggested through a weekly bulletin issued by the Training Department, the bulletins being so worded that they contain a concrete idea to be easily enlarged upon by an executive, comprise an element of humour and vitality, and appeal not only to the fashion section, but also to the hardware and food sections. Reports of the departmental meetings are sent to the Training Department, together with any suggestions made by the staff, comments on the bulletin, and so on.

This year we introduced a new plan which met with great success. Arrangements were made for certain buyers to talk to the staffs of departments selling allied merchandise. For instance, the buyer of travelling rugs spoke on his merchandise to the staff of trunks and dressing bags; the buyer of linens discussed the fashion trend of linen with the furnishing salesmen, and so on. This aspect of training we hope to develop more fully in future.

#### OTHER ACTIVITIES

Apart from this scheduled training within the store, the training work consists of various other activities—

1. Presentation of Plans and Reports.
2. Preparation of Manuals.
3. Giving of Pre-employment Tests.
4. Organization of a Reference Library.
5. Arrangements for Evening Classes.

1. *Presentation of Plans and Reports.* Yearly plans and half-yearly reports are drawn up and submitted to the Management in order to keep them advised of the progress of the work.

2. *Preparation of Manuals.* Rules, policies, and manuals of standard practice are drawn up for the guidance of the staff, such as the Staff Guide, The Responsibilities of an Assistant Buyer, System Manual, Merchandise Manual, Lift Operators' Manual, etc.

3. *Pre-employment Tests.* Pre-employment Tests are given in the Training Department. These are given as follows—

- Assistant Buyers.
- Salespeople.
- Students.

Counting House Juniors.

4. *Reference Library.* A Reference Library, containing more than three hundred volumes, forms an important item in the equipment of the Training Department, and, being subsidized by a grant from the Management, is free to the staff.

5. *Evening Classes.* During the winter months, evening classes are held on the premises for the staff from 6.30 to 7.30. These are free to all members of the staff, and include Commercial Law, Interpretation of Accounts, Appreciation of English, French, German, Shorthand, Typewriting, and Physical Culture.

## APPENDIX IV

### STAFF TRAINING ARRANGEMENTS OF UNITED DAIRIES LTD.

THE problem of Staff Education confronting a multiple shop organization is altogether different from that of most industrial undertakings. One factor which must be borne in mind when considering the educational and training methods adopted by the Company, is the large area over which the staff is distributed, making it difficult to get them together. The problem is further complicated by the entirely different types of people engaged in the various branches of the Company's activities. Some of the difficulties will be understood when the diversity of occupation is realized. The Company employs saleswomen in some eight hundred shops, and its salesmen visit every street in the Metropolitan area. In addition there are plant workers who are concerned with the processing of the milk, and the large office staffs.

#### VOCATIONAL TRAINING CLASSES

One feature of the Company's educational work, which carries staff training beyond its usual application, is concerned with the training of prospective junior employees. Under this scheme, classes have been arranged in conjunction with the local Education Authorities, at certain Day Continuation Schools and Institutes. They are attended by girls leaving school between the ages of fourteen and sixteen, who wish to become clerks or saleswomen in the Company's service. Applicants are interviewed by the Welfare and Education Officer, or, where this would involve a long journey, by the local person responsible for engaging staff, and are given written and oral tests of a practical nature. Those who complete these tests satisfactorily are then interviewed by the Committee of Management for the school nearest their homes. Thus there is a double check on the applicants' suitability.

A word about the committees referred to above may not be out of place; these consist of the Directors or Managers of the section of the Company where the girl will be ultimately employed, the Principal of the School, and the Company's Welfare and Education Officer. It has been found a very happy arrangement to have at least one lady, generally the wife of one of the directors or managers concerned, on the committee.

The term "Vocational Training Classes" is somewhat misleading, as although the Company's system of book-keeping and the principles and practice of salesmanship are taught, these subjects only occupy about 25 per cent of the syllabus, the other 75 per cent being devoted to ordinary scholastic subjects. While

some of the subjects are given a vocational bias, such as including under arithmetic practice in giving change, making out bills, and long and cross tots, they are of such a nature that should students fail to reach the standard required to obtain employment with the company, the training is of very real value to them in seeking other employment.

The Company provides instructors in Salesmanship, but the Education Authorities assume full responsibility for the classes and the teaching of the other subjects included in the curriculum. At the end of each term, special tests approved by the Education Authorities are set in connection with the vocational subjects. These tests are drafted and corrected in the office of the Welfare and Education Department.

After they have spent about two terms in one of the classes, girls who appear likely to be satisfactory are found practical training, consisting of ten hours per week spent in one of the offices or shops, in the area where they will subsequently be employed. This still further helps to bridge the gap between school and business.

The Company undertakes to find employment for those who satisfactorily complete the course and pass the required tests. The period of training for girls leaving elementary schools is from nine to twelve months, while for those who have received a secondary or central school education, only six months may be necessary, the exact length being determined by the girls' ability and progress, and the frequency with which vacancies occur.

A progress report on each girl is sent to the Welfare and Education Department after she has been in employment for six months. Throughout the whole course of training and employment the co-operation of parents is encouraged and private interviews with the Welfare and Education Officer are arranged.

Not least among the benefits of this scheme are the opportunities it provides for physical and mental development during an important period of adolescence, and the facilities it offers for the training of character; while the link it provides with their future occupations gives the students a stimulus which would be lacking in classes entirely divorced from business.

The scheme has been in operation for eight years, and some eight hundred and fifty girls have passed through the classes.

#### SCHOOL FOR SALESWOMEN

The instruction of probationers and saleswomen is carried out at the Company's Training School. In the first instance the course was of one week's duration, but this proved to be inadequate and, consequently, the period of instruction was raised to a fortnight.

A whole appendix might very well be written on the nature of the instruction to be given, but it must suffice to outline the underlying principles upon which it is based. Experience proved that to endeavour to impart technical knowledge alone was not sufficient, and that to be a success the instruction must have an

educational background in order that the knowledge acquired might be used intelligently. In addition, an endeavour must be made to develop latent qualities of character, and to interest trainees in the Company through an understanding of its policy and administration.

The Training School is conducted in a model shop, the technical instruction being given by an expert in salesmanship. Besides learning something of the changes that have taken place in the production and distribution of dairy produce, trainees receive instruction in window and counter display, and a knowledge of milk, dairy produce, and sundry goods. Service to customers, personality, character and personal efficiency are also dealt with, and attention is paid to the question of stock and stock-keeping, and the laws and regulations governing dairy produce. Practice is given in completing the forms in use in the Company's shops, and in giving change and making out bills. A visit is also paid to a bottling depot. Ample opportunities are afforded for practical work, particularly in relation to window and shop display, and service to customers.

#### PUBLIC AND SECONDARY SCHOOLBOYS

A number of public and secondary schoolboys have been selected for special training which will fit them to occupy positions of responsibility. This course extends over a period of years, the candidates spending from six to nine months on each of the various branches of the Company's activities. A Management Committee is responsible for the selection and supervision of these trainees, and regular reports on their progress are rendered to this committee.

#### TRAINING ROUNDS SALESMEN

In addition to the training already described, members of the staff receive pamphlets dealing with subjects connected with their work, and lectures are arranged from time to time, as this has been found the best method of approach to rounds salesmen, for whom a special manual has also been prepared.

#### EVENING CLASSES

All employees are given every encouragement to continue their education by attending evening classes. Under this scheme fees are refunded for approved courses, which need not necessarily be directly concerned with their work, providing that attendances are satisfactory and good reports are received. Prizes are also awarded for passing certain recognized examinations.

#### CONCLUSION

It will be seen from the foregoing paragraphs that the Company recognizes the great importance of employees receiving proper training, and that it has addressed itself to the solution

of its individual problems, bearing in mind certain important principles.

Training consists not only of instruction in the duties to be performed, but serves as an introduction to the Company, its policy and methods of administration. In the case of juveniles with no previous experience of business life, care is taken to see that their first impressions, which are often permanent, are founded on a correct knowledge of the traditions they will be expected to uphold. They learn the importance to the organization of the work they are to perform, and an effort is made to develop character and personality.



## APPENDIX V

### METHODS OF TRAINING ADOPTED BY RECKITT & SONS, LTD.

It will perhaps be best to state at the outset that in most cases we have no cut and dried schemes for training inside the business, and, further, that it is not always possible to consider such training as altogether distinct from that given by outside organizations, such as the Local Education Authority.

As a general manufacturing firm, we have to deal with a number of isolated cases requiring individual attention, rather than with groups of men, all of whom require the same training. For such units we have not found it possible, or indeed desirable, to frame a comprehensive system of training, preferring to take such action as is most suitable to individual needs.

All youths, when first engaged, are interviewed by the Education Department, and are at once advised as to suitable studies, courses extending over several years being planned for the more ambitious youths. Supervision of studies throughout their career then becomes part of the routine work of the Education Department, whilst their training inside the business is undertaken by departmental heads, by whom they are sympathetically handled.

Where such supervision of work and study is carried on, it is an easy matter, by comparing notes, to decide which youths are suitable for promotion.

The arrangements mentioned above are followed up in a variety of ways, as follows—

1. Our Day Continuation School for employees of 14–18 years of age.
2. A comprehensive set of regulations, requiring all youths to take up suitable studies, with which is coupled a Reward Scheme.
3. Lectures by Departmental Manager (in certain cases only).
4. Moving employees from one department to another for the sake of experience.
5. The exercise of care in placing employees in positions for which they are best qualified.

Other expedients, actually employed more frequently in the factory than in the office, are—

6. The appointment of a skilled worker to train a group of learners.
7. Help given by experts to students weak in certain subjects.
8. Time allowed for study during working hours.

For each class of student, certain minimum attainments are tabulated. Engineers and electricians, for example, are expected to reach National Certificate standard, the best students being encouraged to pursue their studies further.

The methods mentioned above can be regarded as, broadly speaking, the system on which we work.

The selection of a man for intensive training is often dependent on his work at external classes. For whilst in some cases a man is definitely trained inside the business for a certain job, well in advance of the time when he will be required to take it up, in other cases men virtually appoint themselves to various positions through qualifying by means of external classes. Such men are given the necessary opportunities of inside experience before being promoted.

The training of individuals who are qualifying for higher positions is carried on in a number of ways. Some are allowed to attend Hull University College or the Technical College during work hours, to supplement the training they are receiving inside the business. In exceptional circumstances, an employee may be sent to the University for a whole-time course. Others are brought from branches to the Head Office for further experience, and similar interchanges have taken place with associated firms.

Even a well-qualified specialist, newly appointed, may be advised and helped to qualify in other directions, with a view to future developments.

It should be stressed that opportunities are equal to all who show the necessary ability. Whilst a clever youth from a public school may mark himself out for promotion soon after entering our employ, on the other hand, youths who have had only an elementary school education have, in the past, by sheer grit, application and ability, proved their worth, and won the right to special training for important positions.

Mention should be made of our Staff Association, comprising heads of departments and assistants from office and works. Fortnightly lectures are given, alternately by members of our own staff and by outside lecturers. Those given by our own members generally deal with some phase of their work; the other lectures are usually a course in some subject of interest to all business men.

Certain selected men on the Office Staff are encouraged to take the examinations of the Advertising Association.

With respect to salesmanship, a much more definite scheme of training has been established. Young recruits are first given a period of intensive training at headquarters, where they are made to follow the courses of actual orders through office, warehouse, and factory. When new lines are to be marketed, also, men are brought to headquarters for a special course of instruction.

The new salesman is then given practical training with an experienced man, and afterwards works his territory under a senior representative, with whom he is in close and constant touch. He is also in constant touch with headquarters, as he reports at least three times a week, and part of his work, in addition to actually selling the goods, consists of the placing of advertisements.

In connection with this, he is encouraged to study advertising, so as to be in a position to make the very best use of all the selling helps that reach the trade through his hands.

The ultimate aim of our various training schemes is to produce a highly-trained and efficient staff of workers, and to create a reserve of well-qualified men on whom we can draw when opportunities occur.

## APPENDIX VI

MESSRS. LEVER BROTHERS, LTD.

NOTES ON THE STAFF TRAINING COLLEGE,  
PORT SUNLIGHT, AND SCHEME OF PRIZES AND AWARDS  
FOR CONTINUED EDUCATION

MANY developments have taken place at the Staff Training College since it was instituted by the late Lord Leverhulme in 1917. At the present time the educational facilities provided by the Company to their junior employees at Port Sunlight may be briefly summarized as follows—

1. *Factory Girls 14 plus to 16 plus.* One full day each week for two years at the College. The eligible girls are divided into two equal sections, one of them attending on Tuesdays and the other on Wednesdays.

The main subjects taken each session are English, Arithmetic, Hygiene, Domestic Science, Handicrafts, and Physical Training, and, in the summer-time, Swimming. In addition, there are short periods for reading and discussing a daily newspaper, for free study, and for hobbies.

2. *Factory Boys 14 plus to 16 plus.* The boys similarly attend, half of them on Thursdays and the other half on Fridays.

The main subjects for boys are English, Arithmetic, Geography, Industrial History, Chemistry, Electricity, Free-hand Drawing, and Physical Training.

3. *Office Students 16 plus to 18 plus.* As these students are School Certificate or Matriculation people, their curriculum is chiefly vocational, and they attend four hours per week for one year, and two hours per week for the second year. All first year students take English and Commerce, and either Shorthand and Typewriting or Arithmetic and Book-keeping. Second year students take Shorthand and Commerce or Arithmetic and Book-keeping.

4. *Apprentices to Skilled Trades.* During the winter months these employees attend the College every Saturday morning. The classes are tutorial in character, according to the various trades and National Certificates. In addition, apprentices during the first two years of their apprenticeship attend the College one afternoon a week for classes in English, Advanced Arithmetic, Chemistry, Cost Accountancy, and Free-hand Drawing.

5. *Chemistry Apprentices.* Special tuition is provided one half-day a week for students entering for the intermediate London B.Sc. Examination.

6. *Evening Classes (Voluntary).* During the winter months evening classes are provided at the College in all stages of English, Arithmetic, Shorthand, Book-keeping, Commerce, and several foreign languages. Students attending are expected, at the end

of the session, to take the Royal Society of Arts Examinations according to the stage in which they have been studying. The fees are refunded to all students who make 85 per cent of the total attendances.

In addition to these facilities, an Education Prize Scheme has been provided by the Company since 1921. This scheme has worked extremely well, and many students have been encouraged to take the advanced stages of various Royal Society of Arts Examinations, National Certificates, and University degrees.

In order to encourage the members of the staff and all employees in the factory and offices at Port Sunlight, Unilever House, or any Branch Office, to attend evening classes, the Company refund the class fees to all students taking courses of study, directed by the Local Education Authorities, who make 85 per cent of the possible attendance at their classes and sit for the recognized examinations.

In addition to the payment of class fees, the Company offers a special scheme of prizes to be awarded annually according to the results in examinations held by the—

University of London and Provincial Universities.

Institute of Chemistry.

Institution of Civil Engineers.

Institution of Mechanical Engineers.

Institution of Electrical Engineers.

Chartered Institute of Secretaries.

Incorporated Secretaries' Association.

London Association of Accountants.

Institute of Cost and Works Accountants.

Advertising Association.

Institute of Transport.

Royal Society of Arts.

London Chamber of Commerce.

London City and Guilds and other Public Examining Bodies of similar standard.

Prizes are usually awarded in books, or in payment of fees in connection with further education, or, by arrangement with the Company, in cash towards the expenses of a Continental holiday.

(The Prize Scheme covers the Matriculation, Intermediate and Final Examinations leading to B.A., B.Sc., and B.Com. Degrees; Associateship of the Institute of Chemistry; Graduate or Associate Membership of the various Engineering Institutions; Associateship of other bodies recognized by the Company; as well as approved single subject examinations of the City and Guilds of London Institute, the Royal Society of Arts, and other examining bodies of similar standing.)

## APPENDIX VII

### PERSONNEL TRAINING IN THE METROPOLITAN-VICKERS ELECTRICAL CO., LTD.

THE training of personnel for a large engineering works covers the organization of further experience of many kinds, all of which are necessary for "the adaptation of entrants . . . by business in business." The assistance of educational institutions is essential to enable the individual to obtain theoretical instruction given by such external bodies in order that he may understand the problems with which he is confronted unless parallel courses are organized by the works concerned, which is unnecessary where adequate facilities for such instruction already exist.

Training with the Metropolitan-Vickers Electrical Company may be considered under four main groups of personnel—

- (A) The professional engineers.
- (B) The artisans.
- (C) The general non-engineering staff.
- (D) The women.

Fully-trained employees under these four headings are essential to the efficient working of the whole organization, and any individual in each group has ample opportunity to progress and develop if the necessary ability and keenness are displayed.

#### GROUP A: TRAINING FOR PROFESSIONAL EMPLOYMENT

Two apprenticeship courses are arranged for the training of recruits for ultimate professional employment—

1. Young men are recruited from universities or certain senior technical colleges who have a degree or diploma in engineering. Two schemes of training under this heading are arranged—

(a) Those who come direct from a university after obtaining a degree.

(b) Those who are selected on leaving a public or secondary school to enter the works for a year's preliminary practical training and then proceed to a university, returning to the works during their summer vacation periods, and complete their final practical training after they have obtained their degree.

2. Those who are recruited from public and secondary schools who have attained at least Matriculation standard of education are accepted in the works for an apprenticeship of four years' duration. These apprentices are required to attend the College of Technology, Manchester, or the Royal Technical College, Salford, throughout their apprenticeship, for part-time technical instruction, and monthly reports are obtained on their work and progress. Many of these follow special courses of training leading to the External Honours Degree in both Electrical and Mechanical Engineering of London University.

Practical training for these groups consists, in the main, of a series of transfers from one department to another, to familiarize the apprentices with the manufacturing methods used, and at the same time they are encouraged to acquire information regarding the organization and problems which exist in each department. When the apprentices are transferred, reports are obtained from the foremen on their work, progress, and general attitude. Towards the completion of their apprenticeship the apprentices specialize in a particular section of the works, such as manufacturing, design, research, commercial, or accounting, and are given opportunity to enter the departments where they will obtain the necessary experience. They also attend a series of weekly lectures given by members of the Company's staff which are held at the works during the evenings. These lectures cover both a works course dealing with practical workshop problems, and also lectures by the managers of the various sections of the works in turn. They are encouraged to attend foreign language classes arranged for groups of three or four students.

#### GROUP B: TRAINING FOR ARTISAN EMPLOYMENT

Boys of 14 to 16½ years of age are selected for a Trade Apprenticeship Course. Candidates from elementary, junior technical, central, and secondary schools are selected after an examination and a personal interview at the works. They serve a probationary period in the works of from six to twelve months, at the end of which they are bound to one of the following trades: Fitting, turning, tool making, moulding, instrument making, pattern making, armature winding, etc.; during their apprenticeship they are given experience in various departments appropriate to their trade. Periodical reports are obtained from the foremen, and tests on craftwork are made every six months. They are encouraged to attend evening classes at the local technical schools, but such attendance is not compulsory; those who attain a satisfactory standard are given the opportunity to attend the part-time day courses at the College of Technology, Manchester, or the Royal Technical College, Salford. The Company pays their wages while they are absent from the works, all school fees, and also for the necessary textbooks, etc. It is not essential that the trade apprentices continue evening class work until they are 21 years of age in order to become efficient workmen, but those who do so and obtain the required standard of technical education are considered for promotion to test departments, drawing offices, commercial departments, etc., as juniors, and they have the opportunity to obtain executive positions with the Company if their progress is sufficiently satisfactory and they have the necessary ability.

During their apprenticeship they attend the works school each week for instruction in practical work complementary to their workshop experience; this instruction is not alternative to that which they receive at the evening and part-time day technical

courses. In order to encourage good workmanship and progress two trophies are competed for each year, one open to boys under 19½ years of age, and the other to boys under 21 years of age. Special facilities for further training are arranged for the winners of these trophies.

Some years ago an Apprentices Association was formed for the purpose of fostering *esprit de corps* and the general healthy development of the boys in social and athletic activities outside works hours. This is divided into two sections corresponding to the professional and artisan grades of apprenticeship. Each section has its own officers and committee who organize social and athletic activities. The officers of each section form the Apprentices Association Council, which governs matters of mutual interest, arranges visits to other works, inter-section sports, social activities, etc., and controls the apprentice magazine, *The Rotor*, which is issued quarterly. The Company believes that experience gained by the officials of such a body in the handling of its affairs, negotiation, and the organization of its activities, has a high value and forms a definite part of its training schemes.

It is the Company's policy to recruit its junior professional staff from among those who complete their apprenticeship courses satisfactorily, and the Company continues its interest in the subsequent careers of these juniors and, in selected cases, arranges further progressive training. Arrangements are made for a sequence of transfers from one section to another, and for other suitable training to enable these men to progress to more responsible employment, and for specific posts either with the company at home or abroad or with customers.

#### GROUP C: GENERAL NON-ENGINEERING STAFF

This section is almost entirely composed of the costing and works accounting staff dealing with all matters relating to wages and works costing and accounting proper. The juniors in these departments, who show that they will profit by further instruction, are trained in various subsections by transfers from one class of work to another, and are encouraged to take courses of study at evening schools in accountancy and allied subjects. Periodical reports on their work and progress are obtained, and their promotion depends upon the keenness and ability shown. A junior has the opportunity to rise to any of the higher positions. University graduates, who have a particular interest in works accounting, are trained for employment in the more senior posts in works accounting. They are given preliminary workshop experience and, in the later stages, are transferred to the various sections of the Works Costing and Accounting Departments for specialized training.

#### GROUP D: TRAINING OF WOMEN

This group may be subdivided into four parts—

1. Women supervisors, research workers, and engineers.



2. Canteen workers.
3. Women workers engaged on manual operations.
4. Women office staff.

1. The technical women research workers, engineers, and supervisors have usually had full-time University or Training College courses leading to a degree or diploma. They are specialists in their own sphere, and upon entry into the works they are given an opportunity to become familiar with the Company's products, and usually have a period of special training. In some cases women have been trained entirely in the works in conjunction with special courses at evening schools.

2. The canteen staff consists of kitchen maids, waitresses, cooks, clerks, storekeepers, buyers, and supervisors. While it is unusual for any worker in the kitchen to progress to the supervisory and higher grades, the clerical staff may make such progress that they become supervisors, but supplementary training in domestic science classes at suitable schools is essential. It is customary to permit domestic science students from training colleges to have two or three months' experience with the canteen staff. This affords opportunities to select future personnel.

3. Women workers are engaged for manual operations of a repetition nature. Those who show the necessary progress and ability obtain promotion to positions as foremen's clerks, charge hands, or forewomen. Classes for young girls employed on this work are organized in order that they may take greater interest in their work and increase the value of their work; the programme for this class of work is being extended. Other classes are arranged for those who wish to become works clerks.

4. Girls in the offices are employed as stenographers, copy-typists, dictaphone operators, routine clerks, tracers, comptometer operators, hollerith operators, time and wages clerks, accounting clerks and secretaries to the heads of departments. Classes in shorthand, typewriting, dictaphone and comptometer operating, English and arithmetic are held on the premises after works hours. These are comparable with those given by evening schools in the district, but they have the advantage that particular reference is made to matters and methods which concern the Company's business, and entail less strain on the girls as they attend for not more than two evenings per week, instead of the usual three evenings per week at evening schools. The works classes finish at 7 p.m. instead of 9 p.m. or later. Girls who wish to train as tracers attend tracing classes to become familiar with the particular type of printing, methods of layout, neatness, and general tracing practice required in the drawing offices. No vacancy on the staff is filled by a new entrant until every effort has been made to find a suitable employee within the organization, and girls are transferred progressively from one occupation to another.

A number of non-vocational classes are arranged and a nominal fee is charged. The Women's Supervision Department

is responsible for the organization, and instruction given in the non-vocational classes.

#### GENERAL

It will be noted that in the courses of training arranged for each group, the necessity of combining internal training with that which may be obtained at the various colleges or schools organized by educational bodies is emphasized, as the knowledge acquired from each course is complementary. On the one hand, the trainee learns the intricate and particular requirements of his present position (and possible future positions) with the Company, and on the other, he gains the theoretical knowledge of his special branch without which it would be impossible for him to succeed.

There is a Works Club open to all male employees, and the women have access to some sections. There is a complete series of clubs covering cricket, football (both rugby and association), hockey, athletics, tennis, bowling, fishing, shooting, and boxing. In addition there is a dramatic and operatic society, debating society, lending library, chess and draughts club and billiards club, all organized by those employees drawn from both staff and manual workers who are interested. Each is run independently and has its own committee. The management gives every encouragement and support to these various activities, but does not centralize any organization, thus encouraging individual keenness and enthusiasm. Such contact between employees, particularly between staff and manual workers, is recognized as leading to a team spirit within the Company which is a most valuable asset, and assists in the development of its employees to their own benefit as well as that of the Company.

## APPENDIX VIII

### MEMORANDUM ON THE DEVELOPMENT OF TECHNICAL EDUCATION IN JAMSHEDPUR

(Contributed by the Tata Iron & Steel Co., Ltd.  
Jamshedpur, India)

I. PRIOR to the inception of the Jamshedpur Technical Institute in 1921, the problem of securing suitable technically trained Indians for the Tata Iron & Steel Company was a very difficult one indeed. It was absolutely necessary to find ways and means of imparting such technical education, as the establishment and the development of the Tata Iron & Steel Company were then established facts. It was recognized by the leaders of the industry that the success of an enterprise depends upon the eventual manning of the industry by the sons of the soil. It was considered suicidal to depend on imported experts for ever. It was therefore decided to start a Technical Institute in Jamshedpur to enable the Indian graduates to qualify themselves for superior positions in the works, as it would have been a short-sighted policy to encourage the manufacture of steel in this country without at the same time encouraging the training of Indians to make steel.

#### II. THE TECHNICAL INSTITUTE

The Technical Institute has the following several divisions—

1. Technical Institute.
2. Foreign Training.
3. Apprentice School.
4. Technical Night School.
5. Apprentice Scheme, 1927.

1. The Jamshedpur Technical Institute was started, and the first batch of twenty-four students was recruited during November, 1921. The minimum admission standard was I.Sc. with Physics, Chemistry, and Mathematics. The students were drawn from the various provinces in India every year as follows—

Bengal . . . . .	5
Bihar and Orissa . . . . .	10
Punjab . . . . .	3
Madras . . . . .	3
Sir Ratan Tata Trust . . . . .	2
Rest of India . . . . .	1
	—
Total . . . . .	24
	—

The Institute gave an intensive training in Iron and Steel Metallurgy and the allied subjects. The course extended over three years. During the first two years the students attended the institute and the works every alternate week, and in the third year they were given specialized training in one department only, and spent the whole time in the works. During the three years of their apprenticeship they were paid Rs. 60 per month.

In January, 1932, the Training Scheme as mentioned above was modified in accordance with the plant requirements. Under this new scheme, which is working now, the students must be graduates either in science or in engineering of a recognized Indian or foreign University or College. About ten admissions are made every year. They are divided into two classes, "A" and "B." The "A" class men have usually high academic qualifications and, in some cases, possess foreign iron and steel works experience, whereas the "B" class men are ordinary graduates. It is expected that the former class will ultimately fill the positions of Superintendents and Assistant Superintendents, and the latter those of Foremen and Assistant Foremen in the works. It should, however, be emphasized here that there is absolutely no bar to a "B" class man ultimately rising to a position open to an "A" class man. The only difference lies in the initial salary on employment, which for the "B" class is to be somewhat lower than that for the "A" class.

The course of training is identical for both the classes, and extends over a period of two years, of which eighteen months are spent in general training in the various departments of the works, and the remaining six months in a specialized training in one particular department. One member of the staff spends his time chiefly in the works, and supervises and helps the students in their work. No lectures are given during the day, but three times a week they are required to attend evening lectures on Metallurgical Processes, Works Maintenance, Cost Accounting, and Industrial Economy, etc., which are delivered by experienced officers of the Company, experts in their own subjects. These lectures are also open to other qualified employees provided accommodation is available. There are now 31 students on the roll, 14 of whom are old Technical Institute students, and the rest have been recruited under the new scheme.

They receive no stipend in the first year, but are paid Rs. 75 ("A" Class) and Rs. 50 ("B" Class) per month in the second year. Special foreign trained graduates are paid Rs. 200 a month throughout the course. The whole scheme, however, is at present under consideration, and a sub-committee has already been appointed to examine it carefully and modify it in the light of past experience and future requirements.

The Institute is at present administered by a Committee responsible to the General Manager and the Agents.

The Jamshedpur Technical Institute is the only one of its kind in India. Here students live and breathe the atmosphere of the

technique for which they are to be trained. Here they not only get theoretical training, but practical experience, by actually coming in contact with men, machinery, and materials. There are now 127 past students employed in the works, 104 under contracts, and 23 without. One of them has already been placed in charge of an important department, while several others hold responsible positions. Some of the Production Departments, such as the Open Hearth, the Rolling Mills, and the Blast Furnaces, are at present practically manned by technical graduates who have successfully replaced foreign experts. It may perhaps, therefore, be stated with pride that the Technical Institute has amply justified its existence.

2. *Foreign Training.* The Steel Company has also a scheme under which past students of the institute, who show sufficient ability in the works, are sent abroad for a year's training. Up till now seven students have been sent out under this scheme, the entire expense being borne by the Company. Financial help has also been given partly to two other students who went abroad for experience on foreign plants.

3. *The Apprentice School.* This was started in January, 1932, with the object of building up a band of loyal, disciplined, self-respecting, skilled workmen. There is a day-time school for these apprentices. Accommodation is available for 250 boys at present, each studying two days a week in the school. The school course is of four years' duration during the five years of apprenticeship. Attendance at school counts as work for purposes of pay. The standard for admission is the Middle English pass, with an age limit of 15 to 18 years. Fifty admissions are made every year, but the number will be increased to seventy-five from 1934. The course comprises General Education, Elementary Science, and Technology as required in the works. In recruiting, preference is given to dependents of local employees.

Apprentices are given a five years' course of practical training in the works of the Tata Iron & Steel Company, working four days a week for four years and whole time in the last year. The entire cost of training is borne by the Steel Company. This is administered by the same committee as for the Technical Institute. The working of the scheme is being very carefully watched, and further improvements and modifications are contemplated in the near future.

This school has become very popular, and there is a great competition for admission. Incidentally, it may be mentioned that this has given a strong impetus to Primary Education in Jamshedpur. Whereas in 1930 there were only 1350 boys reading in the Primary Schools, there are at present 3000. The parents of these boys hope that after passing out of the Middle English School, they will be admitted into the Apprentice School.

4. *The Technical Night School.* This is a separate establishment. This school is run on a fee-paying basis, and is supported by the Steel Company and the Provincial Governments. It is divided

into two—a Junior School in which the teaching is done in Vernacular, and a Senior one in which the teaching is through the medium of English. The school is open to the residents of Jamshedpur. Most of the men who attend the school come from the Maintenance Departments, and study Mechanical and Electrical Engineering. It has also been decided to introduce Trade Courses to meet the requirements of the Steel Company and its subsidiaries. The course extends over six years. There are at present seventy students on the roll. This school is usually patronized by the younger foreman class.

5. *Apprentice Scheme, 1927.* In 1927 the Steel Company also started a properly organized apprentice department. This is administered at present by the same committee as for the Technical Institute, and includes—

(i) Students from Colleges who wish to come for "vocation training" without pay.

(ii) Students from Colleges who have passed their lecture course, and wish to attend for two and a half to three years in order to qualify for a College diploma or a degree.

(iii) Students who have passed the Matriculation and have to do a five years' course in the Maintenance Departments.

(iv) The sons of "Mistries" who wish to do a five years' course in a particular shop.

In reference to (i) and (ii), the scheme is very popular, and a large number of applications are received every year from the various Engineering Colleges in India. The number of admissions, however, is limited by the accommodation available in the shops, and does not exceed thirty-five at any one time. Up till now ninety-eight students have taken advantage of this scheme, and twelve of them have been employed by the Steel Company.

In reference to (iii) and (iv), recruitment was stopped in view of the starting of the Apprentice School. The following statement shows the present position in respect of these apprentices—

Employed on completion of training	38
Transferred to other departments	
during training . . . . .	57
Discharged . . . . .	35
Resigned . . . . .	14
Died . . . . .	2
Under training . . . . .	12
	<hr/>
	158
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III. It is a recognized fact that the Technical Institute in Jamshedpur has come up to the expectations of its builders. The graduates of the Institute have played a very important part in the Indianization of the Company, and the majority of them are holding important and responsible positions in the works. The Steel Company has taken a very broadminded view of technical

**APPENDIX VIII**

**I2I**

education, and has backed its belief by bearing the major portion of the cost. As the apprentices come from all over India, the educational activities of the Company have been very beneficial in furthering Technical Education in this country. This should be accepted as a contribution to the benefit and welfare of the whole of India.

*October, 1933.*

## APPENDIX IX

### APPRENTICE TRAINING IN THE WORKS OF G. & J. WEIR, LTD., CATHCART, GLASGOW

AN Engineering Establishment engaged in the manufacture and development of specialized plant must gather together a technical personnel with expert knowledge of its products, and continually train men in its own particular field.

The technical training provided by colleges and evening schools forms only the basis upon which such expert knowledge can be readily accumulated. The formation of habits of industry, observation and consistent study are essential, and encouragement towards this end should be given to all employees. Particularly is this necessary among the youths entering the establishment.

Great care should be taken to create an atmosphere which will stimulate and maintain an active interest in the products of the firm, their manufacture, operation, and development.

The main flow of youths through an engineering works is usually in the form of apprentices, a very suitable field from which to choose lads for Junior Staff positions, as vacancies arise. Apprentices come from homes of widely varying circumstances, having received their education at different types of schools. By careful selection all Junior Staff positions can be filled with lads of the right type, having the required characteristics and qualifications. This method of staff recruiting has been adopted by the firm for many years with gratifying results. The selection is based upon the reaction of the lads to the work in the shops and works school, and to the amount of technical knowledge they have acquired at either evening or day classes held by the Educational Authorities in Glasgow.

The Principal of the works school receives reports of the progress and conduct of apprentices in the Works Departments twice a year, and selects lads for Junior Staff positions as vacancies arise. The process of selection lasts through the greater part of the apprenticeship period. The intimate contact with apprentices in the school and the Apprentice Engineering Society provides better opportunities for judging the character and potential ability of the lads than the workshop reports.

Several methods of organizing the works school have been tried during the fifteen years since its adoption as a definite part of apprentice training. The present system is the result of these experiments, and is unlikely to be greatly changed in the future. The school results are better than those obtained by the earlier methods, and less friction occurs between the works departments and the school due to the withdrawal of apprentices.

The apprentices attend school for fifteen weekly periods at regular intervals during apprenticeship. The school hours are:



Monday to Friday, 9.0 a.m. to 12.30 and 1.45 to 5.30 p.m.;  
Saturday, 9.0 a.m. to 12 noon.

The schoolroom is large and well lit, having formerly served as a drawing office. Each student is provided with a table 6 ft. by 3 ft., drawing board, T-square, mathematical and steam tables, drawing and blotting paper, ruler, pen and ink. The room is equipped with cinematograph, and facilities for experimental demonstrations. Lantern slides are used for illustrative purposes, and diagrams for sketching parts of machines requiring descriptive notes.

A class consists of twelve to fifteen apprentices, and the school curriculum is divided into fifteen groups—

**FIRST YEAR—**

Steam Generating Plant.  
Prime Movers (Steam and Internal Combustion Engines).  
Auxiliary Machinery.

**SECOND YEAR—**

Ferrous Metals.  
Non-ferrous Metals.  
Displacement and Kinetic Pumps.

**THIRD YEAR—**

Feed Heaters and Feed Heating.  
Condensers.  
Air Extraction Apparatus.

**FOURTH YEAR—**

Evaporators and Distilling Machinery.  
Feed Water Circuits.  
Air Compressors.

**FIFTH YEAR—**

Internal Combustion Engines.  
Marine Power Plants.  
Land Power Plants.

Besides these regular courses, special weeks are arranged for lads desiring to sit for local examinations, such as the entrance examination to the day or evening classes of the Royal Technical College. Training for external scholarships is given to lads of exceptional ability.

The subject-matter in the school curriculum is arranged in relation to the firm's products, and assumes the continuous attendance of apprentices at evening classes. This serves as an additional urge to apprentices to continue their evening studies, and those who do so derive the most benefit from the work done in the school.

For lads who reside near the works, evening classes are held during the autumn and winter months in the works school in

conjunction with the Glasgow Education Authority. A Friday tutorial class grants to the apprentices the facilities of the school for drawing and the preparation of home-work for evening classes.

An Apprentices' Engineering Society, whose officials and committee consist of apprentices elected annually by ballot, arranges lectures, social evenings, and visits to works in the vicinity of Glasgow, and provides a further opportunity for observing the characteristics and ability of the apprentices.

From the description given, it will be seen that the purpose of the school is to show the appreciation of the firm of the efforts exerted by the apprentices to equip themselves for future service in the industry, and their desire to take an active part in these efforts.

## APPENDIX X

### TECHNICAL EDUCATION IN THE LAUNDRY INDUSTRY

(Abridged by the Editor of this Report from a pamphlet bearing the same title, issued by the National Federation of Launderers, Ltd.)

DURING the last few years there has been a growing realization within the Laundry Industry of the need for and practical advantages of technical and commercial education.

It was in the autumn of 1928 that the experiment was made of holding evening classes at the Federation Offices at 17 Lancaster Gate, W.2. There were four of these classes at first: (1) Government Regulations; (2) Engineering; (3) Advertising; and (4) Staff Training; all of these subjects, of course, being treated from the point of view of the Laundry Industry. The following autumn a further experiment was made with a class for Wash-housemen.

These experiments were so successful that classes have been held at 17 Lancaster Gate each spring and autumn since 1928, though the actual subjects have varied from year to year.

This movement soon spread to the provinces, and with the willing co-operation of various technical colleges, classes on the general subject of Elementary Chemistry for Laundries (and in a few cases on Engineering) have been held in Birmingham, Brighton, Burnley, Cardiff, Hull, Leeds, Leicester, Liverpool, Middlesbrough, Newcastle-on-Tyne, Nottingham, Portsmouth, Salford, Colchester, Norwich, Worksop, Cambridge, Southport, Sheffield, and Scarborough. Additional centres are opened from time to time.

Since 1928 there have been about 2000 students at these various classes.

The British Launderers' Research Association has for the most part supplied the lecturers for the classes on technical subjects held at Lancaster Gate. At the provincial classes the lecturers have been drawn, as a rule, from the permanent staff of the institutions, though in a few places special lecturers have been selected.

In order to systematize and co-ordinate the tuition given at these different classes, and to make it as practically useful as possible, the lecturers at the provincial classes have been invited to spend three or four days in London each year at what was first called a Tutorial Class, but is now known as the Conference of Laundry Class Lecturers. These annual meetings (held in 1930, 1931, 1932, 1933 and 1934) have been devoted primarily to lectures by members of the Research Staff, and visits to representative laundries, but the opportunity has also been taken

each year to discuss the general subject of technical education for the Laundry Industry.

They have proved so beneficial that they will be continued.

As a result of experience gained in these various ways, it was decided in 1933 to endeavour to arrange similar courses at the various centres in order to prepare the way for a system of certificates of national standing, so devised that the certificates granted will be of equal value, whatever be the place at which the student has studied. The first National Examination, based upon the standard syllabus, was held in 1934.

The scheme, together with scholarships, medals, and prizes, has been approved by the Association of Principals of Technical Institutions. Officials of the Board of Education have also expressed their approval, and have offered to act in an advisory capacity when necessary.

On the Central Committee, or Examining Board for 1933-4, are representatives of the Board of Education, National Federation of Launderers, the British Launderers' Research Association, the lecturers who take part in the courses at provincial centres, and the Association of Principals of Technical Institutions.

The subjects taught at the London Headquarters of the Federation include—

Washhouse Methods.

Simple Chemistry, Physics, and General Science.

Washing Materials, Processes, Methods, etc.

Practical Engineering for Laundries.

Principles of General Departmental Management and Office Control, including Book-keeping for Laundries, Costing and Industrial Psychology.

Salesmanship for Laundry Executives.

Salesmanship for Laundry Carmen, Driver-salesmen, and Canvassers.

Correspondence Courses are also available on some of these subjects.

The first four subjects are taught by highly qualified members of the British Launderers' Research Association staff, and the other subjects are also in the hands of experts.

The Federation issues a very full syllabus of Laundry Chemistry, on which examinations will be based. While this syllabus indicates the ground to be covered, it does not suggest the method of treatment or the order in which various portions should be dealt with. A valuable measure of discretion is thus left to lecturers at different centres.

Efforts are now being made to induce laundry executives to persuade the younger workers to attend continuation classes in general education, in order to prepare themselves for the technical classes when they are a little older.

For more advanced education, scholarships are offered. *The Federation Journal* for February, 1934, gave particulars of four scholarships, tenable at a three months' course of theoretical and

practical work in the laboratories of the British Launderers' Research Association at Hendon. Four other scholarships are contemplated. These will provide nine months special study at any approved technical college.

In addition to widely distributed classes and lectures, training by the method of Conference and Discussion is carried on at the Young Launderers' Congresses, and local groups mentioned in the body of this Report.

## APPENDIX XI

### EDUCATION AND TRAINING OF STAFF ON THE LONDON, MIDLAND AND SCOTTISH RAILWAY

#### RECRUITMENT, ENTRANCE AND EFFICIENCY TESTS

THE London, Midland and Scottish Company's arrangements for the education and training of staff are of a comprehensive and extensive character.

In normal times it is the Company's practice to recruit the clerical staff by taking on juniors at 15 to 17 years of age, who have successfully passed the entrance examination. They are trained by being placed to various duties in turn, and in the case of the Traffic and Goods Departments they are moved about the line from one place to another.

This practical training is supplemented by providing educational facilities in a large variety of subjects, and such facilities are, generally speaking, available to all grades of staff of any age.

The entrance examination for clerical staff comprises the following subjects: English, Geography, Arithmetic, Shorthand, and Handwriting.

At 18 years of age the individuals are required to pass an efficiency examination in the following subjects: English, Railway Geography, Rules and Regulations, Arithmetic, Shorthand speed. In this test there is a supplementary paper for boys containing questions applicable to the work performed in the department in which the examinee is employed, and for girls one on office routine.

The Company's educational scheme provides—

(a) Classes for junior clerks who are preparing for their efficiency examination.

(b) Classes for clerical staff of any age who desire to improve and increase their knowledge of goods and passenger station clerical work.

(c) Classes and lectures at evening schools, universities, etc., by arrangement with local education and university authorities; open to all salaried staff, irrespective of age.

(d) Lectures and discussions on a variety of subjects of special interest to railwaymen; these are open to all staff, irrespective of age or grade.

Provision is also made for Trade Apprenticeship, Engineering Apprenticeship, and Pupilship.

The various facilities available under these heads are briefly dealt with as follows—

#### CLASSES AND LECTURES CONDUCTED EXCLUSIVELY BY THE COMPANY

(a) *Railway Commercial Classes.* The centres for classes in

Railway Goods and Passenger Station working are fixed at important stations and depots throughout the whole of the system, and the classes, etc., are so arranged as to enable all staff at or near the centres to take full advantage of the facilities offered.

The instruction is usually given between the hours of 6 and 8 p.m., and in most cases each lesson is repeated the following week in order that staff working early and late turns of duty may conveniently attend for a complete course.

This course, in a series of forty-eight lessons spread over two sessions, covers every branch of railway station clerical work, and makes provision for study of the L.M. & S. and other railways, with principal junctions, connections, steamship routes, etc., also for Commercial English, Precis Writing, etc.

These classes are primarily intended for salaried staff, but others may attend on special application being made.

(b) *Block Signalling Classes.* In addition to the above, classes for instruction on signalling are regularly held at the Company's School of Signalling at Victoria Station, Manchester, which is equipped with a miniature electrically worked railway. Block Signalling classes are also carried on at a number of other stations. The signalling classes are open to staff of any age or grade.

(c) *Special Lectures.* The subjects dealt with at the lectures touch upon all of the many branches of railway activity, and include—

The Audit Office in Relation to Station Accounting.

Bridge Reconstruction.

Cartage of Goods Traffic.

Cheapening of Transit of Traffic through Liverpool.

Claims.

The Class 4 Standard Compound Engine.

The Class 4 Standard Freight Engine and the Class 7 Freight Engine.

Coaching Accounting Methods at Station.

Coal Workings as Affecting Railway Maintenance.

The Commercial Activities of the Goods and Passenger Departments.

Composition of Points and Crossings.

Demurrage, Internal User, and Siding Rent.

Departmental Accountancy.

Dock and Canal Working.

Free Alongside Ship Arrangements.

Gauges and Gauging.

Goods Accounting Methods at Stations.

Goods Department Statistics: Necessity for their Compilation.

Hallade Trace Recorder.

Head Office Accounting.

Historical Development of Locomotive Design.

Inner Workings of Motor Vehicles.

The Locomotive Boiler: The Story of its Evolution.

Locomotive Boiler Fittings.  
 Locomotive Valve Gears.  
 Lubricators and Lubrication.  
 Mechanical Appliances in Rolling Stock Maintenance.  
 Measuring and Measuring Instruments.  
 Micro-examination of Metals in Locomotive Manufacture.  
 Modern Road and Rail Transport.  
 Oxy-acetylene Welding.  
 Permanent Way Maintenance and Renewals.  
 Profiling and Measurement of Wear on Railway Rails.  
 Railway Administration—Rates and Charges.  
 Railway Brakes.  
 Railway Electrification Development.  
 Railway Signalling and Signalling Equipment.  
 Safety Precautions in Connection with Loading and Handling  
 of Goods Traffic.  
 Salesmanship.  
 Screw Threads.  
 Some Auxiliary Locomotive Fittings.  
 Three-cylinder Compound Engines.  
 The Use and Development of Containers.  
 The Walschaert Valve Gear.

The instructors and lecturers are in all cases members of the Company's staff who possess a wide experience of the subject on which they are required to impart knowledge, and at every meeting questions are invited and discussion is encouraged.

The staff are allowed to attend all the classes and lectures free of charge and travelling facilities, within reasonable radius, are given to those desirous of attending.

#### CLASSES UNDER LOCAL EDUCATION AUTHORITIES

The scope of the work has been extended by the co-operation of a number of local education authorities, and the following are the arrangements at present in operation—

*London.* Classes for salaried staff are run in conjunction with the London County Council at the North-Western Polytechnic, at which the following subjects are dealt with—

Arithmetic.  
 Book-keeping and Accounting.  
 English.  
 French.  
 Geography.  
 German.  
 Office Routine.  
 Shorthand.  
 Typewriting.  
 Economic History.  
 Railway Station Office Work (Goods and Coaching).  
 All subjects of the Graduateship and Associate Membership  
 Examinations of the Institute of Transport.



In many cases clerks are given time off in order that they may attend these classes. Textbooks are lent to the students for the period of the course, and tuition fees are paid by the Company.

*Derby.* Salaried staff may attend the local evening schools in the following subjects: Commercial Correspondence, Commercial Arithmetic, English, Geography and Shorthand. At the Derby Technical College salaried staff may attend classes in all subjects of the Graduateship and Associate Membership Examinations of the Institute of Transport. In each case the Company pays the whole of the fees.

*Holyhead.* Classes in commercial and technical subjects are open to all staff on whose behalf the Company pays the fees.

*Birmingham.* Salaried staff may attend classes at the City of Birmingham Commercial College in all subjects of the Graduateship and Associate Membership Examinations of the Institute of Transport. The student pays half fees and the Company pays the remainder.

*Manchester.* The Manchester Municipal High School of Commerce in all subjects of the Graduateship and Associate Membership Examinations of the Institute of Transport. The student pays half fees and the Company pays the remainder.

#### LECTURES AT UNIVERSITIES

Arrangements are in force with the Universities of Edinburgh, Leeds, Manchester, Nottingham, and Sheffield, and also the Glasgow and West of Scotland Commercial College for the attendance of salaried staff at lectures at Edinburgh, Leeds, Manchester, Nottingham, Sheffield, and Glasgow. At Manchester the Company pays the whole of the fees, and at the other centres staff pay a nominal fee only, the balance of fees being paid by the Company.

Courses of lectures are delivered on the following subjects, and at each centre the cycle of subjects is completed in four years—

- Railway Law.
- Railway Economics.
- Railway Operation.
- Railway Geography.

At the London School of Economics (University of London) the Company pays the fees on behalf of salaried staff who are permitted to attend lectures on the following subjects—

- Accounts of Traders and Companies (Parts I and II).
- Business Administration and Organization.
- Commercial Railway Economics.
- Economics of Transport.
- Elements of Transport.
- General Economics, with special reference to Transport.
- General Statistics.
- Operating Railway Economics.
- Railway Accounts.

Railway and Commercial Geography of the United Kingdom.

Railway Statistics.

State Control of Transport.

The Growth of English Industry, with special reference to the period after 1760.

The Law of Carriage by Railway.

Works and Factory Accounting and Cost Accounts.

At the close of each session students at the Railway Commercial and Block Signalling classes are tested as to their knowledge of the subjects dealt with, and prizes and certificates are awarded to those attaining a certain standard of proficiency. Examinations are also held in connection with the classes and lectures organized by the local education and university authorities. Particulars of all successes gained are entered on the staff record cards, and taken into consideration when the question of promotion arises.

#### TRADE APPRENTICES

Trade Apprentices in the Chief Mechanical Engineer's Department are recruited from boys up to 16 years of age who have attained a good standard of education. They are accepted without any premium and in the majority of cases are confined to a particular trade. The wages they receive are on a scale graded according to age, and they are employed on the grade of work appertaining to the craft in degrees of importance which mainly run parallel with their rates of pay. They continue as Apprentices until attaining 21 years of age when, unless they can be absorbed, their services with the Company terminate.

A good proportion of the Trade Apprentices are the sons of members of the Company's staff.

#### ENGINEERING APPRENTICES

A limited number of Engineering Apprentices between the ages of 16 and 18 are taken each year in the Chief Mechanical Engineer's Department at the main Works. Applicants must show by production of a school certificate or equivalent that they have reached a suitable educational standard. The course of training covers a wider range than is the case with Trade Apprentices, and this is divided as opportunity arises between the Shops in the particular section, e.g. Locomotive, or Carriage and Wagon, in which they are engaged.

No premium is required in the case of Engineering Apprentices who are paid according to age and in accordance with the scale for Trade Apprentices.

Engineering Apprentices are required to attend technical classes and are granted facilities to attend classes for one whole day per week without loss of pay.

In the Signal and Telegraph Department also there are a number of Engineering Apprentices who are given similar educational facilities.

Engineering Apprentices are required to serve until they attain 21 years of age.

#### PUPILS

A very limited number of Pupils are accepted in the Works of the Chief Mechanical Engineer's Department at about 21 years of age for a course of training extending over two years, for which a payment of £100 has to be made, and during the course they are paid wages at the rate of 40s. per week. Whilst an honours degree is not essential, candidates are required to be of a suitable educational standard.

The training taken covers all the Shops in the particular section, e.g. Locomotive or Carriage and Wagon, in which they are specializing.

So far as the future prospects of an Engineering Apprentice or Pupil are concerned, everything depends on the man's qualifications after his training and the openings that arise.

No guarantee of permanent employment is given either to Apprentices or Pupils on completion of training.

Engineering Apprentices or Pupils already in the service who are exceptionally well reported upon and who have done well so far as their theoretical technical education is concerned are eligible for consideration as Engineer Pupils under a higher scheme referred to elsewhere in this report. They will normally be expected to have obtained an engineering degree, but this requirement may be dispensed with under exceptional circumstances.

#### OTHER ACTIVITIES

*Locomotive Mutual Improvement Classes.* Locomotivemen's Mutual Improvement Classes, managed by the enginemen themselves, are held usually on premises provided by the Company, and are well attended by members of the Motive Power Department. These classes exist at a large number of stations. At the classes lectures are given on subjects having a direct bearing on the men's vocation.

*Railway Institutes, etc.* At practically all the larger centres there are railway institutes, supported by the Company, at which members of the staff meet for social and educational purposes. Some of these institutes contain excellent libraries, and lectures and debates are a regular feature.

*Ambulance Work.* The L.M. & S. Railway in England is a centre of the St. John Ambulance Association, and classes for the training of men in ambulance work exist at a large number of stations throughout the length and breadth of the line; at a few of the larger centres Sick Nursing Classes for girls and women are also held.

In connection with the ambulance classes, annual competitions, both for men and women, are held, culminating in a final competition in which nine or ten of the teams successful in the district

and preliminary competitions take part. Prizes are awarded in all these competitions.

In Scotland the ambulance work is organized as a Brigade of the St. Andrew's Association, and similar arrangements for classes and competitions are in force. In addition, an annual competition takes place between L.M.S. teams from England and Scotland respectively.

## APPENDIX XII

### SURVEY OF EDUCATIONAL FACILITIES FOR RAILWAY EMPLOYEES LONDON & NORTH EASTERN RAILWAY

EDUCATIONAL work plays a very prominent part in the policy of the London & North Eastern Railway, following the traditions of certain of the constituent companies which in 1923 were merged in the new amalgamated Company, and the Company are at all times ready to take any progressive measures in the matter of education which will fit their employees for higher posts in the service, and which in turn tend to improve the general efficiency of the organization. They have clearly recognized the value from the economic point of view of the mental development of their employees, and the comparatively brief account which follows will give some indication of the Company's educational work. Broadly speaking, the Company's educational activities may be summarized under ten main heads—

1. Qualifying Examination for Junior Clerks before Appointment to Permanent Staff.
2. Continuation of Education of Clerical Staff in Railway Subjects.
3. Probationary Clerks.
4. Traffic Apprenticeships.
5. Education of Apprentices in Technical Departments.
6. Civil Engineering Graduateships.
7. Mutual Improvement Classes.
8. Institutes and Libraries, including Literary Societies.
9. Debating and Lecture Societies.
10. Staff Magazine.

The following brief comments refer to each of the foregoing subdivisions in order—

#### I. QUALIFYING EXAMINATION FOR JUNIOR CLERKS BEFORE APPOINTMENT TO PERMANENT STAFF

Candidates before appointment to clerical positions in the Company's service are required to pass satisfactorily an entrance examination bearing on general education, which comprises tests in Dictation, English, Composition, Mathematics, Geography, Intelligence, and General Knowledge. This examination normally takes place between the ages of 15 and 17 years, but every junior, before being appointed as a Permanent Clerk, requires to pass what is known as a "qualifying examination," which is normally taken at the age of 17½ years. If successful the junior is appointed to the Company's permanent staff on his eighteenth birthday. All candidates are required to take English, Commercial Arithmetic, General Railway Knowledge, and a paper on

Present Duties (which includes questions on Elementary Railway Geography), and Shorthand and Typewriting (unless specially exempted). If unsuccessful, a junior is allowed another attempt three months later, but if he fails at the second attempt his services are dispensed with.

## 2. CONTINUATION OF EDUCATION OF CLERICAL STAFF IN RAILWAY SUBJECTS

The next phase of the clerk's education is entirely optional, and in this connection the Company incurs annually considerable financial expenditure.

In the first place the staff are given every encouragement and facility to attend evening classes in Passenger and Goods Station Working and Accounts and Train Signalling Regulations. These are held at numerous centres according to demand and are conducted by expert members of the staff, no fee being charged to the student. To a small extent similar classes are conducted in Locomotive, Stores, and Engineering Accounts and Statistics for clerks engaged in those particular departments.

As a next step the Company have, by arrangement with the various universities in England and Scotland, instituted evening courses of lectures on Railway Operating, Railway Economics, Railway Law and Railway and Commercial Geography, at about a dozen of the principal centres on the system, and here also the Company afford every opportunity and facility to the staff to attend. In respect of these courses a nominal fee of 5s. per subject is charged to the student.

Both in respect of the railway classes and the university courses, examinations are held at the end of each session and certificates issued to successful candidates. In the case of the university subjects the examination certificates are issued by the university authorities. A "Final Certificate" is granted by the Company to all those who qualify in five subjects stipulated.

## 3. PROBATIONARY CLERKS

The Company appoint each year as Probationary Clerks a limited number of youths between 16 and 18 years of age, who have passed an examination of matriculation standard. Exemption is granted from the entrance and qualifying examinations. The Probationary Clerks are placed in definite positions, but their work is specially supervised by committees of the departmental officers, and, as far as circumstances permit, they are moved about to widen their experience. In common with other members of the Company's clerical staff, they are entitled to sit for the Traffic Apprenticeship Examination, of which particulars are given below, before attaining the age of 25 years.

## 4. TRAFFIC APPRENTICESHIPS

The Company have a limited number of positions known as Traffic Apprenticeships to which young men are appointed in two main ways—

(i) By special selection from candidates straight from universities or public schools; and

(ii) By means of an annual competitive examination from the staff.

An equal balance of appointments from these two methods of recruitment is aimed at. The Traffic Apprentices undergo a special course of training covering a period of three years, during which time they are mostly supernumerary to the establishment, and see something of practically every phase of traffic commercial and operating work. Throughout the training period their work and progress is specially supervised by committees of the departmental officers, and they receive salaries which are in the nature of a subsistence allowance. The programme of training covers short spells respectively at small country stations, large parcels and goods offices, yard-masters' offices, dock offices, engine sheds, district passenger, goods, operating, and locomotive running offices (including visits with district inspectors or canvassers), as well as some time in Head Offices.

#### 5. EDUCATION OF APPRENTICES IN TECHNICAL DEPARTMENTS

The importance of providing technical instruction to apprentices in the Locomotive, Civil, and Electrical Engineering Departments will at once be fully realized, and the Company have inaugurated throughout the whole system a comprehensive scheme of instruction of this nature for both ordinary and premium apprentices. Apart from one notable exception referred to later, viz. the Stratford Mechanics' Institute, the apprentices attend classes provided by Local Educational Authorities, and, so far as evening classes are concerned, the Company remit the fees of all ordinary apprentices attending such classes subject to their making 80 per cent possible attendances (apart from illness or other special circumstances), and to a satisfactory examination report being received at the end of the session. At six of the larger locomotive centres upon the system, a limited number of about one hundred apprentices (both premium and ordinary) are allowed to attend day classes, either two half-days or one whole day per week. In addition, a limited number of studentships at the University Engineering Colleges are awarded to students in the Locomotive Department who succeed in passing a competitive examination. The Company pay full wages to these students while they are attending the colleges.

#### 6. CIVIL ENGINEERING GRADUATESHIPS

A small number of Civil Engineering graduates are accepted for a course of training in Railway Engineering work. The course extends over three years, and, after a probationary period of six months, the men receive salaries as subsistence allowances in the same way as traffic apprentices. Their training is supervised by a committee of the Company's engineers.

### 7. MUTUAL IMPROVEMENT CLASSES

At many stations the staff in various departments have formed Mutual Improvement Classes, and the Company provides them wherever possible with accommodation (including lighting and heating) in which to hold their meetings. The classes usually meet on Sundays and study the subjects connected with their work, one of the more experienced members acting as instructor. These classes are particularly numerous in the Locomotive and Police Departments. The Company give every encouragement, and provide diagrams, models of machinery, or other useful material.

### 8. INSTITUTES AND LIBRARIES, INCLUDING LITERARY SOCIETIES

Throughout the system there are approximately forty institutes of varying sizes which, in most cases, occupy buildings which have been specially provided by the Company, whilst in addition the Company render financial assistance towards their maintenance and upkeep. In the majority of cases the libraries form a very important part of the functions of the institutes, and it may be mentioned that over 100,000 volumes are comprised in these libraries, a special section of which is devoted to books on railway subjects. The Stratford Institute (London) is probably the most important, which, in addition to a membership of 2000 and a library of 10,000 volumes, has important educational functions, and conducts upwards of sixteen classes each session in various subjects, several of which are intended primarily for locomotive apprentices. A Locomotive Class for drivers, firemen, and cleaners has recently been introduced at this Institute which has proved very successful. Certain institutes also include in their syllabus each winter a series of popular lectures on general subjects which are of educational value.

In addition to the foregoing, there are quite a number of small lending libraries of technical railway books established in various head and district offices, to which the staff have access without charge.

### 9. DEBATING AND LECTURE SOCIETIES

In certain of the larger centres of the system, the staff have formed Debating and Lecture Societies for the discussion of any subjects affecting railway operation or organization. As will be appreciated, the range of subjects is a very wide one, and the existence of the societies has proved to have had a very beneficial effect upon the staff from the educational point of view. The societies are not controlled by the Company officially in any way, but the Company's officers take a prominent part in the way of preparing lecture papers and initiating discussions, as well as by their frequent attendance at the meetings, and they render by the offer of essay prizes or in other ways any assistance they can in furthering the objects of the societies. The company also provide meeting rooms for the periodical discussions of the societies.



**10. STAFF MAGAZINE**

Whilst the Company's staff magazine necessarily contains a good deal of information relative to the social side of railway life, the inclusion of articles of real educative value is not lost sight of. Articles frequently appear bearing on various aspects of railway working, and experience shows that these are very much appreciated.

In conclusion, it may be stated that the Company is fully alive to the importance of improving the general intellectual standard of their staff, and no opportunity is lost of taking any steps within their power with this object in view.

## APPENDIX XIII

### GREAT WESTERN RAILWAY: EDUCATIONAL FACILITIES FOR STAFF

EDUCATIONAL facilities of an extensive nature are provided by the Great Western Company in subjects which will assist the employees to qualify themselves for higher positions in the service.

It is the general practice of the Company to recruit its staff at school-leaving age, and junior members of the clerical staff are encouraged to attend classes in Shorthand, Typewriting, Mathematics, English, etc., which are arranged in conjunction with the London County Council Evening Institutes and similar institutes in other parts of the country.

Senior members of the clerical staff are afforded facilities for attending instructional classes in subjects appertaining to transport undertakings at the London School of Economics (University of London) and other Universities and Technical Colleges in towns served by the Company's system, the fees of which are borne by the Company. These classes comprise such subjects as the following—

- The Law of Carriage by Railway.
- Railway Statistics.
- Railway Economics (Operating and Commercial).
- Rate-making.
- Goods Station Working.
- Control Systems in Railway Working.
- Railway Accounts.

Courses of instruction in Signalling and the Safe Working of Railways are held under the Company's own auspices at various centres throughout the system, and these classes are open to wages grades, as well as to members of the clerical staff. The lecturers are members of the Company's staff who possess an expert knowledge of the subject, and at the close of each lecture questions are invited and discussion allowed. In order that practical demonstrations may be given in conjunction with the lectures, the lecture rooms at Paddington and certain other centres are equipped with a miniature section of railway, complete with signalling apparatus, etc., and other actual signal box appliances are also provided. For the benefit of staff at remote stations and others who are unable to attend the lectures, correspondence courses are arranged in this subject.

Station Accountancy Classes, which deal with Passenger, Parcels, and Goods Accounts Methods, in addition to classes providing instruction in Goods Rates and Station Working, are also held at various centres on the system, the lectures in each case being

given by qualified members of the Company's staff. Correspondence Courses are arranged in Station Accountancy. Railway Salesmanship is another subject in which classes are held at various centres.

Studentships at local Technical Colleges are awarded to selected apprentices in the Chief Mechanical Engineer's Department at several places.

Lecture and Debating Societies are encouraged and supported by the Company, and lectures are provided on subjects of general interest as well as upon matters connected with transport undertakings. The G.W.R. (London) Lecture and Debating Society holds an annual Prize Essay Competition, open to members of the Company's staff, in connection with which prizes are awarded for the best essays submitted upon a given subject, and the prize-winning entries are subsequently read before a meeting of the society. This society also possesses a well-equipped library of books on railway and kindred subjects, which are of particular value to students attending the various classes, and are loaned to members of the society free of charge.

A limited number of men specially selected from the staff may be given an opportunity of undergoing a course of training in subjects pertaining to the conduct of the business of the Company. Candidates for appointment to these courses must be recommended by the heads of their departments. No application for special training is considered unless the applicant holds a "Merit" Certificate in the Company's Signalling or Station Accounts Examinations, or has attended one course of lectures and gained a First Class Certificate at any of the recognized institutes at which educational facilities are obtainable by the staff. During the period of training each selected candidate is detached temporarily from the position which he holds and is required to take up duty in other positions at such places as may from time to time be decided upon. The progress made by each candidate is reported upon at least every six months, and the right is reserved to discontinue at any time the training of any individual candidate.

Courses of instruction of a combined practical and theoretical nature are provided for certain grades of manual workers. Classes are held at the principal depots from which road motor vehicles are operated to enable drivers to acquire a thorough knowledge of the mechanism of the vehicles they drive.

## APPENDIX XIV

### PEEK, FREAN & CO., LTD. PROGRAMME OF SUPERVISORS' VOLUNTARY TRAINING COURSE

EACH Course, which is two months in duration, is confined to Supervisors only, and limited to twelve in each Course. It consists of seven talks, four visits to Departments other than their own, two visits to outside Works and two sessions for discussion on the outside visits. The informal discussion after each visit, preferably during the same week, takes the place of writing up a report. Two items are arranged for each week. The talks commence at 2.30 p.m. and, including questions, last about an hour. The Employment Manager is in the Chair at both talks and discussions so as to ensure that there is a free and informal atmosphere.

Talks include such subjects as "The Policy of the Firm"; "The Functions of the Employment Department"; "Planning"; "Costing"; "Sales and Advertising." Each Course is opened by the Works Director, who talks on the more confidential aspects of the Company's business: other talks are given by the experts in the Firm on the particular subject chosen.

Each Course is ended with a summary of the ground covered during the two months. Opportunity is given to criticize the Course and to make suggestions for its improvement.

Courses of the present series differ from previous Courses in three main directions—

1. Although the previous Courses were, in a sense, voluntary, the approach was made by the Company, whereas now the approach to the supervisors is made by members of the Joint Supervisors' Committee. It will, of course, be understood that the names of volunteers are submitted to the Management for their approval, so as to avoid too many being away in one department at a time, and so on.

2. Previously twenty took part in the Course. Twelve of these were supervisors and eight were outstanding employees. The Courses are now limited to supervisors only, since there was an objection on the part of the supervisors to having others of a lower status joining in with them.

3. An informal discussion takes place after each talk and visit instead of the supervisors having, as in former courses, to give a written report.

With regard to the writing up of reports, experience has shown that this aroused a violent antipathy on the part of supervisors, who appeared to feel that it was like going back to school. To many of them, too, writing up reports of any kind was a laborious task.

The subjects in the syllabus were asked for by the supervisors themselves. The Company accepted all the suggestions they made, and has included none of its own.

## APPENDIX XV

### THE MORE RECENT PUBLICATIONS OF THE A.E.I.C., AND PUBLICATIONS OF THE B.A.C.E. AND THE B.A.C.I.E.

#### A.E.I.C. PUBLICATIONS

*The City Livery Companies : Their Service to Education.* Presidential Address by Sir Francis Goodenough, C.B.E., June, 1932. Price. 6d.

*An Educational Policy for an Industrial Nation.* Presidential Address by Lord Eustace Percy, June, 1931. Price 6d.

*Young Men in Industry and Commerce : Modern Tendencies and Character Training.* By Viscount Leverhulme and others. June, 1930. Price 1s. 6d.

*Report on "Education for Higher Positions in Commerce."* Including Employers' Evidence, Memoranda from nine British Universities, and Foreword by Sir Kenneth Lee, LL.D. October, 1929. Price 1s.

*Report on "Education for Management."* Revised Edition with extensive Bibliography and Appendices, giving various schemes of Management Training. May, 1928. Price 1s.

*Report on "Education for Foremanship."* Second Edition, with seven Appendices. February, 1929. These reports are supplied at reduced rates in quantities of not less than one dozen, for use at Foremen's Meetings, Study Circles, etc. Price 9d.

*Report on "Training for Manual Workers in the Engineering Industry."* Second Edition, with extended references to American, German, and Swiss, as well as British systems of apprentice training. April, 1930. Price 2s.

*Towards Education at the Top.* Presidential Address by Sir Max J. Bonn, K.B.E. July, 1929. Price 6d.

*A New Scheme for Training in Business Administration.* By Mr. Richard Burbidge, General Manager of Harrods. July, 1929. Price 6d.

*Education and Training in the Transport Service.* By Mr. Frank Pick. July, 1929. Price 6d.

*Education for Responsibility.* By Mr. William Clower. May, 1929. Price 6d.

*The Function of Education.* Presidential Address by the late Lord Riddell. June, 1928. Price 6d.

*Part-time Commercial Education.* By Principal J. W. Ramsbottom, M.A., M.Com., Director of the City of London College. June, 1928. Price 6d.

*Education and Industry.* Presidential Address by Sir David Milne-Watson, LL.D., D.L. June, 1927. Price 6d.

*Why we Want Education in Industry.* Presidential Address by Alderman George Cadbury. June, 1926. Price 6d.

**B.A.C.E. AND B.A.C.I.E. PUBLICATIONS**

*Bulletin 1.* July, 1933.

*Bulletin 2.* January, 1934.

*Bulletin 3.* July, 1934.

*Bulletin 4.* January, 1935.

*Report of the Meeting of the B.A.C.E. at the Mansion House, Tuesday, 2nd May, 1933.*

*Report of the Inaugural Meeting of the B.A.C.I.E. at Merchant Taylors' Hall, Friday, 27th April, 1934.*

*Recent Developments in English Education which Affect Recruitment for Commercial Occupations.*

*Commercial Education in Scotland.* By J. B. Frizell, City Education Officer, Edinburgh.

*The Training of the Retail Distributor.* By S. A. Williams, Principal L.C.C. School of Distribution.

*Report of the Committee on Instruction in Modern Languages.*

*Report of the Committee on Post-Certificate Education for Commerce.*

All these publications may be obtained from the Honorary Secretary of the British Association for Commercial and Industrial Education.

(Other publications have been issued for the information of members of the Associations only.)

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