TRAINING WORKER CITIZENS

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FOREWORD

SCHEMES of social security, provisions for "free" health services, the extension of "free" secondary education to all, are reflections of an awakening of a social conscience which has been too long delayed. But these developments, excellent in themselves, have brought problems not all of which are purely administrative in character. A few moments reflection are sufficient to convince most commonsense men and women that these schemes are not "free" as far as the nation is concerned but must be paid for out of national earnings. The achievement of an intellectual understanding is not difficult but its translation into action and sustained effort sets a problem which is causing grave anxiety to those who are attempting to direct the national economy. The long-term solution of this problem lies in educating all those engaged in producing the nation's wealth—educating them in such a fashion that they will give practical expression to an awareness of their social responsibilities. We do not know yet how to design an educational system to achieve this end. Those engaged in industrial and commercial education as well as those concerned with the state educational system are thinking, planning, researching and experimenting.

However willing men and women may become to perform their duties to society, and however high their standards of citizenship may be, they cannot make their maximum contribution to society and to their own individual development if their inherent mental and manual skills be not properly trained. The will must be supplemented by the skill. There exists already a substantial body of knowledge of the technique of occupational training, much of it a direct result of the war-time demands for the training of large numbers of men and women in a far shorter time than was in peace-time regarded as the minimum.

The peculiar value of this volume lies, I think, in the fact that the contributors together have dealt with both education and training in the senses I have implied.

It is thus emphasised that each is but an aspect of what, as far as the individual is concerned, is a complex unitary process—the development of an effective individual and social personality.

A. P. M. Fleming.

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March, 1949.

INTRODUCTION

by

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THIS book does not pretend to be a manual of instruction for those who seek to educate workers or make better citizens. It is a symposium of the views of a number of people practically engaged in this important field of activity, which it is hoped may provide stimulating and instructive reading to those about to embark on this type of education.

The most important trend in industrial education to-day is the steadily increasing realisation among employers of the need to consider something beyond technical training or improvement of vocational skills. The task involves training for proficiency in work, instruction for integration (to encourage a sense of " belonging " within the firm) and non-vocational education for life.

Education in industry aims at increasing skill, and also at promoting adaptability, a sense of responsibility and loyalty, and finally at stimulating inventiveness. No amount of vocational teaching will achieve maximum output or maximum happiness among the labour force unless the employer is also considering how his workers are fitting in with the team and, furthermore, how they are fitting into the community.

Instruction for " integration and participation " involves pre-entry education. In the first place, it should interest new entrants to the industry in the factory and its various activities, and show them how the particular factory fits into industry as a whole, and how that industry serves the community : it includes the planning of works visits between different factories, and all those things which help to make the labour force feel they " belong ". It must, however, be admitted that some trade unionists do not always like this kind of instruction, because it is inclined to promote too much vertical loyalty to the employer as against horizontal loyalty to fellow-workers.

There remains the question of education for life. It is in caring for this side of education, and in providing facilities for its expansion, that adaptability, responsibility and inventiveness are increased. An educated man, it has been said, is one who can entertain himself and entertain others, but above all one who can entertain a new idea. There is a call for men and women who are able to adapt themselves, especially in this transitional period after the war. One can recall

the period in Denmark when that country had to switch over her whole economy from the export of wheat to the export of dairy produce. The major factor in her triumphantly successful and rapid change-over was the Danish Folk High School, where old and young, under patriotic leadership, went nightly to study, to improve their general cultural education. Thereby they were able to adapt themselves more easily to the new conditions. Something like this is being done in Great Britain—for instance, in the Welsh valleys, where people are continuing their general education by the study of music, literature and drama.

During the war the Army realised that it was not sufficient to teach men only the use of guns : it was found well worth while also to employ full-time instructors to interest the men in the cause for which they were fighting and in the culture of which they were a part. Since the Industrial Revolution the political responsibility of the citizen has increased, but his economic responsibility, as related to his work, has often decreased. Organisation and scientific management techniques have improved efficiency in part, but at the same time they have often decreased the amount of thought and skill required of the worker on his job.

It is in discussion groups and other cultural activities that the stimulus to inventiveness can be provided. "Imagination is not a talent of some men, but the health of everyman." It is in making provision for "education for life" that the key to a difficult problem can be found. Such provision includes, for instance, release for attendance at county colleges, boys' clubs, discussion groups, release for residential further non-vocational education, and musical and dramatic activities, through all of which men and women can achieve a new poise and outlook.

The basic fact to be dealt with in planning for morale education is the mood of frustration and "rudderlessness" which faces us in industry to-day at all levels.

As one writer, Michael Roberts, has observed (in "Recovery of the West"), "There is no single factor that will enable us to understand the social malady and cope with it : the main problem is the loss of confidence and determination." Such attempts as war-weary civilians have made to adapt themselves to the new economy have been geared to a condition of inevitable expansion. We had become used to a Tennysonian background of ever-widening commerce and a rising standard of living. We are unnecessarily alarmed, perhaps, at a check in the tempo. Our economy is accustomed to the earlier tempo, and there are signs of distress when realisation has grown that expansion must now be slower and less assured. Industry and international trade have become more and more complex, demanding a degree of unselfishness and patient sympathy which has not always been forth-

coming. A greater degree of willingness to subordinate our aims to those of others involved in the pattern has not always been observable. The old individualism, with all its fine qualities, has been too tired to rise to the occasion. It favoured the fertile growth of the new productive conditions; it has been slow to adapt itself to the new conditions on arrival.

The old order—call it aristocratic, if you will—is in some ways yielding place to a new. In surrendering privileges, it has abandoned responsibilities which in the past it had shouldered with patience and distinction. Its successor in the saddle, while claiming privileges and rights, is less ready to shoulder responsibilities and duties. Society, in this period of rapid change, comes to expect too much of economics, politics and scientific research. "We have neglected the sense of purpose in favour of technical means, we have cultivated matter to the exclusion of spirit, and in an epoch of rapid change we have learned to rely only on truths that can be quickly verified and to the neglect of those that are said to be the product of generations of experience." This again is the shrewd diagnosis of Michael Roberts, a mathematician, a teacher and a poet as well.

The majority of active willing people to-day are looking for a moral imperative, and sadly missing it.

I should like to quote the cogent plea for the creative factor in Industry and the need to give it scope, voiced by the economist, J. A. Hobson, in his book "Work and Wealth".

"It is likely that far more human genius is lost than saved, even in the more civilised nations of today. For what are the conditions of the successful utilisation of genius, and for what proportion of the population are they securely attained?

"Leisure is a first condition for all free and fruitful play of the mind. Very few inventions have come from workers compelled to keep their noses to the grindstone, and unable to let their eyes and thoughts play freely round the nature of their work. This is why slavery contributed so very little to the development of the industrial arts: this is why so comparatively few inventions or importance have been made by hired labourers in this and other countries. The strongest economic plea for a shorter and a lighter working-day is that it will liberate for invention and industrial progress the latent creative energy of countless workers that is stifled under the conditions of a long day's monotonous toil.

"Education is the next condition. The great mass of the population in this country have no such opportunity of education as is needed to discover, stimulate and nourish the creative faculties in art, science and industrial invention. One need not overrate what even the best education can do for the human talent of the creative

order. Indeed, the education of the schools may sometimes rather injure than improve the finest faculties. But education can do one incomparable service to native genius or talent. By putting the sensitive mind of a young man or woman in contact with the innumerable waves of thought astir in the intellectual atmosphere around, it supplies the first essential of all creative activity, the fruitful union of two thoughts. Until all the new minds brought into the world are placed in such free contact with every fertilising current of thought and feeling, and enjoy free, full opportunities of knowing the best that has been thought and said in all departments of human knowledge, we cannot tell how much creative faculty perishes for lack of necessary nutriment."

This is not the utterance of an impractical idealist out of touch with the bread-and-butter needs of industry to-day; it is the wisdom of an economist basing his judgment on a wide experience of those needs, but using, too, his imagination and his power of sympathy with his fellow-men.

Here are words of wisdom from a great headmaster—the head of Gordonstoun School :—

"The love of enterprise demands a willing body : the sloth of modern adolescence has frequently set in before puberty begins. The motor car provides unearned speed, the cinema unearned thrills; American doctors speak of the social disease 'Spectatoritis'. The love of aloneness cannot grow up amid the confusing turmoil of incoherent sights and sounds. Neither the love of man nor the love of God can take deep root in a child that does not know aloneness. Now to the love of skill : the implanter must be under no illusion about the reluctance of the soil which is to receive the seed—This is the antidote against a poisonous civilisation : the plan of life for adolescence at school and out of school, should give a place of importance to activities meant to stir and sustain the love of skill, the love of enterprise and the love of aloneness."

I have listened to other voices than those of keen, young, educational tutors on the subject of what can be done to build up morale and integrate production workers in the campaign for world markets. There are Time and Motion Study experts. As they explain how the doctrines of F. W. Taylor and Bedaux can eliminate waste and get the last ounce out of every workman, I am tempted to recall that Taylor's Mr. Schmidt (the perfect time-and-motion workman) took to drink and fell by the wayside right out of the race of production. I am reminded also that Comrade Stakhanov in Soviet Russia did not take to drink and fall by the wayside. Can we find the happy mean between Schmidt and the socialist emulator ?

The work of management does not surely end when all processes have been perfectly timed and all machine and human wastage eliminated. Man does not do his best work by bread and time-and-motion study alone. There is a soul to be catered for. Nor does the Adult Education Organiser's work admit of being bounded by the obligation to integrate the worker's work for him in a world-wide picture, linking it with the effort of America and the Empire towards one gigantic end. The planning will fall short of its nobler purpose if it fails to take account of the supreme value of that provision, which, although not directly linked with any detailed improvement of production technique, nevertheless provides, in fuller living, that poise for the individual which enables him to give more to the community, as well as to take more out of it.

As long ago as 1885 the best social thinkers had begun to realise the importance of bringing something more than the outlook of gradgrind-toil to bear upon our factories, had prophesied the attempt " to build Jerusalem among these dark Satanic Mills "—William Morris talked of the factory as a cultural centre in " Useful work *versus* useless toil ".

> " As to that part of labour which must be associated on a large scale, this very factory system, under a reasonable order of things would at least offer opportunities for a full and eager social life surrounded by many pleasures. The factories might be centres of intellectual activity also, and work in them might well be varied very much; the tending of the necessary machinery might to each individual be but a short part of the day's work. The other work might vary from raising food from the surrounding country to the study and practice of art and science. It is a matter of course that people engaged in such work, and being the masters of their own lives, would not allow any hurry or want of foresight to force them into enduring dirt, disorder, or want of room. Science duly applied would enable them to get rid of refuse, to minimize, if not wholly to destroy, all the inconveniences which at present attend the use of elaborate machinery, such as smoke, stench and noise; nor would they endure that the buildings in which they worked or lived should be ugly blots on the fair face of the earth. Beginning by making their factories, buildings and sheds decent and convenient like their homes, they would infallibly go on to make them not merely negatively good, inoffensive merely, but even beautiful, so that the glorious art of architecture, now for some time slain by commercial greed, would be born again and flourish."

A sound education policy in a forward-looking firm to-day starts off with contacts made personally with Directors of Education, teachers, Juvenile Advisory Committees, and parents, and follows up

the progress of the entrants until they are contentedly established as integrated members of a productive community. It concerns itself with selection—an initial appraisement of aptitudes—and with promotion or transfer, as the natural follow-up to that first step in a continuing vital process. It takes advantage of contemporary scientific knowledge on the testing of ability, without forgetting that in the ultimate issue it is a question of human beings employing human beings. The policy must embrace pre-entry instruction, which aims at securing and fostering the identification of employees with their employers; at promoting loyalty to the team, and integration within the community and the State; technical training of several kinds and grades, to ensure and extend proficiency; the encouragement of a wise use of leisure, and co-operation with those agencies which promote non-vocational teaching aimed at evoking citizenship, community sense, and what are described as "leadership" or "officer" qualities. It provides refresher courses for employees who are isolated, or returning from serving the State, or getting stale or "rut-minded".

All these facts must be kept continually in mind, and pursued humanely, imaginatively and in no spirit of impersonal or feudal patronage. The works doctor, the canteen supervisor, the trained psychologist, the Public Relations Officer, the Trade Union leader, are all most important allies, but first, and all the time, the chief allies are foremen and works managers. All the time the provision and planning must evolve on a basis of reality as well as sound principle, to meet a need that is realised, and has been voiced by those who are being taught, and encouraged to rise in the scale of promotion: it must never merely seek to impose a pattern which the employer, however enlightened, believes to be a profitable long-range investment for the shareholders, whom it is his bounden duty to consider. It must be idealistically conceived in close relation to realities. It is of the utmost importance to relate any training and recruitment plans to an ordered system of promotion familiar to the workers, who have learned to trust its promoters and administrators. Equal weight must be given, and equal care be taken over education for proficiency (apprenticeship schemes), education for identification and morale, and education for life. The employer must always seek to provide for the outstanding, but never lose sight of the 75 per cent who are semi-skilled employees of the concern, who have no hope of a field-marshal's baton in their knapsacks.

As regards the various contributors to the symposium, the aspect of proficiency training is covered by such experienced minds as Miss Seear and Miss Shaw, who formerly handled training in W. & J. Clark's of Street and Metropolitan Vickers; by Mrs. Taylor, who was herself a trainee in Macys, New York, before becoming a manager for the John Lewis Partnership; by Mr. Graely, who was formerly in

charge of apprentice-training at Newton Chambers; and by Mr. Kenneth Evans, who manages the most celebrated apprenticeship scheme for electrical engineers in the country. Commander Whitehead, who deals with the problem of the change-over from the home environment to that of the works, is now on the staff of the Treasury's Economic Information Unit, but before taking up his present work spent many months visiting industrial firms who had set up successful training schemes, on behalf of the British Association for Commercial and Industrial Education. Mr. F. H. Perkins, who writes on T.W.I., is the Director of Education for Imperial Chemical Industries, and was responsible for the introduction of T.W.I. into Great Britain after he had reported for the Ministry of Labour on its operation in America during the war. Graham Satow who discusses training of supervisors has built up the training department of Stewarts & Lloyds, Ltd., and Lord Forrester, who stresses the importance of adequate buildings and equipment for sound industrial training is a practical industrialist who has campaigned for more imaginative educational planning for many years.

On the side of citizenship-training the chapters are contributed by a group of writers who have been experimenting in various aspects of this field. Dr. R. W. Revans, the Coal Board's Director of Education, had experience in county educational administration before going to the coal-owners shortly before nationalisation. He writes of the County College from this background of dual experience. Mr. Pate and Mr. Hemming have practical experience as educationalists and research workers with lads both in clubs and classrooms, and have conducted experiments in the teaching of the democratic outlook among young people about to enter industry. I asked Mr. Weldon, the headmaster of an approved school, to write his chapter because it seemed to me that those who have to handle the problem of the boy who, early in life, gets into difficulties through defying the rules of the community, must have a specially keen insight into the methods of instilling the principles of good citizenship. Mr. Harold Hunter has written of "Discussion in Industry" from the background of his experience in the Army with the Current Affairs teaching which the A.B.C.A. carried out during the war, and which its successor, B.C.A., has adapted to the needs of contemporary industry and commerce. The chapter on the "Principles of Good Training", is also based by its author, Lt.-Col. Haycraft, on a background of army experience in the training of officers and N.C.Os. in instructional technique and the best ways of "getting lessons over" with the help of visual aids and other methods. The Principal of Bilston College for Further Education describes this experiment in County College teaching.

In the appendix are included examples of the type of lessons successfully used in a School at Erdington and prepared by Mrs. I. M.

Davidson for young Dunlop employees; charts showing how Enfield Cables and the Glacier Metal Company administer their training departments; and an account of the training plans at Newton Chambers.

Acknowledgement is due to the leaders and members of the Stone-house Gang, Birmingham; the Dagenham Y.M.C.A./Y.W.C.A., Essex; and the members of the Warstock Y.M.C.A./Y.W.C.A., Birmingham, for answering the questionnaire (the leaders making the arrangements for this questionnaire procedure) used by Mr. Vincent S. Pate.

The Editor is most grateful to the editors of the *Architectural Review* and *T.W.I. Topics* for permission to reprint, in the chapters written by Lord Forrester and Mr. Perkins, matter which originally appeared in their pages. He also wishes to acknowledge the kindness of those firms whose training schemes are outlined in the appendices.

D. C. T.

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THE TRANSITION FROM SCHOOL TO WORK

BY

COMMANDER EDWARD WHITEHEAD

Formerly Secretary of the British Association for Commercial and Industrial Education

24 JUL 1959
BHAVANISAGAR
RURAL EXTENSION TRAINING CENTRE

THE TRANSITION FROM SCHOOL TO WORK

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COMMANDER EDWARD WHITEHEAD
Formerly Secretary of the British Association for Commercial and Industrial Education

BEFORE attempting to survey the extent to which industry would appear to be accepting responsibility for continuing the education of its young employees, and proceeding to make a few suggestions as to the kind of educational activity that deserves the special attention of the employer, I would like to make it clear that I claim no personal credit for the ideas I put forward. Many will have seen them better expressed before. My function is to draw attention to matters worthy of your consideration. Like the schemes I describe, these points of view represent a selection, culled from those that I have come across so far. It has been my good fortune, through the very nature of my job, to get a bird's-eye view of many and varied schemes, but I cannot claim to have seen, or even heard of, all that has been done in this field of education and training in industry.

Incidentally, when I refer to industry, I also mean commerce, and when I refer to the boy, I also mean the girl. This avoids constant elaboration.

Day Continuation Schools. For a generation at least a few enlightened employers have been releasing juveniles, usually for one day a week, for the purpose of attending school and continuing their education. These concerns have been generous in passing on the fruits of their experience, and all of us who have come to realise that a social conscience and industrial efficiency are no longer incompatible have reason to be grateful to these pioneers.

Figures for day release provide a fair indication of the extent to which employers are now making some practical acknowledgement of their responsibility towards young workers. Early in the war that figure stood at 30,000—it now stands at 200,000. If nothing else, this indicates a very rapid extension of employer interest and participation in education.

It is often said that enlightened self-interest motivates the industrialist who sponsors such schemes of education. The initiative in this field was undoubtedly taken for humanitarian reasons, but since, so far, I have come across no concern that has abandoned such a scheme, once started, we are entitled to assume that very real advantages accrue to the employer as well as to the employee.

From a good educational policy the employer might expect to gain a better spirit, improved morale, lower labour turnover, greater efficiency and more harmonious relationships; but he must regard such a policy as a long-term investment, and not expect early dividends.

County Colleges. The passing of the Education Act, 1944, which requires the Local Authority to establish County Colleges, at which all juveniles up to the age of eighteen must attend for one day a week or its equivalent, has undoubtedly stimulated great interest and fairly wide-spread action, particularly among the larger employers. There is no point in attempting to further analyse their motives, in anticipating the requirements of the Act, but clearly it will be to their ultimate advantage if their business is so geared that juveniles can be released in this way, without disorganisation. Moreover, employers who take steps to improve the will to work and the loyalty and general efficiency of the juveniles they recruit will not suffer to the same extent as others, who carry on oblivious to the fact that the numbers available for recruitment are already half a million less than in 1938. By 1956 the present figure of two and three-quarter million juveniles will be further reduced to two and a half million.

Collaboration with the Local Education Authority. Generally speaking, day-release schemes are run in collaboration with the Local Education Authority. The usual arrangement is for the employer to provide the accommodation and equipment, whilst the Local Education Authority provides and pays for the teachers. This arrangement appears to work very satisfactorily, and one can see in such establishments embryo County Colleges, especially where the education provided is liberal and where it has been possible to arrange for the employees of other concerns in the neighbourhood to join in. As yet this last development is not common practice. There is much pioneering to be done if groups of small concerns are to be persuaded to collaborate and run Day Continuation Schools, jointly with the Local Education Authority. A rough indication of the leeway that has still to be made up is conveyed by comparison of the figure of 200,000 which I have quoted with 2,000,000 odd, the total number in this age-group that could and should be released during the day to continue their education.

Works School versus County College. In addition to schools run jointly with the Local Education Authority I have come across some outstanding examples of works schools, or to describe them more aptly, education systems run and administered almost entirely by the employer. The usual argument against such institutions, that they must become narrowly vocational in outlook, cannot be sustained

against these few exceptional establishments. Imagination and deep insight into the needs of boys coming into industry appear to be their key-note. These few employers have probably gone farther along the road towards the solution of the problem of what the employer can do, to assist during this period of transition, than the majority of schools jointly sponsored by the firm and the Local Education Authority.

From the employer's point of view there are some tangible advantages in the independent system. *Esprit de corps* and loyalty to the company can be inculcated more readily among groups of young employees released together in their new environment, for a purpose which is readily associated with their work; school and work can be more closely integrated; better opportunities are offered for assessing the potentialities of the individual boy; while the staff of the school, within the factory, have much better opportunities of knowing the working conditions of their students, and of dealing directly with works management over matters affecting them.

Against these advantages—and one cannot blame any employer for recognising them, since, after all, he is "paying the piper"—one must acknowledge the over-riding advantages of the County College, or School which draws on many kinds of factory and office for its students; where opportunities are provided for young people in many different occupations to meet; where the whole range of social and leisure-time activities are wider, the curriculum broader, and the grading of students probably better. There is no doubt that this alternative represents a distinct advantage for the majority. It is just the few who have been privileged to work for particularly enlightened employers who may suffer from the change.

In passing, I would urge those employers who have, so to speak, gone on ahead, to put before the Local Education Authority, charged with the duty of laying plans for County Colleges, the fruits of their experience, so that all may benefit by their initiative and enterprise in the past. Full collaboration must obviously be the guiding principle for the future.

What are the Objects? Plans already published make it amply clear that the syllabus of the County College will include only a proportion of what are usually known as vocational subjects (but here I would like to suggest that emphasis on the dividing line between vocational and general education is often misplaced). The allocation of the remainder of the time is discussed at length in the Ministry of Education's booklet "Youth's Opportunity". "Further Education", a more recent publication of the Ministry, includes some encouraging comments on the breadth and scope of their plans. On the subject of County Colleges, the following quotation is apposite :—

"The programme will be designed to stimulate and direct the

interests of young people and to secure their balanced development as individuals and citizens,"

and further :—

"Industry to-day is a large-scale social organisation, and success in it will depend upon the qualities of personality no less than upon clear knowledge."

Few of us will disagree with these pronouncements, and it is on this matter of the education of the individual *as a whole* that I would like to dilate a little, and make suggestions which may prove of interest to employers in doubt as to what they should regard as their particular province in the realm of education, even after County Colleges become a *fait accompli*.

Character-building. May I for a moment consider the influences that have been paramount before these young people arrived at the factory gates? During recent years elementary schools, as they have been known, seem to have been fairly successful in developing "awareness". For instance, by means of the "play way" for the young, and later by "project methods", boys and girls have been apprised of many things—some good, some bad. I would suggest, however, that these schools have, in the main, failed to convey to their pupils a scale of values, by which I mean the ability to distinguish clearly between good and bad. In other words, emphasis on character-building has not been sufficiently strong. This is not the place for a detailed review of the school influences contributing to this lack of direction but it might be of value if we seek to unmask some of the origins of these defects, so as to avoid their perpetuation in any continued education that is sponsored by industry. To use a somewhat overworked phrase, I would suggest that it is the "tone" of the school that is usually at fault. The "tone" depends, more than anything else, on the genuine interest and the degree of co-operation contributed by the teachers. The importance of character formation may be accepted and acknowledged at the higher levels, but the individual teacher, often bogged down by the pressure of his work, the size of his class and other very considerable difficulties, is apt to lose sight of this. He tends to become discouraged, and forgo the high ideals with which he probably embarked upon his career. He omits to "stay on" and participate voluntarily in after-school activities. The children are thus deprived of that most potent influence, the co-operation and genuine interest of their teacher outside school hours.

An extreme example of the effects of this shortcoming was quoted to me recently. It arises from an investigation of juvenile delinquency figures. Some schools, in the Liverpool area, were found to have as many as one in ten delinquents, while others, apparently similar schools

in the same area, had none. Investigation showed that the difference between the schools lay chiefly in the degree of interest and participation shown by the teachers in the lives of their pupils.

This leads me to say, from the standpoint of my present knowledge, that the most important factor in the educational process sponsored by employers (and incidentally the most potent element in the establishment of good relations between the employer and his juvenile employees), is the approach, from the personal side, and the degree of interest the teacher has in his pupils—and that goes for those responsible for the administration of the scheme too. What is taught and the arrangement of the syllabus are of less importance. One finds widely varying schemes of education apparently equally successful in different concerns. Analysis almost always shows that the explanation lies in the personality of the individuals who come into daily contact with the boys. That, at least, is my conclusion.

I have stressed this point because I think that the importance of character-building cannot be over-estimated, when the employer is considering what his educational contribution should be. If he fails to pay full attention to this paramount point, the boys fall an easy prey to the unfavourable influences which they may unfortunately meet with in the factory. They will quickly assume the " we " and " they " point of view towards their employers, and any chance of improving industrial relationships within the generation now growing up is handicapped at the start.

A University Professor, who has made a special study of the first impact of industrial life on young people, tells me, from the replies he has received to his inquiries, that the outstanding point is the shock felt by the boy coming into industry when he first realises how low is the moral standard of the older men and women in the factory. Since the boy will almost inevitably model himself upon these older people—who represent to him the new adult world he has entered—the moral standard set is of the greatest importance. If the moral standard is low it is improbable that a junior's attitude to work and his employer can be much higher.

What can be Done? What can be done to inoculate the boy against these unfavourable influences ? What can the employer do to assist in the development of the boy's character and personality, and so retain and improve his clean fresh attitude towards life and work ? I would suggest that such institutions as the " Outward Bound " Sea School at Aberdovey where boys can be sent for a period of a month, at moderate cost, probably achieve more than any other form of education and training readily available. The whole emphasis, during such a months' course, in an entirely different environment, is on the formation of character. The mountains and the sea constitute a chal-

lenge to youth's individual prowess, enterprise and taste for adventure; such a school succeeds in eliciting from each boy his maximum effort and makes him conscious, often for the first time, of his own physical, mental and spiritual resources. The experience of those responsible for running this school at Aberdovey matches exactly my own experience in training boys, largely recruited from industry, for the Royal Navy. There seems to be no limit to their grand enthusiasm, to the efforts they will make to acquit themselves well, if, by some means, their imagination can be fired, if a worthy example is set and a worthwhile object in life is presented to them. If the sea and the elements make the training appear a little hazardous, this constitutes a challenge and satisfies the desire for adventure inherent in every boy. A sense of achievement is the best encouragement to further effort. Through such experience the boy acquires a capacity for self-entertainment, an interest in nature and a new consciousness of his own resources; so aiding enormously the formation of character and the acquisition of poise.

Employers who have sent boys to this Aberdovey School are often asked how long the effects last. One or two I have questioned on this subject assure me that the improvement in alertness, interest and attitude to their job continues to be conspicuous a year or more after their brief stay. One can glean something from the reply of a lad who was known by his employer to be addicted to visiting the cinema seven or eight times a week. He said, "I don't go at all now. Screen experience has lost its attraction. I prefer to spend my leisure walking, camping, canoeing and doing things for myself."

Incidentally, another company asked 250 boys between the ages of fourteen and eighteen, earning a small average wage per week, how often they went to the cinema. The average worked out at three-and-a-half times each! In these days of cheap vicarious thrills and experience some emphasis on real-life activity, with all that it contributes towards a balanced development of the individual, is essential.

Short of sending boys to such establishments as Aberdovey, I would suggest that the best the employer can do to assist juveniles in their "education for life" is to give active encouragement to their participation in Youth Movements. The National Association of Boys' Clubs is always keen to collaborate in this. I would further commend support of the Boy Scout Movement. There is ample evidence that the outlook and attitude to life, and work, of the boy who takes up scouting with some enthusiasm undergo a real change for the better. Apart from the encouragement of youth activities of this kind much can be done by the formation of one's own, or a jointly sponsored, youth club (especially if no local facilities exist), giving plenty of scope for widely varying interests. It is important that the boys themselves should be allowed the maximum participation

in the administration and general organisation of these activities. One very successful enterprise of this kind, sponsored by a large company in the aircraft industry, provides amenities for all kinds of sport and physical training, and encourages the pursuit of arts, crafts and general culture by means of a wide range of groups, in their separate sections. Each section is in charge of an honorary secretary, who arranges regular meetings at fixed times and places. Thus any newcomer, below the age of twenty-one, is invited to go along to a certain place, at a certain time, if he is interested in, say, woodworking, aero modelling, gliding or philately, while at another place and time another section may be studying rhythm classical music or drama. The subscription varies between 10*s*. and 15*s*. per annum, and the organisation is almost entirely self-supporting and self-governing.

Summer camps and expeditions are very much to be encouraged, but here again a lot depends on the leader or teacher. Given leadership and example, and a personality that is likely to inspire some enthusiasm in the hearts of the young, there is no limit to what can be done. One of the most important lessons of life—appreciation of the fact that you can get more from the community if you give more to it—can best be learned in this way.

Education in Identification. Next in importance to education for life I would place education for identification. By this I mean a planned approach to the problem of identifying the individual boy with the organisation in which he works, giving him some appreciation of the significance, not only of his own contribution, but also of the part played by the whole organisation in the national and social economy. To achieve this it is necessary to invest even the unskilled job with a certain aura of skill, usually associated with a job that requires special knowledge and long practice. Effort along these lines is essential if we are to avoid boredom among unskilled workers. The true apprentice has plenty to bite on; he might have a day or half a day at technical school in addition to his day a week at the County College. The real problem before us is how to convey to the boy, called upon to do a dull routine job, some appreciation of its significance, some pride in his work and the incentive to give of his best.

By laying emphasis on the fact that however simple a job may be there is a right and wrong way of doing it, by explaining to the boy that the best way to do the job has been very carefully thought out, it is possible to give him the satisfaction of a job well done, when he masters the process—however simple it may be. For the large number of boys who are destined to remain in unskilled or semi-skilled jobs the realisation that his job matters, that it is worth doing and worth doing well, is tremendously important.

To help him to grasp the idea that he must do a good job, and

make his contribution in a world of adults, it is most important that the older people, who come into daily contact with him in the factory (as well as his teachers who are expressly concerned with his education and training), should appreciate that all experience up to the age of, say, eighteen must be regarded primarily as educative. It may not be easy to "get across" this broad conception to the rank and file (who may say that no such consideration was given to them, when they started in the factory), but it is possible, by the careful selection of a sympathetic person who will accept responsibility for each boy to ensure that there is someone to whom he can turn for an answer to all his problems and questions. The average boy enters the factory full of interest, glad to be getting down to a real grown-up job, so every effort should be made to maintain and stimulate this interest in his new surroundings. If this older friend and adviser—call him a works guardian, works uncle, or what you will—appreciates the importance of constant encouragement, and at all costs avoids damping down or "squashing" healthy curiosity, there is much more than a chance that the boy will maintain his enthusiasm for his job and avoid the pitfall of boredom—that listless attitude which is all too common and all too easy to acquire.

Short of appointing an individual to look after each boy, it is essential that some understanding member of the management should be given the special duty of looking after all juveniles employed. An apprentice supervisor (or his equivalent, where no formal apprenticeship scheme exists) must be given full powers to recommend, if not implement, changes for the benefit of the boy, even though other considerations (production included) have to "go by the board". Some concerns have found that a council or committee, composed of employees and management is best for the administration of apprenticeship and similar arrangements. Over all, the abiding interest of the higher management is absolutely essential. Apathy in that quarter quickly seeps through all ranks. You will not get wholehearted co-operation if co-workers and supervisors suspect that the whole thing is just some "bee in the bonnet" scheme of one of the directors, say, without the backing of his co-directors,—concerned only with production!

Much can be done to stimulate the interest of the boy in his job by pointing out the exciting background to his daily work. Most industries have such a background. Some have a romantic history, and a fine tradition, yet one finds otherwise progressive concerns apparently oblivious to its morale-building potentialities. Let the young recruit know all about it; give him the full story—the history, the growth and development of the concern and of the industry; arrange visits to other factories; give him a complete picture of the industry. Capture his interest by stressing the human aspects of the

story; its inventions; the sources of its raw materials and the use and destination of its products. Science, geography and history are brought to life if they are related to the ordinary everyday things with which the boy is concerned in his daily life in the factory.

This education for identification must always be the responsibility of the employer, even when Technical and County College education is continued outside the factory,—to a large extent beyond his control. Moreover, top management must participate fully in "putting over" this background information. Explaining fully and clearly the company policy; the economic fabric of the company. Such explanations, in simple terms (by a senior official), serve the double purpose of helping the new entrant to understand management's point of view, and of reminding the executive that he is dealing with human beings, whose point of view must be reckoned with, and whose co-operation must be won. If this process succeeds—and there is no reason why it should not—each newcomer will be made to realise that he is one of a team; each member with his own function, all with a common aim and purpose.

Group Methods. To further this policy of integration I suggest that young people should be grouped together into small units. As far as possible, they should maintain contact with their group in everything that they do. They quickly become identified with their group, and if the competitive spirit is stimulated, comradeship and a new loyalty to the group speedily manifest themselves.

Within these groups, I think the discussion method is the most effective means of "getting across" the gist of a problem. It has everything to commend it over the usual lecture method. The active participation of each individual, which is the very essence of the discussion method, undoubtedly has the effect of maintaining interest. We must always bear in mind that these new industrial recruits have been used to very frequent changes of subject, and constant stimulus, to maintain their interest in their work at school. Whether or not these efforts have succeeded it will probably be found that the ordinary boy is not particularly adept at consecutive thought and concentration. It is necessary therefore to adopt all kinds of aids, to stimulate and maintain his interest. Repeated and active participation in a well-conducted discussion group has the effect of teaching a boy to marshal his thoughts and express himself clearly. Finally, the habit of conducting a cool, reasoned discussion is substituted for the anarchy of argument. By argument I mean that process described as "Naval Argument"—i.e. downright assertion, followed by flat contradiction, followed by personal abuse!

Despite what has been said of young people's flair for the cinema, full use must be made of films, film strips and other visual aids. What

is seen is remembered long after what is heard, so do not neglect alternative methods of reinforcing impressions. Similarly the whole atmosphere of the works must be bright and cheerful. By the imaginative use of murals and colours, the most prosaic surroundings can be made pleasant and stimulating. Some of the most attractive classrooms I have seen were set in the middle of an iron foundry.

Any problem that has to be explained must first be broken down into its component parts, so that the least intelligent can appreciate the relationship between himself and the problem, as it affects him personally. For instance, it is useless to attempt to induce a group of boys to make a special and sustained effort " because we must produce goods for export or go under ". It is too nebulous a cause. This problem, I maintain, should be tackled in small groups. Each boy must be made to see clearly what is expected of him, and how his contribution fits in. Use the simile of the football field, or explain how a ship's company in a fighting ship epitomises the team spirit; relate the individual job to the total effort and you will have them all behind you, understanding exactly what they are expected to do.

The discussion-group technique is also useful in " putting over " safety measures, social and medical services, etc., in a way that will bring home to young people the need and the reason behind such services. " The case method "—setting a specific problem and producing the solution only after each boy has attempted to solve it on his own—should also be introduced into the group.

Begin to train a potential foreman from the day the boy starts his career in the factory. Even if he does not make the grade, he will have a clearer understanding of what it is all about. Leadership training is not misapplied, even though all cannot hope to become leaders.

Pre-entry Training. I think the kind of education that I have been describing is best included, or at least well started, during initiation or introductory training. This might take the form of an introductory course lasting anything from a few days to a month or more, or it might be spread over a period,—part time. I am inclined to favour the first alternative, as it seems to me essential that the new entrant should be started off " on the right foot ". The correct attitude should, I think, be impressed upon him before he is exposed to the less salutary influences of the factory floor; but there are arguments on both sides. The important thing is that a carefully thought out plan of initiation training should be provided, and not omitted altogether as it still is in so many concerns. In future it will be worth giving thought to similar courses for those returning from a period of National Service. At all costs, interest must be maintained at a high level.

I am often asked what can be done by the small firm that cannot sponsor an effective pre-entry or introductory training scheme alone. We must bear in mind the fact that the vast majority of boys entering industry do in fact start in one of these small concerns, employing, say, from twenty to three hundred.

An interesting experiment was carried out recently at Westham House, an adult education centre in Warwickshire. A five-day course for such lads, about to join small independent concerns in the Midlands, was sponsored by the N.A.B.C., with the title of "Adjustment to Industry Course". Each day began with a talk and discussion on the uses of leisure; to give the boys ideas apart from "pools and dogs". The complications of P.A.Y.E. were explained with a simple wall chart, and National Insurance with the assistance of similar visual aids. Trade Union organisation was explained by a "big man" from one of the Unions, who stressed the need of the Unions taking a statesman-like viewpoint in the modern world (thus presenting a more rational view than a lad was likely to pick up from "Bert" or "George", or whoever he finds associated with him in his job). The B.B.C. provided talks on "Selective Listening", and the Central Office of Information provided films on the need for production and exports. The Ministry of Labour and the Juvenile Advisory Service each sent representatives to explain what they had to offer the boys. Question Box—a kind of Brains Trust—provided an opportunity to "get across" much information on what is usually termed citizenship. Interspersed with these talking sessions there were games, films and a visit to the Shakespeare Memorial Theatre—the first play many of the boys had ever seen.

This, I suggest, gives a lead to what might develop into quite an institution—collective "introductory training" for the benefit of those due to join small firms. Such courses could well be organised between leaving school and starting on the job—i.e. during the usual holiday.

Subjects. I have left myself little space to deal with the subjects for instruction. I have already said, however, that this is not the most important factor in the educational programme. Any subject that appeals to the boy as being relevant to the job, or to his daily life, is acceptable. Only gradually should one introduce abstract theories; always proceed from the known to the unknown, to maintain interest and understanding. Facilities for progressive technical education must, of course, be made available; the ladder of promotion clearly sign-posted. The "bright boys" must be given every encouragement by means of bursaries and scholarships; but one must not lose sight of the fact that the large majority are just not destined to rise to the top. This majority should be taught not as little as they need to

know about their job, but as much as they can absorb about its implications. Add to this, I suggest, physical and recreational training designed to speed up reaction, to enable them to lift and move heavy objects without strain (if this relates to their job); eliminate faults of posture, flat feet and other bodily defects that must hamper them in their work and reduce enjoyment of life. See that discussions promoted are properly led and designed to give some knowledge of the world, so that each boy can form a reasoned opinion, sift the truth, and distinguish the genuine from the spurious. Teach him to listen, read and observe, and to develop a critical faculty. Show him the satisfaction that can come from making things. Do this, and you will, I believe, be helping him to develop his faculties up to the limit of his capacity, and that surely is a worthy objective.

I would like to conclude by quoting a few lines from Nicholas Vachel Lindsay. They seem to me to sum up the aim of education for life, which is surely one of the greatest responsibilities that face employers to-day :—

> Let not young souls be smothered out before
> They do quaint deeds and fully flaunt their pride;
> It is the world's worst crime, its babes grow dull,
> Its poor are ox-like, limp and leaden-eyed,
> Not that they starve, but that they starve so dreamlessly,
> Not that they sow, but that they seldom reap,
> Not that they serve, but have no gods to serve,
> Not that they die, but that they die like sheep.

TRAINING THE YOUNG WORKER

BY

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Early History of Training. In any discussion on the training and education of boys and girls engaged in industry, it seems right and proper to refer to the early attempts to educate the very young people who were engaged in our industries. Looking back on these efforts, they appear to us to be rather crude, but we should bear in mind the great difficulties that surrounded the beginnings of the Industrial Revolution.

The Schools of Industry which originated in the seventeenth century tried to mix labour with learning in a very severe utilitarian curriculum. Possibly the earliest factory school was the one organised at the firm of Thomas Firmin in Little Britain in London, 1681. A large number of these Schools of Industry were little more than craft classes. One such sewing-class was conducted at Caistor, and was known as the Settlement of Industry.[1]

The friends and colleagues of Lancaster and Bell, early educationists, were prominent during these early days in establishing Monitorial Schools, and were compelled to have an understanding with the employers of labour, landed proprietors and clergy. The result of this understanding was to develop a curriculum which was very much allied to the work done in the Schools of Industry of that time. This bias lay chiefly with the teaching of practical activities, such as tailoring, shoe-making, gardening, elementary agricultural work for boys and domestic crafts such as spinning, knitting, sewing, lace making and baking for girls.

A good example of a School of Industry was to be found at Kendal in 1799, where we find that children were taught reading, writing, some geography and religion. Many of the older girls were taught simple home crafts, while the boys assisted with cobbling, and the younger boys helped in the preparations for the carding of wool. The older girls assisted in rotation by preparing breakfast, and they were also taught laundry work. The staff consisted of one schoolmaster, two teachers of spinning and knitting and one teacher for shoe-making. Work was extremely arduous both for young and old. These Schools of Industry no doubt influenced our legislators and had a bearing on

1 " The Education of the Adolescent," H.M.S.O.

the subjects of the curriculum and length of schooling in primary schools in later years.

The state of public opinion at this time can be seen in the Peel's Factory Act, 1802, which was entitled " An Act for the Preservation of the Health and Morals of Apprentices and others employed in Cotton and other Mills and Cotton and other Factories ". Under this Act the employer had to provide proper instruction in reading, writing and arithmetic during the first four years of the seven years of apprenticeship. The three R's were the basic subjects in the curriculum. This secular instruction had to be included in the twelve hours of daily occupation, and had to commence not earlier than 6 a.m. and not ending later than 9 p.m. Peel's Act was imperfectly enforced, but it was extremely useful, inasmuch as it established precedence, and also proved that public opinion had begun to be interested in the responsibilities of the State in the matter of education for the poor.

The foregoing brief reference to the history of the teaching of craft-work should be read in conjunction with the Report made by an Advisory Committee on the Provision of Facilities for Craft Teaching in Institutions providing a General Education for Normal Children. This Report, which was made in 1937, has its origin in a decision taken by the Executive Committee of the Educational Handwork Association.

In this Report it is stated :—

"It is not now necessary to stake a claim for the inclusion of craft teaching in the school curriculum. By sheer merit craftwork has made a place for itself in the list of subjects of school instruction. This has not come to pass without criticism and opposition. The controversies, however, of former years have happily died down. We do not now, for instance, argue as to whether craftwork should be taught in the school for utilitarian purposes or for cultural. We know from direct observation and experience of the teaching of the crafts in the class-room and workshop that it can be and should be taught for both reasons—and so with many others of the old controversies. But craftwork is a progressive and developing school activity which, having faith in itself and its mission, is not afraid of self-criticism."

These sentiments are indeed praiseworthy. The chief feature of this Report is that it shows that educationists are in favour of the teaching of genuine crafts in all types of schools, and we now see woodwork and metal work as subjects in some of our School Certificate examinations. The curriculum of the early nineteenth century, which was dominated by the growing pains caused by the Industrial Revolution, is not to be scoffed at lightly, because even to-day we have educationists who would make craft-work and handwork the centre of their curriculum.

Unfortunately, not all industrialists of the present day are convinced

of the necessity for vocational training, or even industrial education, and it is possible that these industrialists are unaware of the value of organised instruction in the industries. Organised instruction or vocational training alone is not enough; we must have an appreciation of the work our young people are called upon to do. They should know what they are doing, why they are doing it and what it is being done for. We cannot pretend to develop good instructional methods with our young people unless we have their interest, and this interest can best be evoked by industrial education. One successful training and education scheme at an old-established engineering works has for its motto in its Works College, "Interest, Instruct, Inspire". Before attempting to instruct our young people we must endeavour to gain their interest. It is therefore proposed to deal with the industrial education of the young before discussing the details of their vocational training.

Industrial Education. This begins with a proper engagement of the young worker, and few will deny the value of receiving young persons in a desirable and fitting manner. The bad old method of keeping workers standing out in the open, exposed to the elements, waiting for a window to be opened, must surely go, and be replaced by a cordial interview; one of welcome, conducted by a suitable official of the Company. It is advisable that the interview should be conducted by one interviewer, and not by a panel of people, since such a panel must only be an unnecessary ordeal for the young worker. One large firm when employing apprentices arranges an interview, which is conducted by the employment manager, a member of the maintenance engineering staff, the head of the Works Education Department, the appropriate trades foreman and the representative of the men's Works Council. This seems rather an elaborate panel for a young apprentice.

The system adopted for engaging our young workers is probably worse in our basic industries than in our lighter industries. A training officer or other suitable official should be responsible for the meeting and interviewing of the boy or girl seeking employment. These interviewers should be trained in the art of interviewing.

The engagement office should be designed in two parts: (*a*) a reception-room, marked on the outside of the door "Please Come In"; (*b*) interviewer's office, on the door of which the name of the interviewer should be painted. The engagement office should be conveniently situated and easy to find, by means of a suitable notice-board posted so that a stranger experiences no difficulty in finding it. It should be well ventilated, adequately lighted and altogether a pleasant room. A supply of books or magazines should be available, so that the waiting person may be occupied if necessary. The use of

dark brown and dark green colours should be avoided at all costs, because they are reminiscent of the bad old days. Such station lavatory colour schemes are deterrents to the boy or girl.

The waiting-room should be comfortably heated and suitably furnished. A supply of application forms for employment should be at hand. If necessary, the reception clerk should assist in the completion of these forms by the boy or girl.

The young person should be shown into the interview office in a proper manner and treated as an important caller. This interview office, again, should be well lighted and ventilated, and have a pleasant colour scheme. The whole atmosphere should be "welcome to work". Good interviewers will have their own special method of implementing this desirable atmosphere. The interviewer should feel that he is welcoming a new member to the Company and the co-operation of this new member is necessary in the interest of the Company and of the boy or girl. Where the Company has an apprentice training scheme, this should be explained, and the advantages of the scheme should be stressed, and not considered to be a detriment to the young person's career. Some of our young applicants are apt to consider training to be something which is not really necessary and is only preventing them from getting on to the actual job. Some of the older employees are not fully convinced of the necessity for training. The attitude of the interviewer should be: "We train our workers, and we are proud of the fact that our employees are training them to become efficient and happy at work."

A wise interviewer will know the value of the judicious use of the Christian name of boys and girls, who definitely like to be addressed by their Christian names. This is satisfactory to both interviewer and interviewed.

A definite date of engagement must be fixed, and all details, such as National Insurance, transport, further education facilities, wages scales, etc., should be discussed with the young worker. Any difficulties that may crop up between the Company and the worker should be discussed as frankly as possible—e.g. difficulties of transport and distance between the home of the worker and the works. The possibility of night shift or afternoon shift in the future must be mentioned if it exists. It is better to face this at the outset rather than to have a number of young people engaged, and being trained and educated, only to find that they wish to leave after travelling through the rigours of a winter.

An increasing number of companies are following up engagement by an Induction Programme or Pre-Entry Course. This Initiation Course is a means whereby the Company displays itself in its departments and productions to the young worker.

One large concern consisted of heavy engineering works, paper

factory, coke-ovens and collieries, and until recently employed approximately 8,000 people. Obviously their type of Pre-Entry Course could not operate for smaller firms. These latter firms, however, should consider the advisability of explaining to their own people the history of the Company, its products, markets, personalities in the Company, problems peculiar to the Company and industry, and its welfare facilities or, to use another term, personnel services which extend to employees, and should include canteens and savings organisation, etc. The personnel policy of the small company should also be made known to all its workers, but it is perhaps as well to stress services to people rather than welfare for workers.

The uses of the products of the Company should be made known and understood by the young worker. One firm of chocolate manufacturers emphasises that chocolate is not merely a sweetmeat, but a highly valuable and nutritious food used by airmen and explorers. The heroic exploits of such men kindles the imagination of young people, who are proud to manufacture goods for such consumers. It matters little whether it is coal, chocolate, cotton or car manufacture, there is some valuable story which can be presented to the young worker. He or she should know something of the evolution of the craft or trade in which employment has been found, together with the uses of its products.

No industrial education scheme for juniors is complete unless it takes into account that these young people are potential committee members. Many boys and girls will later be serving on Safety Committees, Canteen Committees, Savings Committees, Joint Consultation Committees, Works Councils and the like, and training can begin for the young people by allowing them to serve on Apprentice Committees. One such committee, which came under the supervision of the writer, was composed of boy apprentices from every department, and proved to be highly successful both in the learning of committee procedure and its usefulness. Young workers have not only different viewpoints, but indeed different fears from those of the middle-aged worker, and it is as well that employers should know what apprentices are thinking. As a beginning to committee procedure, the organisation of discussion groups on sound lines might be undertaken, with a view to training each member in the art of group leadership.

Vocational Training. In the case of large firms where there is initiation training, it is easy for many who are suitable for vocational training to follow on quite naturally after the pre-entry or initiation course. Large concerns are favourably placed for segregating their young people into training centres or training bays. Some industrialists take the view that boys and girls are suitable for training in age groups

rather than allowing them to mix with older workers in the formative years of their employment. Whether it is possible to have these boys and girls in special training centres or not, it is advisable that all instructors be well selected for the task of training the boy or girl. This close personal supervision should be done by someone who has received some form of training to enable him or her to become a satisfactory instructor.

Boys and girls should not be allowed to drift from job to job or from supervisor to supervisor without some plan for training. The worst kind of drifting is to be found in the carrying of messages, fetching tea or football coupons, acting as telephone boys and girls, and all those jobs which are better done by an older person or a disabled worker. It is highly desirable that the State in future shall prohibit the employment of boys or girls on a task which does not fit naturally into an upgrading scheme of training.

When young workers apply for a job, they are in effect asking to be given the facilities necessary for the acquisition of required skills. It is entirely the employer's responsibility to provide means whereby such skills can be acquired. Industrial training should definitely remain the responsibility of the employer. In many instances boys are liable to be called up for National Service for a period of at least twelve months. This, taken in conjunction with the extra year spent at school and time to be spent at County Colleges (one day per week for three years), reduces the usual time for training by $2\frac{3}{5}$ years. Industrialists have therefore not seven years in which to train their apprentices, but $4\frac{2}{5}$ years, and it will be seen that there is little time to allow for dead-end jobs if the young worker is to attain maturity in terms of skill.

Vocational training in works and elsewhere should be counted as a specialised form of education. It is part of an industrial education which has for its objectives not only the production of a skilled worker, but which combines efficiency with reliability and a conscientious attitude to work. Vocational training should raise the general level of all, and not merely help the bright lad or girl to get to the top of the ladder a bit more easily. In the past we have been too ready to offer scholarships to help boys already in possession of school certificates, and at the same time we have tended to neglect the other 90 per cent of our workers.

There are certain simple basic operations which should be known to a boy apprentice before he is put on a production job—e.g. sawing and filing, drilling, squaring up, marking off. These are operations which should be shown to the boy fitter before he is asked to produce a production article requiring the use of any of the foregoing operations. The girl office worker should be taught how to use a telephone, to file letters, to prepare mail for despatch and other elementary office procedure before she goes into the typing school.

Some firms have their own works schools or colleges, and the curricula of two given below reveal their thoroughness :—

Training of Apprentice Pattern Makers. (*As carried out in a large American Company.*)

Syllabus.	Period (months).
Exercises in the use of Pattern-makers' Hand Tools, Saws, Planes, Chisels, Gouges, Rasps and Files. Preparation of Simple Wood Joints. Sharpening of Tools. Glued Joints	6
Preparation of Simple and more difficult Single Component Patterns	12
Preparation of Composite Patterns and Simple Core Boxes	6
Preparation of Medium-sized Composite Patterns using the various Wood-working Machines	12
Preparation of Simple Hand-made Cores in the Core-making Shop	1
Preparation of Simple Moulds in the Apprentice Moulding Shop	1
Assisting a Moulder or working in a Moulder's Group in the Main Moulding Shop	1
Preparation of Moulding Sands	2
Individual Piecework	7

Training Programme for Machinery Constructor Apprentices.
(The same firm as above.)

Benchwork. Filing exercises, and training in the use of hammer and chisel work	1
Milling. Milling on the Horizontal, Vertical and Surface Milling Machine	2
Benchwork. Accurate filing of previously machined surfaces, rounding of edges, filing to dimensions, fitting, hand-thread cutting and drilling, countersinking and welding	2
Turning. Machining of steels; turning, using centres and chuck (use of calipers, verniers, etc.). Parting off and nicking; boring and reaming (use of inside and tolerance gauges); cutting of nut and bolt threads with tools, taps and dies; cutting of taper and square threads on the lathe; work using the Steady	4

Syllabus (*contd.*).	Period (months).
Boring. Boring and reaming without jigs; hole sinking; thread-cutting	1
Universal Milling. Use of dividing head for plane and differential indexing; milling of gear teeth and bevels	2
Boring Mill. Boring and reaming of precise bearing alignments; boring and reaming of cross-holes.	1
Grinding. Grinding of hardened and ordinary steels (use of micrometer and verniers); grinding of taper shafts and holes	1
Tool Grinding. Grinding of drills and countersinking tools; grinding of formed tools, undercut tools and milling cutters	1
Smith Work, Hardening. Heat treatment of steels, forge welding, hardening and tempering of tools, tipping and high-speed steels	1
Capstan Lathe. Setting up of tools and stops; simple capstan work	1
Planing. Surface and side planing; angle planing; groove planing	2
Assembly Work. Scraping and trial fitting. Fitting of bolts, springs and other machine parts. Final finishing and polishing. Hand threading and screwing. Tapping of nuts for slotted work. Assembly of precision measuring tools and gauges. Repair and maintenance work. Jig assemblies; small machine assemblies	5

The above work is carried out in a special training bay.

The Newton Chambers' scheme operating in Yorkshire for vocational training is carried out in special training centres, and commences immediately after the Pre-entry Course. The training programme is as follows: one month Pre-entry Course, one month training centre, five months workshop, followed by one month training centre, reinforced by more advanced month courses, and five months workshop, until the apprentice reaches eighteen years of age. The Pre-entry Course is available to all apprentices as a general introduction or "welcome to work". The syllabus for the foundry training centre is given below:—

Foundry Training Centre.

Syllabus.

(a) *Technology.*

Introductory Talk—General conduct of Foundry Training Scheme, tidiness and self discipline.
The Creative Art of Moulding—Craftsmanship and skill required.
Foundry Sands—Properties, mixing, testing, sand-mixing appliances.
Practical Moulding—Green sand; dry sand; loam.
Foundry Methods—Open sand; two-part box; three-part box; pit moulding; plate moulding; snap flask; oddside; stack moulding; loam patterns.
Cores and Core-making—Green sand; dry sand; oil sand; cement sand. (Core Stoves.)
Core—Irons; grids; plates; carriers.
Venting of Moulds and Cores.
Methods of Gating, Pouring and Feeding.
Use of studs, chaplets, etc.
Moulding Machine—types; advantages; limitations and maintenance.
Historical development of the Iron and Steel Industry.
Observation Tests.
Foundry hazards.
Blueprint Reading—free-hand sketching.
Moulders' Tools—Use and maintenance.
Patterns and Pattern-making—types and patterns; timber allowances for contraction, cambers, etc., wood-working machines; taper; loose pieces; core boxes; master patterns; machining; core-prints.
Moulding Boxes—types; method of clamping; pressure of molten metal; maintenance; handling in crane sling; expansion in stove; rigidity.
Mould Face and Core Dressings—Plumbago, blacking, etc., application and reasons for using.
Ladles and Crucibles—Design and maintenance.
Layout of Modern Foundry—mechanisation.
Production of Pig Iron—Iron ores; blast furnace.
Foundry Cupola—method of operation; defects.
Elementary Metallurgy.
Effect of Carbon, Silicon, Manganese, Sulphur and Phosphorus on Cast Iron.
Shrinkage and Contraction.
Fettling Castings—chipping; grinding; sand blasting; rumblers.
Pattern Moulding—methods; precautions; moulding of pattern plates.
Visits to Pattern Shop; Core-making Department; Drawing Office.
Laboratories and Allied Departments.

(b) *Foundry Workshop Practice.*

Cleaning and maintenance of Tools issued.
Sand Mixing—conditioning (Shovelling and sieving); testing sand in Laboratory.
Ramming Practice—plain boxes; testing mould hardness; Ramming Cope and Drag together without patterns.
Sleeking Practice—manipulation of hand tools (trowels, smoothers, gate knives, etc.).
Moulding simple objects—two-part box; method of ramming and venting.
Introduce—Jointing down—oddside—loose pieces—dovetails.
Open-sand moulding—flat plates; weights and box parts.
Core-making—Various types of core boxes; venting; stoving and application of blacking, etc.
Testing Green-, Dry- and Oil-sand cores in the Laboratory.
Practice—inserting and fixing cores in mould.
Experiments with various sand compositions (varying quantities of moisture, coal dust, and clay).
Moulding in a three-part Box.
Lining and Drying Hand Ladles.
Snap Flasks plate moulding.
Making Core Irons and Grids—open sand.
Fettling castings made.
Experimenting with various Runners and Ingates.
Casting in various metals, *e.g.*, lead, aluminium, brass, iron.
Moulding Shell pattern.
Methods of holding cores.
Core-making—large block cores with core irons and core vents.
Plate Moulding by machine and hand.
Experimenting with metal—temperature; composition, fluidity, etc.
Application and experiments with Plumbago and Blacking.
Moulding spiral patterns.
Experimenting with core sand mixtures—drying time and temperatures.
Use of lifters, grids, and sprigs.
Skin drying moulds.
Moulding a job composed entirely of cores.

The Coal Mines (Training) General Regulations, 1945, state that—

"No person shall be employed in or about a mine on any work on which he has not been employed before the coming into force of these Regulations, except under competent instruction and supervision, unless and until he has been adequately trained and is competent to do the work without supervision."

The Regulations go into great detail about the kind of training required, especially on the coal-face, and they also state, regarding boys under eighteen years of age, that—

> " at least two hundred and sixty-four hours shall be spent in such training as aforesaid, of which at least one hundred and thirty-two hours shall be spent in practical instruction in, and demonstrations of, mining operations and at least one hundred and thirty-two hours in attending classes in subjects relating to mining operations and other subjects of educational value and in physical training. . . . In the case of any person who has not attained the age of sixteen and a half years on the day on which he first receives any training as required by these Regulations, the training shall be spread as evenly as is practicable over a period of six months."

There are, of course, many other excellent examples of vocational training which might be studied, and in many cases they are peculiar to the large concern. The problem for the small firm is not a change of principles, but rather a difference of method. It may not be possible to employ a Training Officer in some of the small works, but nevertheless the work to be done covers the same ground as in the more formal training schemes. It should be someone's duty to decide what progress is essential within a definite period for the acquisition of the required skills. This obviously takes into account the necessary operations which should follow in a graded and progressive manner, and will have to take into account the necessity for regular upgrading throughout the training period. The important person in all this training is obviously the supervisor who is to be responsible for instructing the young people. The principles of training remain the same whether in a small or large firm. Each industrialist must decide for himself how much of the vocational training will be done in the works and how much will be done in the local technical school or college. The responsibility in this matter, whether it be a large or small firm, should be clearly accepted by the employer. It is possible that some training schemes are entirely dependent on a-day-a-week attendance at the local technical school. This may work quite well, but it is known that many boys are incompetent and fail to reach the proficiency required by the technical school. Lack of ability can only result in boredom and frustration. If the industrialist organises his own works school, then inevitably he will realise that training must fit the trainee. In other words, the methods of instruction must be planned to enable all boys and girls to gain the maximum benefit.

It is obvious that most of our technical schools have been attuned to the examination system and have not been accustomed to take boys and girls attending under a measure of compulsion. The attendance of large numbers of young people who are being compelled by their

employers to attend creates a fresh problem for the technical schools. An ideal method seems to be an Initiation Course followed by Vocational Training at the works and young workers selected to attend the classes and courses provided by the Local Education Authorities. The selection will depend on age, ability and aptitude and, last but not least, the character of the young worker.

Large firms which have training officers need men and women who have been trained in selection methods. This selection, combined with reports made by the various instructors and foremen, should form very good pointers in selecting boys and girls to take courses in further education. Small firms who do not employ training officers could have their young people tested at the local technical school or through the Juvenile Employment Service, if facilities for selection exist. The selection tests, whilst not neglecting attainment, will take into account intelligence and potentiality.

One important industry in the North of England has been in the habit of advertising for apprentice draughtsmen, but only boys with school certificate could apply. This method was very unfair to those boys already in the works who had not had the good fortune to attend a secondary school. The possession of a school certificate is only a certificate of attainment in the first place, and not necessarily a mark of aptitude for the position of apprentice draughtsman. The persons responsible for such a rule should bear in mind that the apprentice will eventually become a skilled draughtsman with future possibilities in the managerial field.

An interesting report entitled "Craft Apprenticeship", Memorandum No. 1, has been published by the Regional Advisory Council for Technical and other Forms of Further Education for Manchester and District. Some extracts from this report are as follows :—

> "The Conference is aware that experiments are now proceeding with certain forms of vocational and psychological tests carried out by, or in conjunction with schools; it is appreciated that the evidence provided by these tests may be of value in supplementing that obtained by other methods, but the Conference does not feel that such tests have so far been brought to a stage at which their results can play an important part in determining aptitude for engineering. . . .
>
> "Under the proposed scheme, the boy, for the first period of apprenticeship, would attend for training at an instructional workshop training centre, the Apprentice Training Centre (associated with a college for further education), suitably equipped for giving training in the several engineering crafts. During this time the boy would receive an all-round production craft training, and he would attend part-time at the associated college for further educa-

tion. Suitable records would be maintained so that at the end of this first period of training it would be possible to indicate the particular craft in the Industry for which the boy would be best suited. At the end of this period, the apprentices would be available for transfer to employers according to their requirements.

"The Conference is aware that certain firms carry out apprenticeship training on satisfactory lines, and it is contemplated that the scheme outlined above might be carried out by such firms under the general supervision of the Regional Engineering Apprenticeship Council. . . ."

"The Apprentice Training Centres should provide a background of industrial conditions and, by keeping in touch with modern developments in industrial practice, should give the apprentice a thorough and up-to-date as well as broad, grounding in the basic skills of the various engineering crafts.

"The further education at the associated college, so far as its vocational aspect is concerned, should aim at giving the apprentices an understanding of the underlying principles associated with the processes and working properties of the materials with which they are concerned in their practical training at the bench, in the machine shop and in other branches of engineering craft."

It is true that selection according to aptitude is in the development stage, but some results are claimed in a report of a research made by E. Patricia Hunt and Percival Smith in a booklet issued by the City of Birmingham Education Committee. This research work was entitled "Scientific Vocational Guidance and its Value to the Choice of Employment work of a Local Education Authority". These two investigators make the following recommendations:—

"1. That steps should be taken to arrange training courses for selected teachers in senior (secondary) schools with a view to ensuring that there shall be on the staff of each school at least one teacher competent to apply psychological tests and training in the collection of relevant data. Arrangements should also be made to give the necessary training to all Juvenile Employment Officers.

"2. That these specially trained teachers should work for this purpose in close co-operation with an officer who is specially qualified to supervise the selection, application and interpretation of psychological tests and methods. These teachers should be required to give selected tests at appropriate stages in each child's school life, and to record the data on cumulative record cards with other information regarding the child's progress, attainments and history.

"3. That these records should be used from time to time to

enable decisions to be reached as to the course of instruction each child should receive.

"4. That towards the end of the child's school life the juvenile employment officer should study these records, co-operate with the head and with the trained teacher, and give vocational guidance."

The selection of children for the job for which they are most fitted, wherever this is possible, will help to destroy the myth that all young wage-earners are potential managing directors. Nothing could be farther from the truth. A path of advancement should be made clear to all our young workers, but this particular path is obviously a short one in the case of most of our girls, who leave industry in order to get married. The chartered course should begin in the engagement-room, and show all the avenues leading to the various jobs in the works, thus outlining a progressive career. It must be emphasised that a skilled and happy worker is the most desirable end of all training schemes.

One of the great dangers of the apprentice-to-managing-director schemes, advocated by some enthusiasts, is that the training can be too "highfalutin'" and beyond the powers of most of the young workers. This difficulty is chiefly due to their lack of natural ability, together with poor foundations.

In the past we have depended far too much on people struggling through the evening classes comprising the usual Junior First, Junior Second, Senior First, Senior Second Courses. Very often this tuition is undertaken under unsuitable conditions and given by a tired teacher. These evening classes are usually full in September, and in January are struggling for their existence because of the sadly depleted numbers.

We do not depend for the supply of our doctors, dental surgeons and lawyers on tuition in evening classes, and we should therefore not depend on such facilities for our works managers and other executives.

Many excellent men by sheer force of grit and character have forced their way through evening classes, and through a part-time day-release scheme, to positions of authority in our industrial life; but it is apparent in many cases that their struggle has caused them to be warped, and they are found to be still full of conflict, even when they have reached the height of their endeavours.

The grit and determination will always be required, but we ought to make it possible for the suitable boy or girl to take advanced courses of study without at the same time injuring their opportunities for liberal education, so that a general development shall not be of a lop-sided character.

Any work dealing with vocational training would be incomplete without mentioning some of the recommendations made in the Report of the Ince Committee on Juvenile Employment Service.

"*Vocational Guidance for all School-leavers.* Vocational guidance should be given before leaving school and every school (including private schools) should be required by statute to register with the Service, in such manner as may be prescribed, every school-leaver or every person attaining the age of seventeen if still at school, and the Service should be empowered to require the attendance for interview of any person so registered within a period of one year from the date of registration.

Special Schemes for the Interviewing of School-leavers. Too many matters should not be dealt with on the occasion of the interview for the purpose of giving vocational guidance; in the approval and administration of schemes special regard should be paid to the arrangements made for the conduct of the school-leaver's interview.

Transference for Training. A scheme of training grants should be instituted to enable suitable boys and girls to take a course of training for a skilled occupation away from home where no suitable facilities are available within daily travelling distance of their home.

Finance. Wherever possible, while complying with adequate standards for premises, the suggested plan for accommodating Juvenile Employment Offices in County Colleges should be pursued."

It is a matter for some regret that this Report did not go far enough in the matter of dead-end or blind-alley occupations for boys and girls. In view of the importance of the young worker, the undesirability of allowing boys and girls to enter jobs where there is no hope of advancement must be brought to the notice of all concerned, and enforced either by statutory action or voluntary agreement.

General Education. It is apparent in many schemes for the education of our young people that little understanding of the adolescent is shown. Many of our advisers are anxious to press on with ideas which are intended for the good of the young, but the methods employed do not take into account any degree of understanding of our young people. This can be seen in an attempt by some teachers to insist upon a close knowledge of Shakespeare. There are few of our boys and girls under the age of sixteen who can be expected to appreciate Shakespeare, but there are well-meaning people who are quite prepared to impose sanctions, even when it is unnatural for the youth to understand all that is meant by the poet.

Young workers are not adults, and a great difficulty arises when superiors possessing great personality and power insist upon certain schemes being carried through by the young people. We must learn to understand our young people, and it is the duty of teachers and instructors to present a subject in a manner suitable for assimilation,

bearing in mind that education will be desired if presented in the right manner.

Baden Powell displayed great depths of understanding of the nine to fourteen age-group, and there is a need of his counterpart in understanding the needs and wants of our industrial youth in the fifteen to twenty-one age range.

A large proportion of young people who enter our basic industries cause great disappointment when they are given attainment tests, but we must bear in mind that they were probably taught in classes of large numbers. The tendency, it is hoped, will be to make classes smaller, so that the boys and girls will receive more individual attention, and obviously better instruction. Smaller classes mean that the teachers can apply improved methods in imparting knowledge to their pupils. It is, however, still common to find classes of from fifty to sixty in some of our junior schools and classes up to twenty, if not more, in handicraft classes for senior boys. The provision of smaller classes should have been considered in priority to the extension of the school-leaving age.

During the last twenty years there has been a great influence at work, in the form of the films, radio and advertising media, on all classes of people, particularly on the impressionable types. These new methods of presentation are being absorbed by our young people, but unfortunately many have a particular axe to grind.

One of the advantages of a good general education should be to enable our young people to resist the insidious rumours that pass in waves at intervals through most working communities. These rumours may be due to fear, desire or excitement, but the spread is encouraged by ignorance and lack of confidence. An improved education should enable our workers to question the reasonableness of such scare-mongering. The young entrants are desirous of a good relationship between themselves and the management, and their critical senses should be strengthened by an extension of further education, enabling them to discriminate wisely. Improvements in living conditions, or indeed any other factors which go towards the well-being of the worker, aid in the extension of better education. Such improvements may be brought about by the initiative of the management or, better still, as a result of good consultative machinery, and prove to be a valuable agency.

As a result of better general education we should expect a rise in the standard of values and an increased sense of responsibilities, together with a pride of communal achievement in the industrial community.

The 1944 Education Act includes provision for attendance for one day a week at County Colleges, and the curricula for these Colleges have been the subject of much discussion. The importance of method must not be overlooked, and it will be necessary to carry out experi-

ments in the early stages. There is a division of opinion about the advisability of including vocational subjects. It will be obvious that pure vocational training will be almost impossible in County Colleges as organised by the Local Education Authorities. Some County Colleges may be asked to cater for boys and girls involved in a large number of trades and occupations, and whilst it may be possible to offer a measure of vocational education in subjects such as English and calculations, and in some cases style and deportment and the domestic crafts for the girls, it would be rash to claim that the County Colleges can in any way be a substitute for a work's school or for an adequate training scheme for vocational training found in certain industries.

The future vocation of most of our girls will be that of housewife, and this cannot be excluded in any scheme of instruction given in County Colleges. It will be difficult to deny that many girls learn housewifery from their parents, but the County Colleges can asist by accelerating the natural interest of most girls.

Boys and girls are interested in physical recreation rather than physical training, and it is difficult to understand the statements made by an enthusiast that "physical training appears to be attractive in itself to the vast majority of adolescents, and the reason for doing it can be understood by all". The experience gained by many youth leaders and officers engaged in some form of youth service is that, whilst some boys and girls may like physical training, the majority do not take easily to it as a subject. The development of the open-air activities, such as hiking, swimming, games, cycling, boating, angling, camping and Youth Hostelling, should be encouraged, but this physical recreation should have a far greater appeal than the ordinary physical training.

No plans for general education would be complete without studies which take into account the advent of the young citizen. This is not to say that careful attention to formal subjects like Civics and Citizenship will mean that the young worker is bound to become a better citizen. It will mean that he or she will know something about the workings of the machinery of government. The danger lies in expecting the young to appreciate all the traditions, the ceremonies and party tricks that go to make up local and National Government. The practice of citizenship can be seen to advantage in a camp or similar activity, where the young learn so easily by example and practice.

SUMMARY.

ALL YOUNG WORKERS HAVE THE RIGHT TO BE TRAINED FOR THEIR VARIOUS JOBS IN INDUSTRY. THE RESPONSIBILITY FOR THIS TRAINING IS ON THE EMPLOYER. IF ALL YOUNG ENTRANTS, BOYS AND GIRLS, ARE CONSIDERED AS APPRENTICES, AND DEAD-END JOBS ELIMINATED, MUCH WILL HAVE BEEN ACHIEVED.

THE APPRENTICESHIP BEGINS WITH A GOOD ENGAGEMENT BY A TRAINED OFFICIAL OF THE COMPANY. THE NEW ENTRANT SHOULD COMMENCE HIS OR HER INDUSTRIAL EDUCATION IMMEDIATELY AFTER ENGAGEMENT. THE METHODS EMPLOYED IN INDUSTRIAL EDUCATION BY THE LARGE FIRM WILL DIFFER FROM THE METHODS EMPLOYED BY THE SMALL FIRMS, BUT THE PRINCIPLES WILL REMAIN THE SAME. THE KEY-NOTES IN INDUSTRIAL EDUCATION SHOULD BE A DEVELOPMENT OF INTEREST AND A SENSE OF PARTICIPATION.

VOCATIONAL TRAINING SHOULD BE CAREFULLY PLANNED. IT SHOULD BE GRADED AND PROGRESSIVE, PROCEEDING ALONG A CHARTED COURSE. THE MAJORITY OF BOYS AND GIRLS ENTERING INDUSTRY ARE NOT LIKELY TO BECOME EXECUTIVES. THE APTITUDES REQUIRED FOR THE VARIOUS JOBS IN THE COMPANY SHOULD BE KNOWN, AND A STUDY OF SELECTION METHODS AND JOB ANALYSIS IS WORTH UNDERTAKING BY THE TRAINING OFFICER. TRAINING MUST FIT THE TRAINEE, AND SHOULD AIM AT RAISING THE GENERAL LEVEL.

ATTENDANCE AT TECHNICAL SCHOOLS SHOULD NOT BE COUNTED AS A SUBSTITUTE FOR TRAINING ON THE JOB. THIS LATTER SHOULD BE CARRIED OUT UNDER THE CLOSE PERSONAL SUPERVISION OF SELECTED SUPERVISORS. THESE SUPERVISORS SHOULD HAVE A KNOWLEDGE OF INSTRUCTION METHOD.

THE COUNTY COLLEGE SHOULD BE QUITE FREE TO IMPROVE THE GENERAL EDUCATION OF THE YOUNG WORKER. AN IMPROVEMENT IN EDUCATION SUPPORTED BY AN ADEQUATE VOCATIONAL TRAINING CAN BE THE HERITAGE OF ALL YOUNG WORKERS. AN INCREASING GENERAL EDUCATION MEANS A RAISING OF STANDARDS IN THE MINDS OF THE APPRENTICES. INDUSTRIALISTS WILL BE WISE TO IMPROVE THEIR PERSONNEL SERVICES IN ORDER TO KEEP PACE WITH THE VALUES PLACED UPON THEM BY A BETTER-EDUCATED COMMUNITY. IT IS NOT POSSIBLE TO DIVORCE RECRUITMENT FROM TRAINING.

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TRAINING THROUGH APPRENTICESHIP

BY

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THE war-time need for the recruitment and training of large numbers of men and women to construct, operate and service complicated mechanical and electrical devices was an urgent reminder of a problem to which in peace-time insufficient attention had been given. Its solution was the keystone of victory. In these anxious post-war years, when we are engaged in a battle for economic survival, one of the most encouraging signs is the increasing realisation of the importance of the thorough technical and practical training of this country's human wealth. Though we may learn much from the study of war-time training methods, which had, essentially, to be designed to produce rapid results, we may gain equally valuable information from a study of how the problems of recruitment and training were solved in the more distant past. These solutions, though obviously not appropriate in their entirety to modern conditions, nevertheless hold some useful lessons.

In particular a study of the English apprenticeship system, its flowering in the sixteenth century, its decay in the seventeenth and eighteenth centuries, and ultimate dissolution during the Industrial Revolution, yields information relevant to the present-day problem. One of its major characteristics was the close personal relationship which existed between master and apprentice, a relationship which was defined in great detail by many Guilds. Regulations are recorded relating to such small domestic matters as the length of the apprentice's hair, his clothing, meals, manners and pastimes, as well as to his hours of work, education and training. The master thus assumed responsibility for the moral, mental and physical welfare of the youths in his charge, in addition to their initiation into the mysteries of his craft, but it would be a sentimental delusion to suppose that, in practice, these responsibilities were always fully discharged. The Statute of Artificers of 1562, which gave legal status to apprenticeship, left problems of administration mainly to the Guilds, and there is no doubt that its enforcement was by no means uniformly complete. None the less, the concept of a close personal relationship between instructor and trainee is fundamental to sound training theory, and its proper practical application may well make the difference between the success or failure of a present-day training scheme.

The legal regularisation of the apprenticeship system in 1562 is in some respects paralleled to-day by the movement towards the organisation of apprenticeship on a regional and national basis, though to-day the State's rôle is that of an interested "third party". A National Joint Apprenticeship Scheme is described in the following terms by the National Joint Council for the Building Industry :—

> "The Bodies adherent to the National Joint Council for the Building Industry have given consideration to the need for the early establishment of a more comprehensive National Scheme of Building Crafts Apprenticeship, administered upon a local and regional basis, for the better training of building craftsmen with particular regard to the encouragement and promotion of building crafts apprenticeship."

The Report, published in 1945, visualises the setting up of standard conditions of apprenticeship controlled through Regional or Local Joint Apprenticeship Committees. A recent agreement between the Engineering and Allied Employers Federation and the Manual Works Unions affiliated to the Confederation of Shipbuilding and Engineering Unions is also indicative of the present trend. This agreement is concerned with standards of training, recruitment and selection problems :—

> "In order to improve skill in the various engineering crafts and to ensure that those lads who are best fitted for learning these crafts are recruited and then are properly trained, the industry shall set up machinery specially charged with the tasks of assisting in selection and ensuring the maintenance of good standards of training."

The principles laid down in these reports were, in the main, anticipated in the Report of a joint committee representing employers, trade unions, the teaching profession, the Ministry of Education, and the engineering institutions, under the auspices of the Regional Advisory Council for Technical and Other Forms of Further Education for Manchester and District. This report, styled "Craft Apprenticeship", was published in 1944.

This consideration of the problem in national terms is in marked contrast to the nineteenth-century outlook of "free trade" in the labour market. War and the lean years now following have taught the need for economy and good housekeeping in the matter of human skill and ability which can only be effectively met at a national level.

The modern forms which apprenticeship takes can well be illustrated with examples drawn from the engineering industry. In many firms in that industry comprehensive apprenticeship schemes have been formalised for many years, in some cases since the beginning of this century. Moreover, in that basic industry there exists a high concentration of manual and technical skill at the craft, technician and

professional levels. The need to maintain and improve these skills has been met by a continuous attention to matters of training and education.

Young people enter the engineering industry at one or other of three age levels—the majority at the age of 15 + from Secondary Modern and Secondary Technical Schools, the remainder either at the age of 16 + to 18 + from the Grammar and Public Schools, or at the age of about twenty-one years from the Universities and senior Technical Colleges. Where organised apprenticeship schemes exist, they are accordingly often found to fall into three corresponding categories—craft apprenticeship, student apprenticeship and graduate apprenticeship. Craft apprenticeship courses are designed to train the skilled manual workers, the tool-makers, turners, fitters, blacksmiths, coppersmiths, moulders, pattern-makers, instrument makers, etc. In practice, however, men who have served a craft apprenticeship will also be found working as technicians—testers, draughtsmen, production men. Indeed, some will be found occupying the highest managerial positions in the industry. This is a matter which will be referred to again. The student and graduate courses are designed to meet the demand for professional engineers who, in addition to practical training, are required to have a sound scientific theoretical education together with an extensive technical knowledge.

Training for Craftsmanship. "Why do you want to take up engineering?" is a question often asked of prospective apprentices. The answers given are many and various, but only too often indicate a sad lack of informed guidance. Efforts to remedy this state of affairs have been given impetus by the Education Act of 1944. The Ministry of Education and the Ministry of Labour and National Service have shared the task of placing school-leavers and juveniles in suitable jobs, and it is gratifying to note the increasing emphasis on the word "suitable". Much experimental work is being done with procedures of vocational guidance, which is a problem closely related to that of determining the type of education which best fits a young person's interests and aptitudes. We may look forward to a time when sound vocational guidance will have greatly eased the employers' task of trying to determine the fitness of a boy for a given trade, but that time is not yet.

Let us study the career of a typical boy from a Secondary Modern School who decides that he wants to be "an engineer". During his last year at school he has been to a "school-leavers" exhibition at a Juvenile Employment Bureau and has seen displays picturing the opportunities in numbers of different careers. His attention has been caught by a photograph of an engineering apprentice operating a lathe, and on inquiry he finds that a local firm has apprenticeship schemes. His name is put forward for a vacancy, and in due course he

is invited to attend the Works for interview, in addition to which he may have to undergo a written examination to test his school attainments, general intelligence and special aptitude. During his interview he is told about the different types of engineering trades, the conditions of employment and the opportunities for advancement.

He is accepted, and takes the great step from his comparatively sheltered school life into the vast and, to him, bewildering complex of modern industry. At this stage the close personal relationship of instructor and trainee, often very difficult to establish under modern conditions of large-scale production, is of crucial importance. Now he stands in need of all the help and guidance that can possibly be afforded him. This problem of initiation training is met in some firms by special initiation courses lasting from one or two days to two or three weeks, during which time the new apprentices are shown round the factory, told something of its history and the policy of its management, in addition to being given information about general rules and regulations. One of the most important talks he may hear relates to accident prevention. Road safety the young apprentice should have learned at school. He must now be made fully conscious of the special hazards associated with factory life. Youthful high spirits may be safely given free rein in a school playground, but not in a workshop.

Ideally, the young craft apprentice, who during his first months will be on probation, will be receiving practical training in special training workshops under the close supervision of an instructor who has been selected not only for his craft skill, but also for his ability to pass it on. It cannot be emphasised too strongly that the selection of apprentice instructors is a matter requiring the closest attention. The instruction of apprentices cannot be undertaken as a " time-filling " job by anyone who would otherwise not be fully employed. It calls for special, if not the same qualities as does normal school-teaching.

At this stage the apprentice may be given basic experience of the operations involved in a number of different engineering trades, and his performance will give him and his instructors a sound basis on which to make a decision regarding the trade to which he should be indentured. This " progressive selection ", though expensive both in time and money, is probably the best method yet devised of matching the individual to his future job. While it may be possible for large firms to provide their own trade training schools, the needs of smaller firms could be met by the provision of Apprentice Training Centres, such as those visualised in the report published by the Regional Advisory Council, mentioned earlier. These centres would be controlled by a Regional Apprenticeship Council, on which would be represented employees, Trade Unions, professional institutions, the Regional Advisory Council for Technical Education, together with assessors appointed by the Ministries of Education and Labour.

It is customary at the end of his probationary period for the apprentice to sign indentures, to which he, his parents and the Company are parties. This apprenticeship agreement has a long history, and in days gone by its signature was a matter of some ceremony, being recognised as a turning point in the boy's life. To-day it still provides an excellent opportunity for consultation between those intimately concerned with the young apprentice's progress and future, and it is suggested that an hour or an hour and a half is not too long a time for a meeting between parents, their son and his employers. Parents are too often left in the dark regarding their son's progress. Too often is their essential rôle in the education and training of their children ignored, or at the best given only lip service.

After he has been indentured and has received basic instruction in his trade, the apprentice may be transferred to a workshop engaged wholly on productive work. Here it should be added that much of the work he has done in the training school should also have been " productive ", in the sense that its product fully meets adult inspection standards and is used in building up apparatus produced and sold by the firm. The apprentice thus gets a feeling of satisfaction in the knowledge that he is doing real work, and not merely exercises.

The success of this next phase of training requires the close co-operation and interest of the firm's older employees, from the skilled man working on the shop floor to the superintendents and foremen in charge of departments. In larger organisations, where management cannot have direct contact with apprentices, a strong tradition of co-operation in all matters relating to education and training must be fostered throughout all grades. The older employees must be actively encouraged to take a personal interest in the apprentice, not only in initiating him into the " mystery of his craft ", but also in helping him to develop a proper appreciation of his duties and potential value to the working community.

In this later phase the apprentice may spend appropriate periods in selected workshops, and thus gain broad practical experience of the various aspects of his trade, so that by the age of twenty-one years, at which time craft apprenticeship normally ends, he has a thorough practical grounding.

During his interview before employment the lad has been told of the opportunities for advancement and, in this connection, of the facilities available for both theoretical training and further general education. Some large firms run works schools, which the apprentice attends for a half or whole day each week, to receive instruction in workshop technology and possibly also in subjects of a general educational nature. In many such schools physical education is not neglected, there being a regular period set aside for physical training. During their full-time schooling boys may have been receiving a course

of physical exercises to correct minor physical disabilities, such as flat feet and curvature of the spine. It is, of course, most desirable that such treatment should be continued, but it should be done only under qualified, skilled supervision.

The number of firms organising works schools is increasing, and in these schools much valuable experimental work is being done to discover the type of instruction of most value and most appreciated by young people beginning their working lives. The experience being gained, not only of the type of subject most valuable, but also of the relative proportioning of different types of subject in the time-table, may have particular value to those concerned with the organisation and administration of the County Colleges of the future.

However, our typical craft apprentice, be he in a large or small firm, will gain, in almost all cases, that part of his theoretical training for which he may secure a nationally recognised qualification, by part-time study at a local technical college. There he may take courses leading to an Ordinary and possibly Higher National Certificate, also the more practical courses, such as those planned by the City and Guilds in Workshop Technology. It is possible for an able and determined boy to gain such qualifications by evening study alone. Many of those now occupying high positions in industrial life followed that path. For the majority, however, such a course, demanding as it does a marked degree not only of ability and determination, but also of physical stamina, is not within their compass. Moreover, such a course implies a degree of concentration on purely technical study which leaves but little leisure for the pursuit of more general educational and recreational aims. In recognition of this, a rapidly increasing number of firms release their apprentices for a period during the working week for Technical College attendance, and in many areas close and cordial co-operation is found between the Technical Colleges and those in industry responsible for apprentice training.

At this stage it is appropriate to turn from the consideration of the typical boy, to his exceptionally able " brother ". No doubt when the educational reforms of recent years are given full practical expression the exceptionally able boy will automatically receive the highest education that his talents justify, but in the imperfect present many such boys, for one reason or another, leave school at the earliest legally permissible age, a number to take up craft apprenticeship. In order that the nation may have full benefit from the potential talents of its citizens, it is essential that such boys be provided with a ladder for advancement. In apprenticeship schemes, designed to absorb young people at the three age-levels of completion of full-time education, provision is often made to transfer to the professional grades of apprenticeship those craft apprentices who show, by their personal

attributes and by the quality of their work at the local technical college, that they are possessed of outstanding ability.

Before consideration of professional apprenticeship there is one other aspect of the training of our typical craft apprentice which must have our attention. It is his training in the acceptance of responsibility as a member of a community and in co-operation with his fellows. An Apprentice Association may provide an ideal training-ground. Such an Association gives opportunities for experience in committee work and in the mechanics of orderly negotiation. If the Association is so guided by the management, it may become, through its committee, the official channel through which apprentices may negotiate on apprentice affairs of all kinds. It also provides a means whereby apprentices may organise all those social and athletic events which foster a spirit of co-operation and a sense of community which it is sometimes claimed the scale and methods of modern industry tend to prevent. In firms where only a very small number of apprentices are employed it will not be possible to form an Apprentice Association on any widely effective scale. In such cases the apprentices should be particularly encouraged to take active part in the local youth organisations.

Professional Apprenticeship. To those boys who leave Grammar and Public Schools between the ages of sixteen and nineteen, having usually gained a good School Certificate and perhaps a Higher School Certificate, many firms offer a student apprenticeship. These courses are of four or five years duration, during which time the apprentice gains practical experience in a variety of selected departments. His theoretical qualifications he gains by part-time study at a technical college, usually by a combination of part-time day and evening study. It must be emphasised that this type of course is designed to train technicians and professional engineers, and not craftsmen, and that the practical training is accordingly wider, but not so detailed as that of the craft apprentice. Usually half the student apprentice's practical training takes place in selected workshops, the other half in test-beds, planning and progress departments, drawing, engineering and sales offices. Much of what has already been said regarding the practical training of craft apprentices is equally applicable to student apprentices, particularly the reference to the personal contact between instructor and trainee. As the student apprentice spends shorter periods in departments than does the craft apprentice, the issue of training leaflets appropriate to each department can be of great value. These leaflets may indicate to the apprentice what he should look for in a particular department, and help him to appreciate the department's relation to the factory as a whole. He should also have easy access to the firm's technical publications and literature.

At the end of his apprenticeship the student apprentice should normally be in possession of a Higher National Certificate or, in some cases, an external London B.Sc., and thus be well on the way towards securing those qualifications necessary for Associate Membership of his appropriate professional institution. In spite of increased day release for technical studies, there is no doubt that this type of course is arduous, and to complete it a youth must have, in addition to ability, a great deal of physical stamina and a fund of grit and determination.

As in the case of the craft apprentice, an Apprentice Association can provide a valuable training-ground, and if it is run in conjunction with the craft apprentices, it provides a valuable meeting-ground where the craftsmen and professional engineers of the future can learn to appreciate each other's qualities and problems. Although the student apprentice has had the advantage of two or three years formal education beyond that of the craft apprentice, the general side of his education must not be neglected. Some firms give special leave to their professional apprentices at least once during their courses, to gain engineering and general experience with other firms and institutions, both in this country and overseas. The value, particularly of these overseas contacts, cannot be over-estimated.

Most youths who have had the advantage of a full secondary education and wish to become professional engineers would be well advised to consider the possibility of taking a full-time course at a university or senior technical college, in order to gain their technical qualifications. They may gain their practical experience either by taking a graduate apprenticeship for not less than two years, or by entering industry direct from school for a year before going up to a university and completing the remainder after graduation. This latter method, when combined with practical experience during vacations, has in many cases much to commend it. It is essential that during the initial year this type of professional apprentice be given day release to pursue a course of study appropriate to his proposed university course at a technical college. This ensures that the habit of study is not lost, and that the apprentice is not academically at a disadvantage when he starts his full-time studies. By no means the least advantage of this method lies in the opportunity offered to this type of apprentice in his initial year to discover whether or not his real interests and aptitudes are for the engineering profession, before committing himself to a three-year University course. It is, indeed, a very practical form of vocational guidance, which helps young men to make a choice of career based on real knowledge of conditions.

Those who may be interested in a detailed discussion of the practical training of professional engineers cannot do better than to consult a booklet on the subject published in 1947 by the Institution of Electrical Engineers.

Organisation of Training. Some principles of apprentice training have been illustrated by examples drawn from the engineering industry. Although practice must vary between industry and industry, these principles have a general application, and are fundamental to the success of any apprenticeship scheme. This description of some modern forms of apprenticeship and possible developments, brief though it be, cannot be ended without some general observations on methods of administration. At the foundation of any successful apprenticeship scheme must lie the full and active acceptance by industrial management of the need for the thorough training of its employees. Once this acceptance is established, it will lead to the delegation of the training functions to a specially appointed officer, whose duties will include the supervision of apprentice training. That step should be common to all firms, large and small. In the small firm that officer may undertake all the detailed work in connection with training and be in close personal contact with all the firm's apprentices. In this respect the small firm is at an advantage, in being able to give more easily modern reality to the old master-apprentice relationship. Much has been said and written about the disadvantages and difficulties experienced by small firms in matters of training. But this advantage, if coupled with the provision of Apprentice Training Centres and arrangements for the interchange of apprentices between firms, may well do much to adjust the balance.

As the size of firm and number of apprentices increases, the number of staff engaged whole-time on training may warrant the establishment of a separate training department. Such a department in a firm employing three to four hundred apprentices may require a full-time staff of five or six instructors, in addition to clerical and office staff. One of the most difficult questions in any large scheme is how to make the individual apprentice feel that there is a real personal interest in the progress of his training. The admirable apprentice training schemes in the Services overcome this difficulty by having available a far higher proportion of apprentice instructors to apprentices than is practicable in industry, where, after all administrative precautions have been taken, so much must ultimately depend on the personalities and capabilities of the apprentice instructors themselves. Only through having an absorbing interest in their work, as well as having had a proper training for it, can they successfully make each apprentice feel that he has someone to whom he can turn for ready assistance and information. One sure mark of a good apprentice instructor is that he can meet and remember his ex-apprentices and display a sincere interest in their achievements. If he can do that he can reap one of the most satisfying rewards of his profession.

TRAINING AND EDUCATION FOR GIRLS IN INDUSTRY

BY

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It is well known that in many parts of the country it is now extremely difficult to recruit girls into industry. Full employment means that there is a far wider range of choice of jobs for school-leavers than there was in the inter-war period, and it is common experience that the majority of girls choose clerical or shop work in preference to industrial jobs.

As it is most necessary that industry should get its share quantitatively and qualitatively of the available girls, it is very important that the reasons for this position should be examined, so that, if possible, the cure may be found and the balance redressed. Moreover, so widespread a reluctance to take up industrial employment suggests that not all the objections to it are of a frivolous nature, and that there are substantial reasons which cause girls to be reluctant to enter this type of work.

It is frequently stated, no doubt with some truth, that a good deal of the prejudice against industry is due to a hang-over from thirty years ago, when industrial conditions were admittedly in many instances very bad. It is claimed that standards have now changed out of all recognition, and that the prejudice, once often justified, could not now be sustained if the facts of the situation were examined. It is also held that the preference for non-industrial work results from the desire for the higher status that such work carries in the eyes of a great many people. The cure for this, it is maintained, is not primarily in the hands of industry itself.

A further objection, and one for which industry cannot evade responsibility, is the charge that an industrial career is a haphazard and chancy affair. In many industries the juvenile on entering the factory spends weeks, or even months, doing any jobs that come along, which frequently means nothing in particular. No real instruction is given in the job, which the newcomer is left to pick up by haphazard methods. Opportunities for advancement are, it is claimed, limited, and the methods of promotion are obscure.

Behind all these more specific criticisms there lies the feeling that industrial work is frequently very monotonous, and that it offers little or no scope for an interesting and full life. This feeling may not become articulate or be clearly formulated in the minds of many of

the critics, and it is of course true that what appears monotonous to the casual observer is not necessarily in the least monotonous to the experienced operator. None the less, there is sufficient truth in the accusation for it to be essential that industry should treat it very seriously.

The present position is a challenge to industry, and the challenge must be met if we are to continue as a great industrial nation. There is no one answer. As in so many of these problems, it can be solved only by a united attack on many fronts. It is suggested, however, that one important approach to the problem is through improved schemes for training and education.

It is now an accepted educational principle that the type of education provided must be adapted to meet the needs of the individual concerned. The individual is not to be expected to fit himself into a prescribed educational pattern. That principle is embodied in the 1944 Education Act, which provides three different types of secondary education for different types of children. The first step, therefore, is to try to understand the potential needs of the girl going into industry, both as young worker and as young woman.

In order to focus attention on the most serious problem, the problem of the routine worker, it is necessary to distinguish between the girl for whom an apprenticeship is necessary and desirable, and the girl for whom it is not. There is, at the present time, some difference of opinion on this subject, and in some influential quarters the development of apprenticeship schemes is widely advocated. But it would appear to be obvious that the nature of any training for a job must be determined by the demands that the job will make on the worker. If, for example, a girl is to be a private dressmaker, she will be called upon to do a wide variety of jobs, and her training must be planned to cover all the tasks to which she will have to turn her hand. If, however, she is to be a skiver in a shoe factory, she will operate a skiving machine, and, in nine cases out of ten, she will only operate a skiving machine. She will reach a remarkably high standard of skill and speed in this particular job, but she will be essentially a specialist. It cannot be the best use of her time, therefore, to give her a little knowledge but no real mastery of a wide range of jobs of no intrinsic value which it is most unlikely she will ever be asked to perform. Where there is a body of knowledge and a range of skills that must be taught, there some form of apprenticeship is required. Where this is not the case—and this is true of the great majority of industrial jobs for women—there apprenticeship cannot be appropriate.

It is frequently implied, if not actually stated, that for those engaged on routine work the only possible interest and satisfaction in life must be found in leisure-time activities; that it must be accepted that for them work is hopelessly monotonous and completely unsatisfying.

Education, therefore, it is argued, should concentrate on providing training for participation in outside activities and interests. But this is surely to run away from the central problem considered either from the industrial or from the wider social angle. Education for leisure cannot help us to overcome the reluctance of girls to enter industrial employment; indeed, it could even be argued that by implication it emphasises the undesirable nature of such employment. Nor does it meet the charge that our existence depends on an industrial system based on an extreme sub-division of labour, and that we are accepting as inevitable a position which condemns a large number of people to work from which they can get no personal satisfaction. Education for leisure is of course important, but we cannot allow it to be accepted as the final answer.

If we reject formal apprenticeship and are critical of emphasis on training for leisure, what in fact are the needs of this type of worker? Briefly, the essentials are that she should be able to reach a high standard of efficiency and of remuneration on her own particular job; that she should be flexible and adaptable, so that she can adjust to changes and to improved methods; that she should know how to keep really physically fit; that she should be able to participate to the full in the life of the factory and should feel that it is valuable and important; that she should be able to make the best possible use of her life outside the factory, according to her particular interests and characteristics.

It is plain that the programme to meet these needs must divide into the specific training which is necessary to prepare the new recruit so that she may eventually become a thoroughly competent worker, and more general education not concerned with her performance on the job, but with the rest of her activities both inside and outside the factory. The essential point is that the idea of a divorce between the two sides of life should be avoided, and it should be made clear that the various phases of training and education are concerned with the person who is also a worker and the worker who is also a person.

Job Training. Although the training of the routine worker has been neglected in many quarters, a great deal of work has been done on the subject in certain firms, and valuable lines of approach have been developed. Before drawing up a training scheme, it is first necessary to review the jobs in the factory which are to be taught to new entrants. A careful analysis will show some common features in them all. It may be, for example, that they all need a background knowledge of the material to be handled and of the words and phrases in common use in the factory. There may also be certain tools used by everyone—the screwdriver and hammer in the engineering industry, or scissors in the clothing trade.

Further analysis will show that the jobs to be taught fall into two categories. The first category includes the so-called unskilled jobs on unchanging specialised repetition work, often requiring a great measure of dexterity and a very detailed knowledge of a very small job, but no initiative or adaptability at all. The second category includes work involving a degree of adaptability. The work is still unskilled, and falls within certain narrowly prescribed limits, but because it varies from day to day or from month to month, it cannot be taught in the same way as jobs in the first group.

When a preliminary survey has been made on these lines it is possible to begin to outline a training scheme. Its object will be to impart information under three main headings :—

(*a*) General information about the factory, its procedure and its products.

(*b*) General aspects of job training common to all workers in the factory.

(*c*) Specialized training for specific jobs.

1. ***General Information about the Factory.*** Training coming under this heading can be divided between a number of lectures, demonstrations and instructions, not necessarily all given by the training instructor. They will be spread over the whole training course, and they will cover the background of the training, not the actual work to be learnt. The first of these lectures will be the initiation talk given to a girl arriving at the factory on her first day. In this talk she will be told about those factory regulations which affect her at once, and she will be given a general outline, which will be developed later, of the amenities of the factory. This talk will normally be given by the Personnel Officer, and it will encourage the new girl to use the Personnel Department when she wants accurate information and advice.

Subsequent talks and demonstrations will cover the following subjects :—

1. *Factory Rules and Regulations.* Starting and finishing times, lunch and tea breaks, good time-keeping, clocking, time-cards and other similar matters.

2. *Accident Prevention.* The Accident Prevention Officer should be asked to prepare and give a talk specially designed for new entrants into industry.

3. *Factory Organisation.* Girls should learn how the management consists of chairman, directors, managers, foremen and charge-hands and how authority and responsibility are delegated. At this point they should be introduced to the idea of Works Committees, Joint

Production Committees, shop representatives and any other form of self-government appropriate to the factory.

In presenting these ideas to girls it is important that the people concerned should be described as human beings, not as remote figureheads.

4. *Health.* A health talk should be given by the factory nurse, followed by a visit to the first-aid room, and trainees should be particularly encouraged to make use of it in cases of minor injury. The trainer should give a subsequent talk to explain the procedure to be followed in the event of absence from work, and should make clear the employee's rights under the National Insurance Act. She should be told whether the firm expects a doctor's note when she is away, and she must know to whom her illness must be reported.

5. *Wages.* Definite explanations and talks are necessary on this subject. Where piecework or bonus schemes are in force, these need full explanation, and practice should be given in working out a week's earnings so that trainees leave the school thoroughly understanding what they can expect to receive each week. They should learn to keep a permanent daily notebook record of completed work.

6. *Factory Amenities.* During the training period girls should have an opportunity of visiting clubs, libraries and canteens available to them. If they take advantage of them at this stage they will be used to them before they leave the school for a strange department.

7. *The Firm's Policy and Products.* In some factories, where the product is well known and widely advertised, new girls will already have some idea about the factory, but the large majority of works are not famous, and many do not even produce a finished article. Trainees therefore, if they are to develop local patriotism and loyalty, should get an opportunity to learn as much as possible about the firm's products, where they go and who buys them. During the war, because of security difficulties, many factories were not able to tell employees anything at all about their work, and where this happened morale was always a difficulty. In peace-time every opportunity should be taken, particularly during the settling-in period, to give all the information possible about the product and its destination. If the factory is one among several associated works, new girls should be told this and encouraged to feel part of the larger organisation. In large factories it will also be necessary to explain the functions of the different departments, and if trainees can have opportunities of visiting as many as possible, their interest in the firm will be stimulated. It should be the object of the training department to send girls into the main shops feeling that they belong to a team, not that they are going to do a single individual job with no past and no future.

2. *General Job Training.* In most larger factories there are certain elements common to all jobs which must be taught. The young employee must also learn to treat tools with respect and to look after them. In planning a training scheme these basic facts and skills should occupy the first days or weeks according to :—

(*a*) their complexity and
(*b*) the age of the trainee (the school-leaver should have about two weeks as a minimum, the older trainee much less).

As far as possible training should be given on productive work, and jobs should be collected from production departments which illustrate the facts and skills to be taught. A successful training scheme for girls in a light-engineering works taught the use of the screw-driver by inserting screws and washers into the terminal blocks of electric meters and the simultaneous use of both hands assembling nuts and washers on to the stems used to bolt the meters to the wall. In each case they were productive jobs, which could be used to teach both facts and principles. During the course of the work the girls learnt to arrange the materials they were using in conveniently shaped receptacles in a semicircular arrangement round the two hands, and to place their tools in the position from which it was easiest to pick them up—simple principles which they could apply to any kind of engineering work. This was taught not only by practical work on the jobs, but by lectures and special demonstration diagrams, to show the correct position of tools in the hand and to emphasise faults commonly made.

During this early period of training, girls should learn something of factory procedure in the matter of obtaining work and materials, and the training department should run on strict factory lines, with inspectors or viewers and someone in charge of stores to give the trainee first-hand experience.

3. *Training for Specific Jobs.* When the first period of general training is completed, a good training instructor will be able to supplement the information obtained at the original interview and from any tests which may be used. In the light of this knowledge the Personnel Department is able at this stage to decide on the most suitable job available for the trainee.

When jobs have finally been allotted, the third part of the training begins. Those who are to do jobs which are specialised and unvaried begin to learn the actual job they will do in the factory. After some preliminary instruction in the use of any special tool involved, they should go straight on to the actual work or the actual machine. The work will first have been analysed and the correct method laid down clearly and definitely, and only this method will be taught. By means

of demonstration, diagrams, and even slow-motion films the trainee will learn a definite series of movements, which are those she is going to use as long as she does the job. She will be taught why these particular movements are the best. It is vitally important at this stage to make certain that a trainee is not allowed to form a habit which has to be unlearnt later. If the final sequence of movements is too complicated to be learnt all at once, some parts of it may be omitted to be learnt later, but nothing must be substituted for them, and the whole series must be learnt before any attempt is made to get up any speed or rhythm. This, after all, is the method of any good golf or cricket coach, but it has been all too infrequently applied to the teaching of industrial methods.

The second type of work in this advanced training section is that demanding some adaptability. In teaching this kind of work it is again necessary to find out exactly what the trainee needs to know. For example, in the training school quoted above, general assemblers have to learn to use hammer, screwdriver, pliers, spanner and soldering iron, and in some cases to follow a very simple blue-print. Their training is therefore given on any simple assembly jobs involving the use of some or all of these tools. At the same time they are taught to set out their work and tools to the best advantage, and they are tested on their ability to do this. Everything that is taught to them emphasises the importance of their method of work and the common features of the work, and they are encouraged to make suggestions and to know the reason for everything they do. They have further instruction in piecework schemes and job cards, and they learn something about the procedure of fixing a rate and the terms of agreements dealing with this matter. They leave the school with a good general idea of assembly work, but they are not trained to do one specific job at a high speed. They are taught to use their heads as well as their hands, and the more intelligent girl is given a scope and interest she could never hope for under more old-fashioned teaching methods. After this sort of training an intelligent girl will have acquired an adaptability which will be of enormous advantage to her if the firm's product is modified or changed.

General Education. Essential though this initial training is, it is clearly not sufficient to meet the full needs of the girl, and a much wider and more prolonged educational course is necessary. This further programme could be carried out in part in the factory and in part at the County College. It does not perhaps matter greatly where it takes place, provided it is done as well as possible under local conditions. As County Colleges develop it may be that they will take over some of the educational activities at present handled by certain factories. The important point is that the two partners in the job,

the factory and the school, should work together to produce the best possible results. One of the first and most difficult steps in this enterprise is to get real understanding and appreciation of industrial problems on the part of teachers and of educational problems by all levels in industry. An excellent example of the need for collaboration is seen in the question of physical education. It is probably broadly true that the most serious health problem in industry to-day is not any specific disease, but a general standard of sub-normal health which is too often accepted without a struggle. The improvement in physique which took place for many girls when they joined the Women's Services was most significant and gives industry much food for thought. Physical training is clearly necessary, since without good health a girl is handicapped in almost every sphere of life, but it is not necessarily clear what type of physical training is suitable. The Central Council for Physical Recreation, which has for some years been studying this problem, tackles it by sending its trained experts into factories to make a close study of the type of job a group of girls is doing and to draw up physical exercises which will be complementary to their ordinary work.[1] This is typical of the intelligent co-operation based upon facts which is essential if the educational programme for the girl in industry is to be wisely planned.

In addition to physical training, a great deal more should be done to teach the principles of factory hygiene, on which the well-being of the individual very largely depends. It is a commonplace that managements frequently provide efficient and modern equipment which is not used, and is even wilfully damaged. The reason probably is that the employee has not absorbed the need for such apparatus, and is therefore quite indifferent to it. If, however, the County Colleges, in dealing with young people in industry, could teach the principles of heating, lighting and ventilation and their connection with health and efficiency, the attitude of the younger generation of workers would be radically altered. It was noticeable during the war that young employees who were members of the St. John Ambulance Brigade or the Red Cross Society took a live and active interest in the health and hygiene of their factory, because they had received sound training in first principles.

The key to a satisfactory curriculum for the young wage-earner lies in this broad educational treatment of subjects of real interest and genuine importance in factory life. By such means it is possible to avoid a programme which is either narrowly technical or is so remote that it fails to stimulate, and therefore fails to educate. Subject-matter will vary, but further illustration will make clear the type of course which is required.

[1] "Physical Recreation at Work," *Journal of Institute of Personnel Management*, May–June 1947.

A basic need and interest for the majority of employees in this group is some knowledge of the principles of machinery. There is no doubt that an increasing number of girls, given the opportunity, like to work machines. If there is a chance of a job on a machine as compared with a hand job, many girls will choose the machine job. For them there is more satisfaction to be gained from the manipulation of a machine than from an ordinary hand job. It is, of course, true that the maintenance of machinery is in the hands of maintenance engineers, but if a girl has a good understanding of how a machine works she is likely to use it more carefully and to get more satisfaction and pride out of the job. There is a most important distinction between a machine-minder and a machine-operator. A machine-operator who feels she has control over the machine and who knows that the quantity and quality of her work vary according to her skill in using it, is in reality using a power-driven tool and is in the line of inheritance of the craftsman. Knowledge of the principles of machinery should therefore be given to all recruits in this group.

A further subject which relates to both interest and efficiency in the job is the study of methods of work. Basic principles will have been taught during the period of initiation, but much greater attention is now being paid to this subject, and Technical Colleges are beginning to realise that a regular course in motion economy should be included in the teaching of more advanced students. In view of this, it will be obvious that an elementary course in the theory and application of motion-study methods should be given to all juniors entering industry, irrespective of their particular occupation. Nor is this needed only for the production worker. It cannot be too often repeated that this subject is as valuable to the girl in the office as to the girl at the bench. Unnecessary movements and procedures are by no means the prerogative of the worker on the factory floor. Motion study can never be entirely successful until all levels in the undertaking have a good working knowledge of its principles, so that the operator not only accepts, but even anticipates suggestions from the expert. This surely will involve participation in a most practical sense.

It is necessary to stress that the lack of satisfaction that many people suffer in factory work is not entirely due to the nature of this work. Most people with experience of factory life will confirm that, particularly where women and girls are concerned, there is rarely a surfeit of people able and willing to take on the arduous but interesting and stimulating jobs of supervisor, trade union representative or Works Council member. And for those who do fill such positions interest is inevitably in part dependent on the amount they are able to put into them. War-time experience made it clear that in many cases people fell down on these jobs through lack of proper training. An unreasonable amount was expected from people inadequately prepared.

This is a consideration of great importance both to industry as a whole and to individuals in search of an interesting and satisfying career. It is one thing to set up a joint advisory committee; it is another to make it an alive worthwhile body. In the long run the value, and therefore the vitality, of any advisory body depends on the quality of the advice given. This implies that people who want to take part in such activities must be given good background training and be enabled to keep themselves so informed that their opinions may grow into balanced judgments of real value. The background training at least should be given the most serious thought by those concerned with the training and education of young people in industry. The detail of the training will vary in different localities, but should include not only the more obvious subjects, such as the elements of economics and the structure of industry, but also the development of the power of clear self-expression, both in speaking and writing, and, above all, the encouragement of the gentle art of listening to, as distinct from merely hearing, the points made by other people. A great deal of trouble arises in industry, and for that matter in life, because people are unable to say what they really mean; because they are unwilling to admit that there can be any reasonable view other than their own; because they are not sufficiently well trained to perform the difficult mental gymnastic of suspended judgment. Most differences are half solved if all parties concerned really want to sort out the facts as impartially as possible and to be guided by " the law of the situation " that thus emerges. If the educators will bend their minds successfully to this problem, they will make a tremendous contribution to their pupils and to industry.

The programme so far suggested is a heavy one, and the educationalists will point out with justice that they have only eight hours per week for two years in which to do their job. If the idea is accepted, however, that work is a central part of life, and that training for life cannot ignore subjects which illuminate and expand interest in work, we are bound to give some attention to the subjects which have been suggested. But work is not the whole of life, particularly for girls—though most of the subjects so far considered are of interest and value to any intelligent citizen, as well as to the industrial worker. Married or single, every woman at some time in her life has to accept responsibility for looking after a home, even if only for herself, and there is no need to argue the importance of training in the essentials of home management and of family life. This should include the ordinary domestic science subjects, the care of children and sex instruction. Domestic science is a subject which is greatly enjoyed by nearly all girls if intelligently taught with plenty of opportunity for practical work. In passing, a plea might be made for adequate, though not elaborate equipment. A frontal attack is needed on the housewife's

deep-rooted pride in "making do" with tools of a standard which would spell bankruptcy in any industrial undertaking.

But training for industry and training for family life are not in themselves sufficient. The remainder of the programme is in the traditional province of the professional teacher, and those who approach the problem from the industrial end can only make suggestions based on knowledge of the girl in the factory. The first point is to urge the case for a continuing training in normal academic subjects. Whatever may happen in the future, the present problem is not that the girl leaving school at fifteen is too highly trained academically for factory life, as is so often suggested. It is more frequently the case that she is not highly trained enough. It is not over-ambitious to say that all factory workers need reasonably accurate command of the three R's, however unfashionable they may be, some knowledge of the elements of science and some simple idea of the structure and organisation of the society in which we all have to work out our lives. The evidence of the Forces and of industry is that this not very lofty ideal has not so far been achieved. Without question, continued education must make possible a considerable improvement in what are normally regarded as the ordinary school subjects, whatever changes are made in the presentation of these subjects.

Much attention of late years has been focused on the need to develop leisure-time activities; and it is, of course, important that every help and encouragement should be given to girls to make the best use of that leisure which, in theory at least, is increasing so greatly to-day. If greater emphasis has been put in this chapter on other aspects of education, it is not because leisure-time activities are regarded as unimportant, but because they should not be the focal point and main purpose of the educational programme. How such training is to be given is primarily the concern of the educationalist, but it does seem to be important to stress that if every girl is to learn something which will be a continuing and developing interest after she has left school, a wide range of choice is necessary to allow for the wide range of individual talents. There must, however, be sufficient specialisation to enable and to encourage the girl to continue on a voluntary basis after her days of compulsory instruction are over. Enthusiasm is not likely to be sustained unless a reasonable degree of mastery has been achieved while still at the County College. In the limited time available this will be possible only if there is a great deal of considera-tion given to individual problems and if there is a ruthless refusal to dabble. Finally, it is impossible to say too strongly that girls must be taught in every possible way to use their own initiative and to become accustomed to accept responsibility for carrying through a chosen enterprise. It is not easy in industry to let young people learn by experience what it means to take responsibility—the educational process

may be too expensive. Yet somehow they have to learn that they must take decisions and must be responsible for the consequences of these decisions. It is in this field that the voluntary youth organisations have made a great contribution, because they have made it possible for their members to make a wrong choice. Whatever else is left out of this crowded programme, experience of responsible activity must stay in. There are many ways in which it can be done, and enthusiastic teachers are always devising fresh methods, though it would be a pity if the experiments and experience of the Youth Movement were neglected.

This is inevitably a brief and general sketch of the type of training and education that a girl entering industry needs. In its detail many will, no doubt, be in disagreement. But our generation is demanding that we should abandon the idea that there should be one standard of values for work and another for ordinary life. We are trying, however gropingly, to get a better integration between work and the rest of life, and to put work back into its important and honoured position. If that is indeed our aim, our educational policy must reflect that attitude, and must regard preparation for work and preparation for life as part of one unified pattern.

TRAINING FOR THE RETAIL DISTRIBUTIVE TRADE

BY

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Selling Then and Now. We are all customers of shops and not unnaturally show a preference for shops with a standard of service that pleases us.

In war-time it was different, with a shortage of goods it was a case of buying where one could.

More goods and a reduction in spending power has brought back competition which means that the customer has now the advantage of absolute freedom. Salesmanship therefore is once more a key-factor in business; requiring ability, calibre and a knowledge of merchandise. It is only too plain that from now on selling must be on a professional scale.

Because of the difficulty in recruiting experienced staff and juniors with a good standard of education the present day service in shops must undergo rapid and substantial improvements or survival for many will be slender.

It has to be conceded that the majority of people available for the retail distributive trade are average; the extremes—the best and the poorest—are not typical, and upon it being obvious that we have got to make the best of this material a change in training methods is more compelling than ever before.

No longer can the raw recruit be hurried through the Training Department haphazardly and be expected to pick up the endless threads of her job in the department. The very average and green labour must be groomed along studied lines quickly and efficiently to make professional sales people or productive non-selling staff. Thus Staff Training must be properly organised, and indeed it is vitally important that it is constructive and thorough if full benefit is to be gained.

Selection. In smaller shops the Staff Trainer may also be the Staff Engager; so, before passing to training, it may be wise to pause here on just one point. In selecting staff the Engager must know *exactly* what she is looking for. An analysis of the various jobs in the shop is the easiest and quickest way to acquire this information. It is important that the right person is chosen for the job, for bad selection leads to high labour turnover, which is extravagant and expensive.

Labour Turnover. The first few days on any new job are, to say the least, trying and tiresome, especially if the new-comer lacks confidence and is at all nervous. It she is not properly looked after she will, in many cases, resign before she has had time to settle down. This is another contributory factor to high labour turnover. A sponsors' system has been found to be invaluable in preventing this.

The Sponsor. Staff Trainers cannot at all times be present in departments to watch over and guide new-comers, so a solid contribution in the form of sponsors is added to the Training Department. Sponsors therefore become the representatives of the Staff Trainer in their individual departments. In addition to their normal daily duties, they do all the training that must be done outside the Training Department.

There should be at least one Sponsor in every department, selling and non-selling, and more if the department is a large one. Any member of the department may be the Sponsor, providing she has the proper qualifications. The people chosen for this job must have ability to get along well with people; they must possess tact, make others feel at ease, be able to absorb all the details of the system, have a wide knowledge of their merchandise and the shop in general, and be competent to impart their knowledge. They must also be sympathetic and understanding, for it is to them that the beginner will come with her many questions and difficulties. The Sponsors need not necessarily be the best saleswomen in the departments, though they must be capable saleswomen, in order to teach the new-comer how to sell. They will, of course, get special training, so that they have a fund of knowledge, to enable them to answer intelligently any questions from the new-comer.

Sponsors should get extra pay, or a bonus for every person they sponsor, when that person has passed her test and received a satisfactory grading from the Staff Trainer.

Training the Sponsor. As soon as conveniently possible after the Sponsors have been selected, the Staff Trainer should get them together and explain to them why they have been chosen to be Sponsors and their responsibility to the Staff Trainer, as well as to the new-comer. It should be stressed that it is an honour to be a Sponsor.

A very thorough and detailed system training should then follow, for they must know the system perfectly. Lectures by holders of key posts in Management, Merchandise, Finance, Publicity, Display and Personnel will give them an adequate background of the shop and a wealth of general knowledge.

From time to time refresher courses should be given and discussion groups arranged. The Staff Trainer should meet the sponsors collectively each week to discuss their daily problems.

Initial Training for the New-comer. It is understood, of course, that the proposed training scheme will have to be adapted to meet the needs of the individual shop.

The first class is a simple but very necessary one from every point of view. Outline the rules and regulations of the shop; clocking or signing in; house discounts; allowed shopping times; holidays; leave of absence; sick pay; thefts (customers and staff); promotion; reviews on performance, erasures on sales checks; how to collect pay; lost property, etc.

At the second class the various administrative posts, who the holders are, and what they do should be explained. Next, the trading policy of the shop should be outlined, and the class told what the customer expects to find at this particular shop—value, assortment, courtesy and good service—and how it differs from its competitors. These two classes are sufficient for the first morning, if the information given is to be properly assimilated. Before lunch the new-comers should be turned over to the Sponsors, who should escort them to their departments and introduce them to their fellow-workers. The Sponsors should then instruct them in departmental routine and take them on a tour of the building to learn the location of washrooms, canteen, medical room, counting-house, despatch and receiving departments. At a later date another tour of the building will help them to locate different selling departments.

In the afternoon the Staff Trainer should teach sales book and selling system in the Training Department.

Special systems, such as alterations, repairs, hire purchase, should be taught where necessary by the Sponsors on the selling floor, for these things seldom affect all the class.

When teaching system each type of transaction should be explained. The class should make out sample bills for the various transactions. The class should be instructed to print all bills in block capitals, so that they are legible.

The balance of the day can be spent on the selling floor, where new-comers should be attached to their sponsors, and have the opportunity of observing them at work. No attempt should be made to serve customers.

By the end of this first day the recruit knows the rules and regulations of the shop—who is who, the trading policy, the location of many departments she will soon be using—and she has a general knowledge of the system.

Next day the previous day's system should be reviewed, to make sure that everything taught has been thoroughly understood. As in the first class, sample transactions should be given, the class making out the sales checks for the transactions. The general system training should then be completed.

Merchandise Training. On this second day the Sponsors and their pupils should report for work two hours after store opening, and remain for two hours after it has closed. The sponsors should then, after closing, give the new-comers their merchandise training.

The stock should be gone through thoroughly, fixture by fixture, the Sponsor explaining as she goes along why the department carries one type of merchandise in preference to another, materials, pricing, sizes, tickets, display and good stock-keeping methods.

When the explanations are completed and all the stock has been gone through the Sponsors should ask their pupils to find various pieces of merchandise and question them regarding prices, sizes, materials, etc. Thus, merchandise training can be given in concentrated form without interruption; the necessity for asking questions whilst trying to serve customers is eliminated, and, most important of all, the customer is not inconvenienced and exasperated by an assistant who does not know her stock.

How to Sell. It is here that the shop with the good training system gains over its competitors. The fact that the staff are system perfect and know all about their shop means very little if they cannot sell with confidence.

Almost everyone requires to be taught how to sell. Salespeople, as a class, are amateurs, have little technique, and take the line of least resistance.

Therefore the next step should be to teach the theory of good selling, and this should include the following points :

(1) A pleasant courteous approach.
(2) How to size up the customer's needs.
(3) Presentation of merchandise.
(4) How to gain the customer's confidence.
(5) Price of merchandise to show first, and how to work up to more expensive merchandise.
(6) Skill in helping the customer to make her selection.
(7) Information on durability, suitability, washability, style and value.
(8) How to close the sale.
(9) Suggesting of additional merchandise.
(10) The making of a neat package.
(11) Taking leave of the customer.

After explaining the steps in a sale, one person from the class should sell to another member, who should act as the customer. The class should then criticise the transaction, discussing the mistakes and the good points made by the seller.

Unless the shop is a very large one with a complicated system and tremendous stocks, the new-comer, on the afternoon of the third day, should be ready to take her place in the department. The training up to this point has taken two and a half days, and though this may seem to be costly, it is really money well spent, since the customer will not now suffer from inefficiency on the part of the new-comer.

Throughout the coming weeks classes in salesmanship should continue, and each step of a sale can be the subject of one class. The use of the members of the class to demonstrate the methods should be continued.

Non-selling Training. Non-selling staff need only have the first two classes :

(1) Rules and Regulations;
(2) Administrative posts, and the Trading Policy.

The balance of their training should be given in their department by the Sponsors. They should be told what they have to do, and shown how to do it. The beginners should then do the job, the Sponsor supervising and correcting them as they go along. The Sponsor should make sure that they thoroughly understand what is required of them, for if they fail to learn a routine job it is reasonably certain that they have been badly instructed.

Follow Up. It would seem to be a waste of time to fail to ensure that all the information given to new people through their training period has been absorbed and is being put into practice. Consequently, towards the end of the third week the new-comers should have a simple written test in system, merchandise and general shop knowledge. These tests should be graded, and those who fail to reach a satisfactory standard should be given additional training and if this fails they ought to be dropped from the team.

Junior Training. Too little attention is paid to the necessity for well-planned training for the juniors—the juniors of to-day are the sales-people of to-morrow.

In the old days of apprenticeship the junior was attached to a competent person in the department to learn her job, but this is not now possible, for the young people of to-day would simply not stay the course, because of the length of time involved and the monotony of the routine to be followed.

In the first two years the junior should spend six months in each of four different departments, under the direction of the respective Sponsors. Each Sponsor should give a report on her progress, and the Staff Trainer should go through these with the junior in question.

Only in this way will the junior get a reasonably comprehensive knowledge of shop routine, and by the end of the first year she may have some idea of what she would ultimately like to do.

Special Junior Course (After One Year). Prior to giving any special training, the junior should be interviewed by the Staff Trainer. At this interview her future should be discussed. If it is then thought that she is likely to benefit by special training, and that she hopes to make a career for herself in the shop, she should be recommended for the Junior Training Course. Throughout this course the competitive spirit should be fostered by competitions of various sorts, with prizes to keep up enthusiasm.

The subjects for the course should be on the following lines: good housekeeping, display, answering shop letters, grooming, shop routine, promotion and a comprehensive course on selling, bearing in mind that juniors have never done any selling, and do not know much about things in general.

Selling should be practised in the department after the shop has closed, one junior acting as the customer, whilst another does the selling. This gives the proper background to the sale, and helps the junior to gain confidence. There is not the same necessity for this in the case of senior salespeople, who can quite well practise selling in the Training Department.

Day Continued Education. Whilst these classes have no direct bearing on the junior's job in the shop, they stimulate a desire for better education, and make the junior take a more serious view of her future. They should be conducted by the Local Education Authorities, and consist of a summer and winter term, twice weekly for two hours, preferably in the mornings, since young people are too tired at the end of the day to be really interested.

Though any subjects of interest may be chosen for these classes, arithmetic or mathematics should always be included. These subjects are excellent training in clear thinking, logical arrangement and mental agility. Other suitable subjects are Current Affairs, English Literature, Speech Training and Art.

Now that Staff Colleges have started in Great Britain an ideal way to end the summer session, particularly if the college is in the country, is to send the best pupils to Summer College for two weeks. Here they should have morning classes and discussions on a variety of subjects, acquire a knowledge of how their particular shop was built up, and what it hopes to achieve. One or two evening lectures should be arranged, leaving the afternoons free for sports. The advantage gained from this visit is that these young people learn the value of community living, and get something of a boarding-school atmosphere.

Adult Education. There are quite a number of people in shops who would like an opportunity to extend their somewhat limited education, and where there is a Staff College that can be quite easily dealt with. For those who, for one reason or another, cannot attend the Staff College, the Staff Trainer should arrange a series of evening lectures by well-known people. It is better that these lectures are not vocational, but rather those that give some form of culture, such as music, drama, play reading or travel, for they are not for the masses, but rather for the few.

Vocational Training. Staff can never know too much about the merchandise they sell. Curiously enough, the customers often know more than the selling staff, for, strange as it may be, what people see every day they see not at all, and they go on from day to day in the same rut, learning nothing new about the goods they try to sell.

Lectures on the manufacturing of goods are of considerable value, but much the better way to learn how things are made is to see them in the making.

Staff Trainers should therefore arrange trips to the mills, factories and potteries. The knowledge gained from these visits is never forgotten, and the staff can sell their merchandise with additional confidence.

Training for Junior Executives. Only the most promising and ambitious Junior Executives whom the Management want to reward for a job already well done should be chosen for this course. Classes should be held twice weekly for twelve weeks. The lectures arranged should cover personnel management, store management, buying, advertising, display, store layout and store finance in its widest sense, mark-up, mark-down, appreciations, selling costs, gross and net profit, capital expense and budgetary control. At the end of the course an examination paper should be set, and the entrants graded.

Councils and Committees. In every shop there are people who would like to air their views on matters of common interest.

A shop council or committee elected by the rank and file by secret ballot will give them the opportunity they want, and permit them to speak freely.

It will also teach them committee procedure, help them to formulate their ideas, and to express those ideas coherently in public. Only matters related to the shop should be raised at these meetings. To ensure that the proceedings are fruitful, one or two holders of senior posts should be appointed as ex-officio members.

Finally, it cannot be too much emphasised that behind all the

schemes of Training that can be provided for the staff of a shop there must be a deep underlying sense of the objects of this training.

These objects are: first, to train the members of the staff in the technical aspects of their work; secondly, to make them realise more vividly that they are part of a team in which each has an individual responsibility to the customer, and thus to the ultimate success of the shop. The shop will be successful because they do their jobs well, and they, in turn, will have good rates of pay, good working conditions and security of tenure.

TRAINING WITHIN INDUSTRY FOR SUPERVISORS

BY

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The Origin. Much has been said and written from time to time regarding the training of supervisory staff in industry and commerce generally. Progress has been made during recent years in the development of the lecture course and discussion groups. A general need and demand for training of this character have been disclosed, and available staff competent to conduct such courses and discussions has been at a premium.

In September 1944 the Ministry of Labour and National Service began to develop a new form of training, called " Training within Industry for Supervisors ", which merits the special attention of all concerned with this problem. It is similar to a scheme that has been outstandingly successful in the U.S.A., where approximately one and a half million supervisors have benefited from this form of training during a period of intense industrial activity. The Ministry made a close study of the American scheme, and then introduced it, with appropriate modifications, into industry and commerce in Great Britain.

It may be said that the outstanding feature of the scheme is its clear, logical and practical approach to the real issues involved in good supervision It is an approach that throws up in relief factors which may have previously received but scant attention, and it provides a medium for a more balanced assessment of the real needs of good supervision in any set of given conditions. It embodies, too, a departure from the lecture method and an acceptance of the principle of group discussion along set and well-defined lines, as the best means of assisting the practical man on the job with a scientific approach towards the solution of his problems.

It is based on the idea that, once general principles have been clearly defined and accepted, the skill in good supervision can only be acquired by practice, and that initially in the group-discussions supervisors can do a great deal to help each other in acquiring this practical experience more rapidly. It accepts the fact that many supervisors to-day have acquired their ability in the hard school of long experience, but it asserts that much can be done by the T.W.I. method to accelerate the process, and so eliminate the need for costly " learning errors ".

However, it is an approach that is of little value unless it has the

full understanding and whole-hearted co-operation of " top management ". It is true to say that almost everything depends on this, and that therefore the approach becomes a real challenge to management. Success is obtainable only if there is a thorough integration of the training into the whole organisation and a continuous day-to-day application on the job by all levels of supervision. Much evidence is now forthcoming that where the training has been well done and the vital condition of management support exists, the results are significant and far-reaching.

It has been said that no written article or oral exposition can adequately convey the full implication of T.W.I., and the experience gained so far in the development of this work has proved this to be true. It is therefore only possible within the scope of this article to give a very brief account of the analysis of the essential needs of good supervision upon which the whole T.W.I. approach is based.

Basic Needs : Knowledge of the Work. First, the supervisor, who is defined as anyone in the organisation who has the responsibility of directing the work of others, needs to some degree a knowledge of the work. In a factory job this may imply a knowledge of the materials, machines and processes involved. The extent of the knowledge required in order to perform his supervisory duties satisfactorily will vary from industry to industry and from job to job.

Basic Needs : Knowledge of Responsibilities. Secondly, a supervisor requires a knowledge of his responsibilities as a supervisor, and this implies an understanding of the limits of his own authority and a knowledge of the company's policy on matters on which he himself can take action or can recommend what action should be taken.

The extent of the knowledge required in both the above cases must be determined by individual managements themselves, and the initiative for making good the deficiencies rests on their shoulders. But these " knowledges " represent the pillars of the structure; they are basic and fundamental in the make-up of a good supervisor. Clearly, then, although a man must have this knowledge of the work and of his responsibilities, it is the manner of its application that represents the real " skill " in supervision.

Basic Needs : Skill in Instructing. A supervisor must possess an ability to impart knowledge to others, to give an instruction in a manner that will induce the best results and, in the case of those close to the worker, an ability to instruct in the way in which the job should be done. The need for the development of this skill forms the basis of the T.W.I. Job Instruction programme.

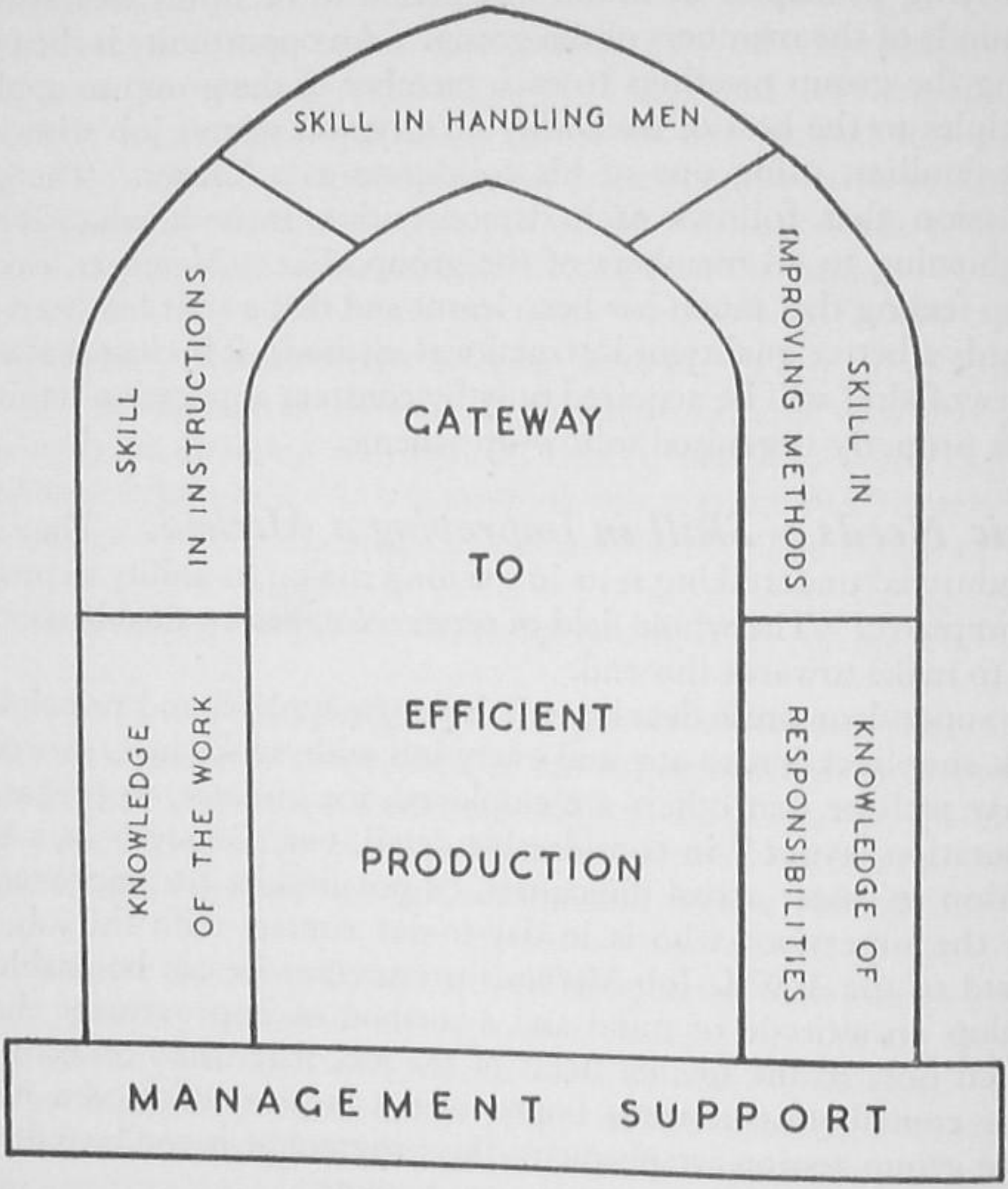
A series of five two-hour sessions are held within the factory or office during working hours for a group of ten supervisors at a time. The meetings are held on consecutive days under the guidance of a trained group-leader. In small firms the leader may be one of the Ministry of Labour's own staff, while in larger firms there are very good reasons why he should be one of the firm's own men trained by the Ministry of Labour to do this work. During these sessions a simple illustration is presented by the leader to the group to enable the underlying principles of sound instruction to be firmly established in the minds of the members of the group. An opportunity is then given during the group meetings to each member of the group to apply the principles to the best of his ability on a typical sample job with which he is familiar, using one of his colleagues as a learner. The group discussion that follows each demonstration is both educative and enlightening to all members of the group alike. Members leave the group feeling that much has been learnt and that a start has been made towards a better quality of instructional method; it is clear that a high degree of skill will be acquired only by constant application on the job and a properly organised follow-up scheme.

Basic Needs : Skill in Improving a Method. The life of an industrial undertaking rests in the long run on its ability to progress and improve. The whole field of supervision has a valuable contribution to make towards this end.

A supervisor must develop an ability to apply sound principles of work simplification to any and every job with which he is associated. It may well be that others are employed, for instance, to prepare the "operation layout" in considerable detail, but nobody is in a better position to assess actual difficulties, or possibilities for improvement, than the supervisor who is in day-to-day contact with the job. By the aid of the T.W.I. Job Methods programme he can be enabled to develop an attitude of mind and a method of improvement that, if applied only to the smaller items of the job, may make collectively a major contribution towards improvement in production as a whole. In the group session arrangements this programme is conducted along similar lines to the Job Instruction programme.

Basic Needs : Skill in Handling Men. Finally, as representing the keystone of the arch superimposed upon the two pillars of knowledge of work and knowledge of responsibilities, comes the skill in handling men. T.W.I. approaches this problem in its Job Relations programme as one of paramount importance in industrial relations to-day, and suggests that much can be done through the medium of this programme to bring the qualities of leadership into line with the changing trends of the present time.

Along similar lines to the other two programmes, it develops by group discussion the " foundations for good relations ", and suggests that, however conscientiously as supervisors we apply these foundations, human problems will always arise, and that sound training is needed in the handling of these problems. An underlying method for use in the handling of human problems is discussed by the group, and its application is practised and demonstrated on individual problems brought in by each member of the group. But here again a high degree



of skill in leadership can be acquired only by constant and unflagging application of the " foundations " and the " method " in day-to-day contacts on the job.

T.W.I. has accepted this analysis, and directed its whole effort towards the development of the skills represented in the arch itself. The stability of the whole structure of T.W.I., however, can only be measured in terms of the strength of its foundation, and this is Management Support.

For over three years there has been an intensive effort made in this

country to develop the T.W.I. Training Scheme. Relatively little official publicity has been given to the scheme, and it can be justifiably claimed that the progress made is, to a large extent, a measure of the industrial support and spontaneous effort made by industry itself to back and develop this form of training. Over a thousand companies, including some of the largest in the country, spreading over the whole range of industry and business undertakings, have to some degree adopted this form of training. Many firms associated with this work in the earliest days of its development still remain its staunchest supporters. Some of the trainers who were initially employed by these firms have moved on to other senior positions in their own organisations, but not a few are still directly concerned with the actual training programmes, as also with the problem of continued effective application on the job. Many members of management in these firms, and the T.W.I. trainers themselves, felt for some time that there existed a need for some organisation through which contact might be maintained with all those concerned in the development of this work, and in particular with the Ministry of Labour's T.W.I. Staff. In the establishment of regional organisations of a T.W.I. Association the North-West Region gave the lead, and a number of other regions have followed suit.

T.W.I.—Part of a Long-term Training Process. The whole of this activity must be reviewed in perspective and a careful examination made of its relationship with other forms of industrial education and training schemes. Otherwise there may be a growing tendency to refer to T.W.I. as something apart or distinct from the more orthodox methods adopted in the training of supervision. During the last war the Americans foresaw this possible danger and introduced a fourth programme called "Programme Development". This programme was devised for the training, not of "supervisors", but of members of management responsible for training in their own organisations, and in particular for education and training officers themselves. The underlying idea of this fourth programme was to assist these particular people in the development of any type of industrial training programme that might be required to meet a specific production need, and the Job Instruction, Job Relations and Job Methods programmes automatically fell into their rightful place.

In this way the application of T.W.I. was brought into proper relationship with many other training schemes, some provided by the colleges, some by the vocational schools, others by apprentice-training organisations and similar bodies. Although it may be claimed that the idea of this fourth programme is just as applicable, and indeed highly desirable in our own country, the American "P.D." Programme did

not lend itself in the same way, as the other programmes had done, for adoption and development in the British setting.

It is the absence of this fourth programme that makes it all the more imperative to be on guard against "isolationist" tendencies. It is probably true to say that some of T.W.I.'s best friends are the worst offenders in this respect. As a simple example, one's attention was recently called to a meeting that had been convened to consider training programmes for supervision "apart" from T.W.I., on the grounds that the latter was being fully and adequately dealt with by its own organisation and can be safely left to look after itself. Any dissociation of this character discloses a lack of understanding of the real contribution that T.W.I. has to make.

The Scientific Method. Aristotle, Francis Bacon, Herbert Spencer and many others stand in the line of those who "through the ages" have seen the possibilities of the application of the "scientific method" to a variety of matters that can be made the subject of a reasoning process. Although it was in the field of physical and chemical science that the quickest progress was made in its application, it was not until the last century that any similar progress was recorded in its application to managerial problems *per se*. Skill in the instruction of others, in developing a better method of doing a job and, above all, in the handling of the human problems that arise in one's day-to-day relationships with others, provides the very foundation for success as supervisors and as effective members of management. The three T.W.I. Programmes have helped many to approach these matters more objectively, to apply and use a more logical reasoning process in their treatment and to think, not in any narrow sense, but much more broadly about the factors that influence given situations in which these things are concerned. As a result, those concerned with Training Within Industry have been able to visualise more clearly the proper place and function of training in relation to the normal production and commercial activities of any organisation; it has been possible to get a glimpse of the real meaning of "integration of training".

If these are some of the lessons T.W.I. has taught, then one can no longer think in terms of "five two-hour sessions", but rather in the application of the whole T.W.I. idea to all training work on a permanent long-term basis. Many trainers have, no doubt, given a great deal of thought to the problem of fitting the T.W.I. scheme into long-term training programmes, and here one or two illustrations might be given in this particular respect.

T.W.I. Applied to Training of Process Workers and Apprentices. In the case of the training of juvenile and adult process workers (non-apprentice grades), it will be found that a great many of

the operations can be broken down into " instructional units " and dealt with according to the normal Job Instruction technique. The sequence of the " instructional units " and their layout on a time basis are important, and if any really worth while instructional job is going to be done on some of the more complicated processes, this lay-out of instructional units, with their respective " breakdowns ", must lead to the development of a form of training manual related to any one specific process. In essence it is the development of the " Training Time-table " idea combined with the method of handling the " long operation ". Multiply this procedure many times to cover the multi-farious processes that may be found in one particular department alone, and one's mind automatically turns from the narrow conception of the " five two-hour sessions " to the broader idea of a long-term training plan and all that is involved in a well-developed scheme.

The same line of reasoning applies in the field of " apprentice training ", and although there are many well-developed apprentice-training schemes in existence, it is doubtful whether any substantial inroad has been made into this field in regard to the practical interpretation of the Job Instruction technique. Here there is a great opportunity for development, and when consideration is given to the ground that has to be covered in the course of a five-year apprentice-ship, the magnitude of the job becomes apparent, and can only be tackled on a " long-term " basis.

Long-term Objectives. Reference has been made to two logical developments of the Job Instruction programme in its application to certain specific fields of training, and the same reasoning applies to the other T.W.I. Programmes in their particular fields. A good deal has recently been heard about the possible application of the Job Relations programme to Shop Stewards and Trade Union representatives. This is a field in which the scheme must be developed with the greatest care and forethought. Nevertheless, there is everything to be said for bringing these people into direct contact with the Job Relations course, so that both supervisors and workers may recognise and accept a common basis for the handling of many human problems. Those who have had contact with Shop Stewards and Trade Union representatives know that many of their misgivings regarding T.W.I. arise from an initial lack of essential information regarding the objectives and content of the programmes.

Many other illustrations of the relationships between T.W.I. and long-term training schemes might be quoted. If this work is to be seen in its true perspective, it is clear that those who are more directly connected with this form of training must " lift their sights " on to those long-term objectives if some of the real benefits of T.W.I. are to be realised.

THE COUNTY COLLEGE: ITS SIGNIFICANCE TO INDUSTRY

BY

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1. *Industry and the School Leaving Age*, 1947. It cannot be denied that, whatever the enthusiasm for a better education service displayed by some industrialists during the passage of the Education Bill through Parliament, their first general interest in the Act itself was directed to the postponement of the raising of the school-leaving age. Faced with a declining man-power and with incontestable demands for five-day weeks or shorter hours, there were those persons, both disingenuous and sincere, informed and ignorant, who asked whether this could really be the time for embarking upon long-term reforms, whose only immediate effect would be to deprive productive industry of the juvenile labour of which it appeared to be in such urgent need. In addition to these doubters were the men of independent thought, for whom such questions did not arise—men who regarded education anyhow as a corroding influence that put boys and girls above themselves, and turned their thoughts away from honest and productive labour towards the temptations of commission salesmanship or the effortless paradise of a bogus social security. Nor were these philosophers alleged to be found only in the ranks of industrial management; the parents of the fourteen-year-old children frequently shared the same views, and to them the prospect of their overgrown and appetitive sons, now far beyond the ages at which they themselves entered industry, spending a further twelve months in unremunerative idleness was dark with injustice, foreboding and alarm. Things had come to a pretty pass, it was argued, if these educational changes were to be taken seriously; even the more liberally minded argued that education, although quite unobjectionable in itself, was somewhat of a luxury, and should await the recovery of trade for its further extension. Now that the question has been settled and our children in their fifteenth year are safely in school, it might appear that these remarks are overdrawn, and that in fact no such objections were raised; or that if they were, they found but little support. As nevertheless they may tend to be repeated when the day comes to make effective those parts of the 1944 Act dealing with County Colleges, it might be as well to remind ourselves of the attitudes of some persons by turning again to the newspaper leaders of March 1947, presenting with various measures of skill, prejudice and downright insincerity the case for postponing the raising of the school age.

It does not, of course, necessarily follow that all those who had reservations about the wisdom of raising the school age will also oppose the County College; their attitude will depend to a large extent on the degree of crisis to which the country is then being subjected. Some industrialists, too, who have tried their hands at education or training through the medium of their own works schools, or who have had previous experience of part-time day release, may see a great deal more of good in the County College than in time spent at school before the age of fifteen; a few idealists—or cynics, it is hard to say which—regard the future of British industry as assured only if the new generations now entering it can be trained away from the older men, and kept isolated from them, for fear that they will be infected in their youth by the selfish laziness, as they imagine it to be, of the present workers. But whatever the influence of the industrialists who approach the County College with educational ideas, preconceived or otherwise, there is no doubt that all their colleagues will soon take a very practical interest in what goes on in them, if for no other reason than that the employers will be expected to pay the wages of the students, even although there may be no provision to that effect in the Act.

2. *Potential Realism of County College Education.* The County College offers prospects of educational achievement that have been denied many other approaches. When the Education Act of 1870 was put upon the Statute Book, conditions in industry were not substantially different from those earlier described by Charles Dickens and attacked more positively by Lord Shaftesbury; those who were moved by the injustices of child-labour determined that statutory education was in every way to be a corrective to the influences of Victorian factory life. And among their resolutions was this: that the content of the school instruction should be as far as possible removed from the principles of commerce and the practices of technology. Just as in the first wave of the Industrial Revolution the intellectuals turned away from the realities of the steam engine and the mill to the mediæval romances of Walter Scott, or to contemplate Nature through the eyes of the Lake Poets, so, half a century later, the educational pioneers, to fulfil their duty of teaching the three R's, turned to abstract mathematics and the English classics as the proper food for the first generations of school children. This has had two main consequences: the first to develop a narrowly scholastic tradition in the schools, out of touch with the structure and realities of social and industrial life to-day; the second to incline children, particularly children of ability, away from industry as a means of livelihood. The Spens Report of 1938, on the aims and content of secondary education, illustrates the first; the need for the Barlow Report of 1946 arises from the second.

There is abundant evidence that the Ministry of Education is alive to these issues; we must, however, all be on our guard to see that the outlook of the County College is not, from the beginning, coloured by the same desire to regard attendance at the College as an escape from the Moloch of industry. Not that this implies the teaching of trades at County Colleges; let us hope that, as a matter of policy, trades and their inner technicalities will never be part of their stock-in-trade: the few hours devoted to further education can be much more valuably spent than in offering specialised clerical or manual instruction that can better be given in the factory or the counting-house. But industry and commerce to-day, whether that industry is coal-mining or the weaving of silk stockings, or whether that commerce is selling ice-cream in Cardiff or managing a shipping concern that operates on the other side of the globe, are built up on what the human imagination regards, from the nature of things, as a set of principles. This set of principles has gradually been sorted out and divided between two groups of recognised formal subjects: first, the exact sciences of physics, chemistry, mechanics, geology and so forth; second, the social and biological sciences, such as economics, psychology, industrial relations, public health, theory of government and many others, sometimes approaching the limits at which a subject can no longer be described as a science, because no universal principles can be discerned therein. It is one opportunity of the County College that it is able to pick out a limited few of these principles in terms of the daily lives of the adolescents, and to illuminate them in terms that they understand.

It is sometimes forgotten that people think of situations or things only in terms with which they are already familiar; a boy, to his parents, is, among other considerations, a potential contributor to the family income; to the parson he may be the best choir-boy or the Sunday School member most in need of salvation; to the orchard-keeper a natural enemy; to the girls living in his street a possible husband; to the schoolmaster a personality to be fashioned or a character to be formed; to other boys a member of the football team or a merchant with whom to barter foreign-stamps or fishing-tackle. And the young person in industry thinks, or can be led to think, of the principles of science and the records of humanity in the terms of that most important interest of all, the daily work in which he earns his living. The County College will need to look at industry and commerce as educational media of the most effective kind, and the persons responsible for establishing and maintaining these new institutions must therefore make themselves thoroughly familiar with the outlook of the young person upon his employment. It is not that the student will necessarily understand a principle that he would profit from understanding simply because it has application to his employment, such, for example, as a boy in a boiler-house understanding by the light of

nature the principles of combustion; the teacher must not only know that the principle is illustrated in the industry, he must also know that it comes within the purview of the student and can be interpreted to him inside his common experience.

3. ***The Social and Industrial Pattern.*** This cannot be achieved through administration on a national scale; employers and teachers must meet frequently either at the factory or at the college; each must be thoroughly familiar with the activities of the other, and personal contact alone will generate this familiarity. Moreover, the local employers should agree between themselves upon the nature of the general technical principles that the County College courses should illustrate, even though the arithmetical example best suited to the apprentice carpenter learning to take off quantities differs from that most appropriate to the shop assistant who wants to know all the tricks for casting up grocery bills. In a subject such as local history or geography, the first aim should be not to read the facts of the present time in terms of the architecture or the memorials of the local church, but of the growth and location of industry, its relation to the railway or the river, and the problems of man-power, transport or supply, with which that local industry is now faced. Such illustrations should be worked out with the help of local employers' confederations, and would serve to make young people recognise that the industrial fabric is very closely interlocked, and that parts of it cannot be disturbed without undermining others; the recognition that the only people who may suffer in, for example, the next milk strike are the children of the strikers themselves and of their neighbours is a lesson that human beings need to be taught, and they will understand it only if they have an understanding of the social structure that the milkmen are employed to serve. Those who think that these simple truths are revealed to men through their unaided intelligence ought to reflect that the whole history of civilised society has largely been the gradual building up of a system of law and ideas in order to protect the majority from being exploited by the few, and exploitation of a whole nation by a particular trade is only the latest form of an ancient urge to power. The turbulent nature of man, whose historical record is one large chronicle of group organisations, whether tribes, nations, religious factions, trading concerns or different social classes, engaged in unending struggles for supremacy, gives one little confidence that even in the most highly advanced and socialised State the various groups of industrial workers will of their own accord abandon the ancient strivings. The gradual amalgamation of groups of workers' interests will not go on indefinitely, and automatically lead to a world federation of labour; long before that state is reached, and inside the confines of any particular nation, some kind of equilibrium, achieved after inter-

trade struggles and perpetually threatened by changes of techniques and markets, will need to be established between the separate powers of the labour forces in each industry of that nation. As long as France remains, the French steel-workers, the French farm-workers and the French shopkeepers will, with other classes of French workers, each try to get for themselves the largest slice of the French national cake. Because we accept this as a fact in the very nature of things, we must stress the paramount importance of sufficient education to ensure that, in fighting to divide up the cake, the workpeople do not in the course of the battle destroy just that of which they are all trying to get as much as they can—the very cake itself.

It is hardly necessary here to enlarge upon the opportunity granted to the County College for bringing home to adolescents the consequent dangers of industrial disintegration; any principal with a reasonable grasp of his job will see at once the use to be made of that greatest of all adolescent interests—prospects in employment. Wages, security, present conditions of working and many other factors, familiar because they are experienced, can form the material for a thoroughly practical course in social and industrial structure, and the variety of employment among the students in any one district will help to paint the course in the attractive colours of conviction.

4. ***Grammar and Tables of Everyday Things.*** But there is a much more necessary, and infinitely more difficult task for the County College than this. It is to attempt, if not to secure, a deeper understanding of the phrases and figures of social and industrial argument, or, failing this, a critical and cautious way of listening to or looking at them. We believe this to be necessary because, of all the achievements of modern education, none is so striking as its success in having taught people to read without having taught them what is worth reading, unless it is the success with which we have taught people how to calculate, without giving them any sense of the values of the symbols that they manipulate. Because a statement in a newspaper obeys the laws of syntax, the chances are that it will be accepted as true; unless an idea can be expressed as a number of pounds or expressed as a numerical target, it is hardly thought worth pursuing. Slogans can be concise and infectious, and yet bear not the slightest relation to truth or practicable effort; wages, points, bonuses, scores, gradings, priorities, quotas and so forth can obey every rule of arithmetic and yet be deliberately false. It is symptomatic of this that the Government have set up a Royal Commission on the Press and that intelligent cynics regard statistics as organised prevarication; certainly the power that numerical statement has over most people often breaks down the resistance of common sense. Numbers have invaded nearly every field of thought, and in concentrating on the numbers, we may

not trouble to ask just what they stand for. An age of record-breaking demands a scale of measures; film stars are placed in serial order of popularity; intelligence quotients are measured numerically; endurance feats are of interest as long as they can be shown to surpass in time or measurable effect the existing records; finance, expressed chiefly as strings of figures written in ink upon sheets of paper, has become the vascular system of Western society; during the war men organised sweepstakes to bet upon the numbers of British bombers that were lost on the nightly raids over occupied Europe; in the absence of positive qualities the journalist measures his value by the mere volume of his circulation.

The greatest harm that the fiction of numbers can create is the confusion it produces in the minds of men between the natures of wealth and of money; men to-day believe these to be identical. The efforts of the individual, whether a workman, a foreman, a manager or a director, have largely become bent towards the acquisition of more and more money units, computed on a numerical scale of which they understand only the notation, quite without regard to the actual work they perform, oblivious of the fact that this work appears at other hours of their lives as the standard of living the country and they themselves can afford. One frequently meets people who still feel that all that is necessary for economic salvation is to run the printing-presses at the Mint overtime, and to give each workman more pound-notes at the end of the week; there are other persons who, while denying this ingenuous argument, think that more South African gold is all that is necessary to restore what they believe to have been the mass prosperity of 1939. So far are we now deceived by words, numbers and symbols.

5. ***Awakening of Industrial Consciousness.*** It is in this field of such simple economic theory that the County College can achieve so much. The two great urges of adolescence, social consciousness and the need to see the utility of things (in fact two aspects of the same primary instincts), ought to be intimately articulated to the educational cause. In the long run it will profit industry far more if its seventeen-year-olds are mixed in with the young typists and shop assistants, investigating, from personal knowledge of the group, the economic foundations of the village or the district, than if they should spend all their time studying, say, the principles of measured drawing. Most of these young people earn a wage; most of them have a fair idea about how it is spent. Few of them, needing, say, a lipstick or a cricket-bat, have much idea where these goods come from, the amount of labour that goes into making them or the overhead costs of the factories where they are made. But the adolescents know of their own conditions, and can be led to think in terms of them; it is only through

such comparisons that any effective socio-economic thinking will be engendered.

There are idealists who, knowing of the powerful religious forces that can be made to move most adolescents—for social revolutionaries and evangelical converts are nearly always adolescents—say that young people do not need their social awareness sharpened on the economic whetstone. They say it is sufficient to bring out the "team-spirit" in the juveniles, to make them members of a good club, and they will then grow up unselfish and given to the service of their fellows. However true this may be in particular cases, it forgets that in using such concepts as "team-spirit" we are falling into the snare of words; "team-spirit" on the football fields or in the club may not, and probably will not, be automatically transferred to the bench or the counter—least of all to the deliberations of the wages conference. For "team-spirit" is a very elusive quality; the compound word gives us a mental image of it, as "rainbow" gives us an impression of summer rain. But one cannot transfer rainbows to situations where the atmospheric conditions are different; they are specific to sunshine and showers. So "team-spirit" is specific to surrounding conditions, and the "team-spirit" of the cricket ground begins and ends on the cricket-ground. Industrial team-spirit has to be engendered in the conditions of industry; it demands first of all an understanding of the rights and duties of the persons among whom it is to be fostered, and of the economic foundations of the world in which they work.

It is impossible also to believe that the concept of Society as a live and purposeful organism to be conscientiously served can ever be brought home to adolescents in general terms; illustrations of society that are familiar must be used. Society is too new, too remote and too coldly official to inspire confidence or devotion as a general idea; used in the abstract, it probably stands for unemployment benefit or national health insurance. Besides, there were times not so long ago when Society appeared to take little enough interest in large numbers of individuals, and the boys and girls who were aware of this would find talk about debts to Society not only difficult, but extremely irksome and hypocritical. If one wants to engender social responsibility one must introduce it through the local and personal influences that Society brings to bear on the particular individuals in question. It is this that accounts for the failure of broadcast appeals and general exhortations to action that are not translated into terms of the daily rounds of the persons expected to act.

6. *Appreciation of Authority and its Problems.* Any analysis of a business enterprise that the young people know must at the beginning employ the concept of authority. The social aware-

ness of young people, which gives them a sense of fair dealing that is often, alas, rapidly blighted as they take their places in the practical world of their elders, demands leadership. Schoolmasters since the beginning of recorded time have observed how young people will follow an example; Hitler and Mussolini were on very firm ground when they relied upon adolescents for their storm-troopers and their political commandoes. The effervescent energies of the sixteen-year-old seek for mass expression; adolescence has no Robinson Crusoes, although it is equally rare to find the leader among the spirits of the same age. The youthful revolutionary usually takes his prophet from a past generation or models himself upon an older man, as Shelley on Godwin, the Girondins on Rousseau. Likewise in industry; it is leadership that most young people want, not Utopia. There is evidence that older workers have similar needs.

The inherent dangers of this necessity are obvious to all who have studied the events of the past fifteen years. We saw young people abroad growing up in the featureless misery of post-war Germany and the violent anarchy of Italian disappointment, and we know the power that Fascist Party discipline achieved over them; it was not, as it might have been, the discipline of mere restraint and servility; it soon became the positive devotion to a cause to be won, a readiness for active self-sacrifice that did not waste time discussing abstractions such as social rights or constitutional legalities. We may shake our heads and say, " Never in this country ", but we must at least recognise the forces with which we are dealing. If industry fails to give clear leadership to its young people, or to explain to them how that leadership is constituted, then it will be so much the worse for industry. It is not that adolescents deny the need for authority; they recognise it and will support it, but what they need is to be impressed with the justice and the worthwhileness of the cause that authority is trying to maintain. In short, young people like to be bossed about if they feel that the boss has a right to give his orders.

This may be a little startling to the manager who has never dreamed of questioning his own position, much less expected his employees to do so. But industry is so vast to-day, and workpeople are so confused by the smoke-screens of political and economic half-truth that are thrown around issues of any importance, that the great majority of employees have no conception of the organisation, much less the problems and policies, of the firms for which they work. Now, we do not say that County Colleges should undertake to explain to individual boys and girls how any particular firm is managed, but lecture-discussions upon the need for management and authority, introducing ideas of division of responsibility, departmental organisation, grades of supervision and so forth, as well as the rights and duties of the various kinds of subordinates, would be extremely

valuable. They would, carried on in the peace of the classroom, help to dispel the ridiculous ideas that are in common circulation in some industries, such as that which holds that managerial positions exist merely to give a privileged few houses bigger than those of their neighbours, or that the coal industry was nationalised primarily to provide officials with motor-cars. These illustrations are not intended to be facetious; men do in fact believe such things, and it should be our aim to try to make a new generation of entrants to industry think clearly upon the nature of the authority which, as we have said, they, as adolescents, are quite prepared to accept without question.

7. *Co-operation with Trade Unions.* This might be read so far as an elaborate attempt, or as an expression of hope that the attempt might be possible, to restore under a façade of high-sounding and grandiose social principles the discipline or the subservience of labour of which, in the eyes of some people, industry to-day stands in dire need. But discipline in the old sense—the weapon wielded by arbitrary authority, the threat of retribution and the fear of unemployment—has disappeared; if it returns it will not return as industrial discipline, for this needs behind it an industry so organised, so powerful and so self-confident that it can afford to treat its wage-earners in any way it pleases. Now industry has to be built up on technical realities, not on political manoeuvres, and it will be many years, with the state of world trade and the physical exhaustion of British industrial resources, particularly of her mines and railways, as they now are, before industry is in such a powerful position that it can afford, even if it were right and proper to do so, to dispense with the services of a single workman. Whether we live to see discipline of another kind imposed upon us is another matter; continental countries have discovered that there are ways of coercing men besides depriving them of their means of livelihood.

For these reasons, it is absolutely essential that the help and active interest of trade unions should be sought in the lessons on industrial democracy and government that the County Colleges should offer. The trade unions are just as concerned as any federation of employers with the need for making young people understand the delicate structure of the industrial society in which they are employed; the trade union leader is normally more dismayed than the employer or the industrialist at the unofficial strike or the unintelligent defiance of authority. For he sees that in the end it is the working people who usually suffer most, and he knows very clearly that the strength of industrial negotiating machinery lies in its proper constitutional use; his interest in the political education of his constituents is vital, for his power depends not on capital or property, but on intelligent unity of action. Moreover, it is a power that he is becoming increasingly

loath to use, and in fact the whole educational policy of the Trade Union Congress at the moment is to give its members a sense of the need to recognise the wider problems of organised industry and to help in the solution of them, rather than to wield their collective strengths for sectional and restrictive ends. Lecture-discussions about Trades Unionism and its policies should be included in the curriculum; trade union leaders should be given a platform at the appropriate part of the course.

8. ***Wider Educational Needs.*** It cannot be the purpose of this dissertation to advise upon the detailed way in which a County College should be organised; that is the business of the people who organise it and are responsible for running it. The essay tries to outline what industry expects the County College to drive at in serving not just the narrow needs of industry, but the sociological needs of a civilisation in which industry is now the most important practical factor. It is fortunately true that life holds for most persons a few interests that have little to do with the earning of money; nevertheless, we still have a peculiarly difficult educational task ahead of us, to put money, questions of employment and promotion, hours of work and so forth in their right perspective. (We take the meaning of "right" here to be understood, and not to call for definition.) There are men whose whole powers, which are considerable, are bent to outwitting the wages structure of their industry; they do not want more money as a means to worthier or even separate ends, nor more leisure to further their own self-improvement; to them more money for less work has become a fanatical obsession, a self-contained and objective competition with figures, which in others might appear as the desire to swim the Channel or to sit for three weeks on the top of a flagstaff, neither of which achievements, as far as can be seen, are other than ends in themselves.

But there is a relation between these exaggerations. Elephantiasis in industry, mass production in the factory, herd action at the political meeting and so forth are manifestations of the same submergence of the individual personality as are cinemas, dog-tracks and football grounds. In themselves there is nothing wrong with any of these; it is as idle and silly to deplore professional football or mass-produced newspapers as it is to deplore railway locomotives or electric washing-machines. Both are signs of the times; all bear witness to the triumph of men over their physical environment, whether it is the mechanical ingenuity that thinks out steam-engines, or that understanding of human cupidity, backed by incredible powers of organisation, that goes into systems of credit betting. What may be wrong, however, in these accessories of entertainment or amusement is just what is wrong in modern industry: the individual is swept up in a torrent against

which he cannot swim and that takes him he knows not where; he has ceased to believe that he is anything but one of a million investors or of a million anonymous pen-pushers in a system designed for mass-operations. He understands what is happening only in so far as the results of the system can be expressed in numbers; to believe a film is a good one he must be told it cost a million pounds; to find a newspaper worth reading he must be told a million other people read it.

It remains to be seen what the County College can do about this. In the opinion of the writer, any approach deliberately opposed to trends of modern industry will fail; there is no place in England to-day for archaistic idealism like that of Ruskin, William Morris or Jesse Collings. Leisure must never be regarded as the corrective to a distasteful or brutalising job; to preach this is to set education and industry against one another again, as in 1870. Religion was once misguidedly used in an effort to distract the attention of the masses from the industrial misery of this world by holding out to them the celestial attractions of the next; education for leisure must not make the same mistake by trying to interest people in activities that are designedly got up to blind them to the realities of industry. If men are going to live and to work in industrial surroundings, they must be fully educated to do so; this means that, on the one hand, they should not regard their leisure as essentially an escape to another world, nor, on the other, as a mere extension of the factory method of dealing with thousands of cases by mere repetition.

Those aspects of education at the County College which, for the purposes of description, have to be regarded as distinct, and which, we may say, are for the proper use of leisure, must recognise the environment in which they are set. It is not education in art to get adolescents in, say, Stoke-on-Trent, to draw imaginary Persian ruins by moonlight, nor education in music to get them singing songs about going to Mandalay. If this is what is meant by education for leisure, there is much to be unlearned. Nor is it in the study of classical literature; it is monstrous to pretend that boys and girls of seventeen are by and large interested in Shakespeare or Milton or Charles Lamb, and the County College staff will very soon find this out. Adolescents earning their own livings are not helpless and unprotected, as are children still at school; they will revolt very quickly against having to read what may be safely forced upon their younger brethren; they will be quick in detecting the fulsome insincerity which marks the approach of many school-teachers to literature which they cannot themselves understand and which they would themselves never voluntarily read. The County College will succeed in awakening a true interest in the inheritance of English letters only if individual members of the staffs learn to know the students as individuals and advise them separately what to read, and then ask them a month later if they have read it and

what they thought of it. The boy in industry is forming judgments of his own; he needs help in being guided to what is good, but he does not want to have his canons of taste riveted on to him by somebody he hardly knows. Those who can remember their own days in the Sixth Form will probably admit that the greatest formative influence in their education were the tips that one got from the staff—not necessarily the English staff either—as to what one ought to try to read. The teacher who can open to a boy the worlds of Joseph Conrad or Thomas Hardy or Robert Louis Stevenson, or to his sister the worlds of Jane Austen or the Brontë sisters, or who frankly recognises that their young capacities are limited, and hence advises them to stick to W. W. Jacobs or Mark Twain, will do them, and the cause of literature, infinitely more good than the scholar who tries to encourage them to an enthusiasm for Coriolanus that he cannot understand. In any case, there will be no time during College hours to analyse substantial works; advice is the practical limit of the teacher's influence. And as with literature, so with music and painting. A fortunate few will already belong, and will gain from the tit-bits of encouragement and anecdote that the knowledgeable teacher can offer; the whole class can be advised upon radio listening, and short discussions can be held upon programmes actually heard, but formal attempts to analyse symphonies or to define in words the elements of beauty are not only insincere, they are also impossible. In the graphic arts, too, adolescents have their own ideas as to what they like, and should be encouraged to say why, if there is a member of the staff capable of following their attempts at self-expression.

Briefly, we may say this: whereas before the age of fifteen we must largely use the hours of schooling to teach the simple things that we must all agree upon, such as the rules of arithmetic and the meaning of words, during adolescence it is the differences between individuals that we must encourage, in order that each may grow as an independent and self-contained human being. It is the peculiar task of the County College to achieve the second aim, while nevertheless using the adolescent's attachment to industry or commerce in order to bring home to him his utter and entire dependence on others even for the fulfilment of his simplest needs. Perhaps we may put it in this way: at school we teach children to read the words in newspapers; at the County College to question their statements. Such questioning calls for the development of the individual in as many aspects of his own self as possible.

9. *Continuity of Technical Studies.* It is unfortunate that, just at the moment when many young men in industry awaken to the need for improvement in their own technical or professional qualifications and present themselves at the nearest Technical College to enrol

in classes useful for their trade, they find that they have forgotten much that was clear and simple to them before they left school. The human capacity for forgetfulness needs no encouragement; those who had to deal with the training or education of, say, R.A.F. recruits during the war soon discovered that many of them, although of high intelligence, had completely forgotten their elementary school arithmetic and were quite unable to string a few words together to write a narrative report of some simple event they had seen but five minutes earlier. Close investigation of particular cases revealed that ten years before, the same persons had written the best essays of their classes, and were then able to solve arithmetical problems far beyond their range at twenty-three. It is tragic when a young charge-hand or electrician wishes to take a course for a nationally recognised certificate or diploma and is unable to start on educational grounds, although he may be quite willing to give up his spare hours to his studies. By maintaining an interest throughout adolescence in simple intellectual exercises, the County College may save potential technicians a lifetime's disappointment; industry may have good cause to encourage the College for this reason alone.

10. ***Conclusion.*** It is impossible, just as it is unnecessary, to forecast the specific lines along which the County Colleges will in fact develop. In any case, their future organisation is in the hands of the Ministry of Education and of the local education authorities; these must have regard to the total educational needs of the country, and not those of industry alone, or even mainly. The division of the time-table between the many desirable activities, physical, social and intellectual, of the adolescents and the settling of the syllabuses with which these various activities are illustrated, are matters that must finally be settled by the College authorities; they alone have the view of the whole picture. Moreover, the education authorities will themselves be largely controlled by external circumstances; available labour and materials will determine rates of achievement far more effectively than educational resolutions. But industry will be consulted, and industry must be clear as to what educational purposes it expects the County College to fulfil. It must remember that the opportunities the College offers are limited; to some education officers they seem almost derisory. So industry must not expect too much, either in depth or in content. There is a very great deal of industrial training that industries must undertake themselves; it is to the County Colleges that they must turn to fulfil the educational needs that all industries have in common, and the recognition of this is the expression of industry's greatest need to-day—the need to give every individual it employs an understanding of his own place and importance in the industrial scene of the future.

TRAINING THE SUPERVISORY GRADES AS A LINK BETWEEN MANAGEMENT AND MEN

BY

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A GOOD deal of attention has been paid recently to the quality of supervision and of supervisors. Not only are modern industrial methods demanding higher standards of knowledge, but the old social relations, within the factory and outside it, have changed.

The workman's outlook has altered fundamentally. The causes are many and varied, but chief amongst them may be mentioned the combined effect of full employment, the doctrines which have been instilled into him for so many years, taxation, the advent of a Labour Government, the confused world relations, free social benefits, communist activities and so on. It is vitally important that this changed outlook should be met and guided along channels beneficial to everyone.

The present flow is in the wrong direction. From many quarters we hear the same story of workpeople not pulling their weight, reflected in lower output per man-hour, even when the system of payment includes some form of piece-work or bonus system.

Investigations have been made into the root causes of this state of affairs, involving assessments of the various impulses which affect a workman's rate of working. Although much more remains to be found out, it seems certain that under present conditions the influence of the pay-packet has lost some of its pre-war significance, and that other impulses have gained importance.

It can hardly be doubted that some of these secondary impulses to work or not to work have arisen from the misty notions born of crude propaganda connected with such facile phrases as: The workpeople govern the country; Out with the bosses; Let workers run industry; The profits belong to us; and so on *ad nauseam*. One has to try to realise the effect of such slogans on the mind of the average youth and working man. Those who have the opportunities of listening to workmen talking freely about these things will understand what I mean.

In cases where Management is just letting things slide, it is my view that a condition of mind arises amongst workpeople so antagonistic to Management that work output—direct and indirect—is seriously affected.

There is no magic wand with which to change this state of affairs.

But the longer we delay taking positive steps to rectify it, so much longer will production be affected by it, and the worse the situation may become.

Certain steps have been taken by enterprising firms, involving a diversity of methods. The Government, in their anxiety to do something, have set up an Economic Information Unit, with the principal object of devising ways and means of bringing home to the shop floor the urgency of the country's economic condition and the paramount need for higher rates of production. But their approach is from a distance, and, realising this, they are trying to enlist the assistance of —at first—larger firms.

I suggest that the problem goes deeper, and that we have only been scratching about on the surface. It is a problem of changing the outlook of human beings in such a way that they will feel that they want to work, and that they ought to work. This, it seems to me, cannot be done by asking men to read all about it in a book or pamphlet, however attractive or startling the make-up may be. It is a matter of personal approach to people who are entitled to respect by people who are respected.

At this point arises one of the factors in this personal approach—namely, the paramount influence which can be exerted by the supervisory grades. If this influence can be guided in the proper direction and felt on the shop floor, it surely offers one of the most effective means of getting below the surface.

Let us now have a look at our supervisory grades, starting with the foreman. In this grade are manifestations of unrest : there is talk of unionisation, in fact actual instances have occurred of foremen joining a Union and this sort of thing is catching. But why should they want to belong to a Union? It would seem that, like Gilbert's policemen, such foremen's lot is not a happy one. I admit that this is perhaps a risky generalisation. But suppose for a moment that I am a foreman talking frankly to you, and I say :—

"I'm fed up. Time was when I had charge of this shop. The Manager used to have a walk through every day. He'd stop and have a word with me : talk about the plant and the men; tell me how the firm was doing, and what they hoped to do. He relied on me to run my shop and to get the best out of it. But the firm has grown, and the Manager hasn't time to have his daily crack. My boss is quite a youngster : didn't know much about the work when he came in. Can't do anything without asking him first. They run a Production Committee : none of us chaps are on it. They tell my men things, and the Shop Stewards too—things that the Manager used to tell me. Now I hear about them from the men. They ask me questions and I don't know the answers, so they think I'm a mutt. There's another bloke who comes into my shop and checks up on the inspection and

the machines, and writes things in a book, and goes off again. Says he's in charge of Quality Control, but I've never heard of such a thing. My job was a good 'un in the old days. Now the men's wages have crept up, and it's their Union chappie who sees the Manager about them : I don't know what they talk about. If the men have a grouse about anything, they don't ask me to sort it for 'em—it's the Union again. Can't even give a man the sack now if he won't work. My job isn't what it was. I'm fed up. Think I'll join a Union myself."

This may be an extreme case, but I wonder how many firms in the country can say : "*None* of our foremen can possibly have *any* of these grouses" ?

Is it not the case that the foreman's status has gradually declined, and that the larger the organisation the greater the decline—always admitting honourable exceptions ?

There is news from the U.S.A. about this subject. Here is an extract from an authentic post-war adress given to a conference of Management :

"Almost all dignity has been detached from a Foreman's job. Staff Departments have usurped his responsibility and authority. Unions have been allowed to by-pass him in the grievance procedure. Approval from some higher-up must be obtained before the Foreman can make almost any move in his department. Rebuilding his job in importance and scope, and manning it with competent leaders, is industry's most urgent task. The salaries of Foremen should be of little concern, provided they are high enough to attract and to support properly the right kind of person. Industry should stop evaluating their jobs with those of workpeople. Foremen are of the management ; their salaries should be set on this basis."

This is a bit of a shock, coming hard upon strident criticisms from across the water of the decadence of British industrialism. But there is worse to follow :

"Who are these people called Foremen ? What are their responsibilities ? Do Foremen have unique characteristics that mark them off from other people in Industry ? Are they truly part of Management ? What is it that gives them distinction and makes them the subject of endless discussion ? What qualifications must one possess to fill adequately the job of Foreman ? Despite their grave significance, these basic and fundamental questions have received little real consideration from industrialists. . . . The truth is that Industry does not know how to answer these questions."

Well, one might hazard the idea that the causes of unrest amongst foremen are similar on both sides of the Atlantic.

I have dwelt for some time upon this grade as the problem of the supervisory grades seems to focus on the foreman's position. He is the man who is in day-to-day, hour-to-hour contact with supervisors

and workpeople. On his outlook and methods depends, more than on any other factor, the restoration of the will to work. But he must be equipped for the job. And, in turn, so must the supervisors under him. What can be done about it? What follows is intended to present some points for thought.

(a) Strengthen the Foreman's Status in the Firm. Many good books have been written around this subject, but I suggest that foremen should come to be regarded as "of the Management". I do not mean that the foreman should be called a Manager or an Assistant Manager, but that those under him should come to regard him as of the Management, and in their councils, knowing much about the firm, and hearing news and views before the shop stewards and the workpeople. Small privileges and distinctions count for much. A Supervisors' Association known to be sponsored actively by the Management is an obvious alternative to unionisation. There are other ways and means to the end, which is to restore to him a status which he once possessed, and which is necessary for the efficient discharge of the responsibilities which Management desires him to carry.

(b) In the Supervisory Grades there must be developed a Changed Pattern of Leadership. As soon as a workman is given the responsibility of directing the work of others, he becomes a supervisor. As such, his ways of thinking and doing are bound to influence the small social group of which he is the head. The method adopted by Communists—the formation of "cells"—in a Society is known to us all. The supervisor's small group is a cell, and a healthy body is made up of healthy cells. Has much attempt been made in the past to train supervisors for *this* job? Or have they been chosen solely for their capacity for the immediate technical work involved? Can we claim to have trained them adequately for the broader aspect of their work?

We must no longer be content to rely upon some undirected system of absorption by which a leading hand, in his progress up to foreman, is assumed to acquire the ability, attitude and understanding necessary for the maintenance of good social relations, not only with those whom he controls, but with those who control him.

The corollaries are that far better methods for the recruitment, selection and training of supervisors need to be adopted, and that training should be viewed, not as a series of unconnected steps, but as a continuous or semi-continuous planned progression.

So there is my argument. How helpful it would be to many of us if I could refer to a book and say: "In this book, which is sponsored by the British Institute of Management, the National Institute of Industrial Psychology, the Federation of British Industries, and the

British Employers' Confederation will be found the practical steps to be taken by firms small and large to ensure first class supervision of British Commerce and Industry. In the appendices you will find practical examples of what has already been done and what can be made available."

Let us take a look at what might be included in this imaginary book. It seems to be the sort of book which might conceivably be read by a busy senior executive, for it is not full of dissertations but is essentially practical.

Inside the front cover appears an ancient Simian proverb : " WHAT ONE FOOL CAN DO ANOTHER CAN." That seems to be a sort of challenge.

The Introduction is by Sir Stafford Cripps : nothing about beer, baccy or betting, but some straight talk about the responsibilities of Management. Clear, concise and constructive.

Chapter I is headed " OSTRICHES." It appears to be addressed particularly to those Managements, without specifying any particular level of management, who might regard some of the suggestions which follow as a gross interference with their divine rights, and who would scout any ideas that the old order of industrial relationships has changed; who would reject any philosophies of which they had no experience; and who have no time to find out what is going on outside their own particular sphere of action. I won't quote any more from this particular chapter : it's pretty hot stuff when you remember who is backing the book.

How easy it is to say that such managements *must* be converted! And how often at conferences have I heard the question asked : " How is the Management to be brought to this way of thinking?" One might say : " By direction from the Board," but there is an old proverb about watering a horse. I fear that persistent hammering is the only way, but no doubt this contribution to the present book will help.

From the conception of the firm as a working unit it surely follows that any policy for dealing with the supervisory grades and the foremen must be accepted without reservations by management at all levels. No matter how excellent a scheme looks on paper, it can only be made really effective by good team work, not by directives.

Someone will comment that such managements won't read books in general, and this book in particular. My reply is that this book must have such powerful backing and publicity that they *will* read it.

Chapter II appears to say something on the lines of my preceding contentions, so we turn to Chapter III, which contains a few notes on examples of training programmes seen as a connected whole over a period of years, adaptable for small, medium and large firms.

Chapter IV deals with systems of selection for charge-hands, including recommendations from shop or department, assessment at an interview, with special notes on the possibility of discovering latent

talents for foremanship, appropriate intelligence tests, English and calculations, all aimed at selecting the best possible material. It stresses the necessity for adequate publicity for the selection system, to avoid suspicion or doubt when it is introduced, and that is a very useful point to remember.

Chapter V divides courses into three components, but devotes most of its space to general training, which naturally includes the T.W.I. programmes. Examples of courses lasting two or three weeks up to nine months full-time: lest someone should think this excessively long, it quotes a Swedish firm who release their prospective foremen for two years, and gives particulars of the system which has been adopted, tested and proved by a number of large industrial enterprises in Sweden, where there exists an Institute of Training for Supervisors organised by the Federation of Swedish Industries. An account of this system can be found in Vol. I of the Eighth International Management Congress, 1947.

Because of the reluctance of Production Departments to release for long periods, a suggestion is made that an initial two to three weeks full-time kick-off, should be followed by part-time courses partly internal, partly external, preferably in works' time with pay. Examples of programmes in actual use are given, such as conference techniques, shop reports, case method, visits, and so on.

Leaving this book for a moment, I would like to stress the value of outside visits both to works and to other selected places. It is only when one hears it at first hand that one realises the effect of these visits on supervisors who, after years spent in one works, often in one department, have had an opportunity of seeing the work of other departments, and of works whose manufactures are quite different from those of their own works: of seeing the other fellow at work. I know of two or three firms which in their courses for supervisory grades include a week-end course at Ashridge, Pendley Manor or Roffey Park; another firm arranges visits to the House of Commons, the Home Office Safety, Health and Welfare Museum—there is no lack of places worth visiting. (I see there is a list of suggested places given in the book.)

Chapter VI is on external technical training, and refers to what the Local Education Authorities could and should be doing; good advice about making use of H.M.I., and of visits to factories by Directors of Education and their staffs so as to get a background to industries in their county. It says that teachers who instruct supervisory grades should be practical persons who understand what supervisors have to do in the factories. It gives a list of graded courses fitting in with a connected programme.

Chapter VII tells industry something about the Regional Advisory Councils which have been established in the ten areas whose wheels

are starting to revolve, but it must be confessed that their angular velocity is in some cases not great; it stresses the part that these Councils should play in arranging specialised courses, particularly for those subjects which cannot be taught effectively except by those who have had practical and recent works experience; it refers to the National Advisory Council, which is expected to co-ordinate the work of the Regional Councils, and gives the set-up of a typical council down to the Advisory Panels which deal with particular industries in each region, affording opportunities for close contact between educationalists, employers and workpeople's representatives on educational matters of common interest.

Chapter VIII deals with a really tough problem—that of promotion in the range of supervisory grades. It has something to say on workable systems which are actually in use in this country, in the United States, and in Sweden. It tackles the practical problem of the position of the candidate who has gone successfully through a training course for a grade before promotion to the higher grade, and is then hung up because there is no vacancy existing in that higher grade. It mentions that common practice should make it clear at the start that success in the course carries no guarantee of promotion, and points out that this in itself is hardly encouraging—rather like telling a new apprentice that you cannot guarantee his tradesman's ticket even if he completes his apprenticeship period successfully. It mentions the "pool" system, in which success in the course insures entry to the pool for the next grade: when a vacancy occurs, promotion is made only from the pool. It points out that this system is in practical use. (It worked well in the Royal Filling Factories during the war.) It mentions the need for intelligent forecasting, and the fact that part-time instruction can still be carried on for those in the pool.

Further, it discusses another debatable issue—viz., whether promotion in the supervisory grades ought to be limited to the one department, as has been the case in many of the older industries. It deals with Trade Union concepts on this matter and shows how opinion seems to be veering away from past ideas, and how much the overall picture of training can be improved if the ultimate foreman has had experience in several departments. Finally it stresses the need for publicity and making the system thoroughly understood.

Chapter IX gives practical advice on the set-up for a Supervisors' Association, contrasting this with unionisation and giving examples in the Appendices of typical constitutions for such associations, together with the programme of events in a well run association, backed by top Management.

So much for my imaginary book. Other chapters could doubtless be included with advantage. A powerful co-ordinated effort seems to be needed. The dictionary defines "co-ordination" as "The bringing

together of the parts and the whole into orderly relation." Many different bodies are or should be concerned. Are they all too busy to contribute to the work?

"*Quis custodiet ipsos custodes?*" Who is going to co-ordinate the co-ordinators? I don't know. But I remember the chorus in Kipling's poem called "Natural Theology" which runs:—

> "We had a kettle, we let it leak,
> Our not repairing it made it worse;
> We haven't had any tea for a week,
> The bottom is out of the universe."

CITIZENSHIP TRAINING

BY

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The Citizen. A citizen, in the literal meaning of the word, is a person who dwells in a city. Unfortunately, far too many men and women are just this and nothing more. As a matter of fact, however, when referring to a man as a citizen we think of him as actively contributing to the life and well-being of the community. When considering the training of young citizens, we must state precisely what we mean by an active contribution to the community and, consequently, what we consider to be the desirable type of citizen.

Obviously the Humanist, the Christian and the Jew, to take only three different religious and philosophical points of view, will differ in their ultimate ideals for the desirable citizen but their proximate aims will be similar. In the first place, they will look for the person who has successfully directed his mental energy towards the group or community, having deflected it from serving his own purely selfish interests. They will, secondly, expect him to direct his mental energy along more or less permanent channels towards worth-while objects in the life of the community. The harmonious integration of various streams of energy, directed away from the self towards the life of the community, produces the phenomenon called character.

Whilst we must look more closely into the nature of this mental energy and of the worth-while objects in the life of the group towards which it should be directed, we may, as a corollary to the foregoing definition, say that the highest form of citizenship is sound character and the aim of citizenship training will be to facilitate for the individual adolescent the attainment of integrated character.

Character—Its Conditions. It is useless to discuss vaguely either mental energy or character. It is necessary to examine the relevant facts about human behaviour, so that we may see more clearly what the nature of this mental energy is and how it can become orientated towards altruistic objects in the community.

Controlled experiment and observation during the course of prolonged experience have demonstrated that in a very large number of cases the manner in which we react to the behaviour of other people, or to the objects and scenes we see daily, or to incidents in which we

become involved, is automatic and inborn. For example, if we hear an unexpected loud shout from behind us, we jump involuntarily; again, if we see appetising food on the table when we come home for a meal, our saliva glands begin to operate, making our mouths " water "; again, if, at the summer camp, whilst we are taking an after-dinner snooze, someone tickles the soles of our feet, we jump up with a yell. Now, the main characteristics of such modes of behaviour—examples of which can be multiplied at will—are that, for any individual, the response which they evoke is invariably the same, is shortlived, being suddenly produced and quickly dying down and, as previously stated, is automatic and unlearned; to clarify this last point, we may note that a baby does not learn to sneeze—this pattern of behaviour is already with him when he is born. These automatic responses are called reflexes.

Like other youngsters, when he is going to sit down to a meal, a certain eighteen-months'-old boy, whom I know very well, has a feeder tied around his neck; as this is being done he is calling out lustily for his food. This is a regular ritual, which has been performed several times daily for a year or so. When he is playing in the garden, he suddenly notices his washed feeder drying on the clothes-line; although at this particular moment he is not hungry (a rare occurrence), he immediately starts calling for food. What has happened is that the sight of food causes a reflex in him in the shape of calling out for food. At the same time, another condition—namely, the presence of the feeder—has become associated in his mind with this situation. In fact, what was originally a simple situation—namely, the sight of food —has now become a compound situation, that is, the sight of food and the sight of the feeder. First of all, the food alone evoked the characteristic response of calling for food; then the food and the feeder together produced this effect; finally, the feeder alone—that is, *one* condition only of the two—was sufficient to produce the response. This type of automatic response is called a conditioned reflex, as distinct from the simple reflex. A Russian scientist, Pavlov, made the most well-known controlled experiments in the investigation of this phenomenon. He trained several dogs to come to him for their food. As they rushed up for it, he found, as he expected, that their mouths were " watering ". After a while he was accustomed to ring a bell at the same time that the dogs were brought in for their food. Eventually he found that the mere ringing of the bell, without the food being present, caused the dogs' mouths to " water ".

There are people who consider that the whole of human behaviour can be explained in terms of simple and conditioned reflexes; that all our actions are but a chain of these automatic momentary reactions. The implications of such a belief are very considerable from the point of view of the educationalist. For instance, it places all our behaviour

on the plane of random minute-to-minute reactions to our environment. This implies that there can be no forward-looking or planning on our part, since, as we have seen, reflexes are comparatively momentary in duration from initiation to termination. There is, with such a state of affairs, no need for a conscious mind to direct our activities. In other words, we have no free will with which to choose a course of action or plan our lives and, furthermore, there is no such thing as purpose in them. Now, clearly, for an educationalist, such a belief is untenable, since educating the individual is, in itself, a very definite and well-marked purpose.

What, then, has happened? Wherein lies the discrepancy between the undisputed facts of behaviour observed by the Behaviourists (as these people are called) and the facts of free will and purpose? It lies in the fact that the Behaviourists have stated only half the truth. The other half lies with different groups of psychologists, all characterised by a common belief in "purpose" as a fundamental element in behaviour; however much they may differ in other respects, they are all united, inasmuch as they value this principle. Whilst the simple and conditioned reflexes observed by the Behaviourists account for certain simple kinds of behaviour, they do not account for the more complicated and sustained behaviour which characterises the pursuits and plans and struggles of a lifetime. These latter are much more satisfactorily accounted for by a theory (based on scientific research) of "instincts". As a result of the research and experiment of half a century, with which are associated, more than any others, the names of A. F. Shand [1] and William McDougall,[2] there has been evolved a theory of instincts which is, in general, accepted by most reputable psychologists. Those divergences that do exist, in the interpretation of facts, constitute, from the point of view of the educationalist, only minor differences. Whereas it was formerly thought that there were several instinctive springs of behaviour, it is now considered that there is but one source. The statistical technique of factorial analysis has confirmed this conclusion.

The motive-power of all our behaviour is considered to spring from a reservoir of emotional energy which is inborn and not acquired. Also innate in the individual are several tendencies which determine, in various circumstances, in which direction this emotional energy shall flow. Moreover, these innate determining tendencies are characterised by the fact that they strive to guide the latter towards a goal. For example, if someone attempts to steal our property or to insult us in any way, the tendency to fight becomes active and the instinctive energy can express itself in a variety of ways; it may prompt us to fight with fists, to kick, coolly to pull a trigger or to use

[1] A. F. Shand, "The Foundations of Character," 1914.
[2] William McDougall, "Social Psychology," 1908, and "Energies of Men," 1934.

biting sarcasm. There is a further concomitant to the activity of this instinct. We are aware of an accompanying, well-marked feeling of the kind we call anger. When sudden danger looms ahead, another tendency will probably come into operation. The individual will tend to run away, to hide or evade it in some other manner. Other important innate tendencies are that of seeking food, that of sex, that of herding together with one's fellows and last, but most important of all, that of asserting oneself or detaching oneself from the general background of the group or community; that is, the self-assertive tendency.

Almost the whole of the behaviour of the lower animal is determined by the operation of its instinctive tendencies. On presentation of the appropriate stimulus a particular tendency becomes operative and, as far as we know, there is an emotional accompaniment; the instinctive activity is expressed in a limited number of overt ways. It is important to note that the behaviour of the animal at this evolutionary stage is almost completely automatic and predictable. The higher animal is characterised by the fact that it possesses a greater number of instinctive tendencies and that, because of its higher intelligence, it can modify and vary the expression it gives to a particular instinct. That is to say, it possesses a greater degree of autonomy than the first type. At the human level not only is the number of innate determining tendencies increased but they themselves are capable of being aroused by a larger range of stimuli. Most significant of all is the fact that, as a result of his enormously increased intelligence, man can express his instinctive activity in an infinite variety and a countless number of ways. So great is this variety that a perfunctory examination does not readily reveal the instinctive source of the behaviour involved. Indeed, the American psychologist, Professor G. W. Allport, and his school believe that, although animals, and even human beings, are endowed with instincts, in a short time the human being develops interests, habits, attitudes and other modes of behaviour which break away from the instinctive energy source, supplying, instead, their own sources. Allport believes that in man the instincts very soon become atrophied; he stresses the importance, as sources of behaviour, of what he calls the " Ego structure " and the " present go of interests ". As opposed to the underlying conception of an innate energy source, he stresses " Functional autonomy ".[1] An important criticism of " Functional autonomy ", particularly relevant to the educationalist, is made by Professor Sir Cyril Burt. He says " As regards sex-behaviour more specifically, is it not rash to assume that, in every human being, the collective effect of the 'acquired elements of character' is stronger than that of the inherited instinct? No doubt

[1] G. W. Allport, " Personality," 1937, and *British Journal of Educational Psychology*, Vol. 14, Pt. 2 (Article in " Symposium on Personality ").

the psychoanalyst has magnified the importance of such inherited impulses. Yet the facts of moral conflict would scarcely be explicable, if we did not assume that sex, fear, anger, hunger and the like are not merely innate but often more powerful than the restraining habits and sentiments acquired by the individual ".[1]

For man, however, there is a further stage, in the management of the instinctual energy, of which he is capable. We have seen that any instinctive activity is characterised by the fact that the individual strives towards a certain objective (e.g., satisfying hunger, subduing an opponent, or safely reaching the herd); the achievement of this objective marks the cessation of the instinctive activity. There appears at the human level a phenomenon whereby the energy directed by an innate tendency can become deflected from its natural goal to another similar goal, which satisfactorily absorbs and utilises the energy. The difference between the two goals is that the second (which receives the deflected energy) is socially more acceptable or ethically higher than the first. The deflection of instinctive energy through an innate channel to a similar but ethically higher goal is called sublimation. As a result of this process, the emotional element of the tendency becomes less intense and momentary and assumes a relatively permanent form, providing a background to the individual's action; the interests and habits which the individual acquires as the result of experience are incorporated into the organisation of innate tendencies which directs the individual's deflected energy. For example, the tendency to self-assertion and the emotion of elation which accompanies it become sublimated into a "sentiment" of self-regard (as McDougall termed it). Consider a man whose instinctive tendency to protect less fortunate creatures and his feeling of tenderness towards such people have been stimulated by the fact that thousands of his fellow-men are condemned to live in the misery of slums. He may join some organisation which devotes its time to alleviating their plight. At the same time, the tendency to fight has been roused in him by these conditions, and he now devotes his whole time to politics in order to right this wrong. He is fighting on behalf of these underprivileged people. Out of the momentary emotions of tender feeling and anger has developed the sentiment of justice. This forms a permanent background to his life's work. It is still the fighting instinct which guides his emotional energy towards this new objective and which is expressed not by a battle of fists, but probably by a battle of words and tactics. In similar fashion the sex impulse becomes sublimated into the sentiment of love and the herd instinct into a sense of community. It is self-regard which is the most important and the key sentiment for all the others.

[1] C. Burt, "Is the Doctrine of Instincts Dead?" *British Journal of Educational Psychology*, Vol. 13, Pt. 1, 1943, p. 3 (Article in Symposium on the subject).

It will be noted that a sentiment directs the instinctual energy towards objects of an altruistic kind, so that it does not serve the selfish needs of the individual only, which is the case when emotion only is gratified. Furthermore, several innate and acquired determining tendencies may be incorporated into a sentiment organisation. For complete harmony of behaviour in the individual, the sentiments must be integrated into one balanced whole. It is the achievement of this phenomenon which is designated by the conception "character". The achievement of sound character is therefore synonymous with the integration of sentiments into a harmonious whole.

The conventions of society, moral standards and the ideals of religion make it undesirable for the individual to allow his innate emotional energy to serve unconditionally its natural goals. Not only is the wholly natural expression of the instinctive tendencies undesirable for, but intolerable to society. Therefore, unless some degree of sublimation is achieved by the individual, another mental process will be observed to take its place. The Viennese doctor, Sigmund Freud, observed that many of his patients suffered from "nerves", "depression" and "anxiety"; at the same time no satisfactory explanation was provided by physical causes and therefore no satisfactory treatment could be given. His subsequent experience led him to believe that the unconscious mind played an even greater rôle in the individual's behaviour than the conscious. Motives, desires and ideas that were unacceptable to the individual's moral ideals or that were tabooed by social conventions, for instance, became relegated by him to the unconscious mind; there, however, their energy became incorporated into an active mental energy system, so that the motives and desires themselves in a disguised form (since they were unacceptable in their true form) became disturbing factors to the conscious mind. The fact that the patient was unaware of the causes that gave him a vague restlessness made the activities of this "underground" system the more distressing. This phenomenon Freud termed the repression of the conscious motive and its incorporation into a complex. He conceived of the individual's mental life as consisting of this continuous conflict between his acquired social interests and taboos and the repressed motives of his innate determining tendencies (which he termed collectively the "libido").

There is evidence to show that the innate emotional energy strives for an outlet and primarily finds this outlet through the various channels provided by the determining tendencies or, secondarily, by the operation of sentiments. If, however, instead of sublimating the energy and forming sentiments, the individual is compelled, by the demands of society, to curb and suppress this energy, he is providing only a temporary solution to his problem, for it must find an outlet somewhere. It is at this point that we find the energy becoming

incorporated into a complex, with disturbing effects for him; on the other hand, of course, instead of repressing his emotional energy, the individual may allow it to be expressed in its natural, anti-social form.

The facts established by the research of all groups of psychologists described lead us to conclude, therefore, that man's behaviour is essentially and innately purposive, and that the conditions of character are to be found, essentially, in the sublimation of the innate emotional energy towards altruistic goals of a relatively permanent nature and in the organisation of its tendencies and those acquired by experience into a harmonious whole.

Training Method. Having decided on an objective and being aware of the conditions necessary for its achievement, it is possible to set about evolving a method of training suited to this purpose.

The first requirement is that adolescents should be able to associate with each other in a community of their own which is, in many respects, a microcosm of the community at large (to which everyone belongs) or, more accurately, of its ideal form. The pattern of the small adolescent community should be such that the behaviour it nurtures will stand the members in good stead when they become adult members of the community at large.

In this type of community two main conditions ensure that the sublimation of the individual's instinctive emotional energy is facilitated. In the first place, an enlightened and thoroughgoing self-government gives opportunity for sublimating the innate social tendencies, whilst, in the second place, the right kind of cultural activities ensures the sublimation of the æsthetic tendencies. These two groups will be discussed more fully as experiments in self-government are described. From the accounts of these experiments, it will be seen that certain underlying and recurring mental processes are engendered by these self-governing communities, from which it will be possible to enunciate some guiding principles.

Experiments in Self-government. These have taken place, from time to time, in three main educational fields :—

(i) Schools.

(ii) Residential Colonies for under-privileged or delinquent children.

(iii) Youth Clubs.

There now follow the descriptions of two school plan and two Residential Colony experiments.[1] After certain guiding principles

[1] Whilst several more modern experiments could be described those actually selected constitute pioneer classical examples demonstrating on the whole, a magnificent insight into the aims and principles of self-government.

have been examined, a Y.M.C.A. Youth Club experiment will be described.

The Dalton Plan.[1] In the early part of the century an American teacher, Helen Parkhurst, devised a system of teaching which subsequently became known by the above name.

In a Dalton school the various classes pursue their studies on their own initiative, under the guidance and with the technical aid of the teacher.

The school building is divided into rooms, by reference not so much to age groups as to subjects; the room to be used for the study of any particular subject, say history, would be provided with the necessary library, charts, maps and other equipment needed for this purpose.

A class of pupils is given "Assignments" in each subject for a specified period, generally one month. The word "assignment" is a technical term in Dalton language, designating a particular field of study to be covered by the pupil in the form of a "contract" within the month. At the beginning of the period the teacher will circulate typewritten notes on the work to be covered within that time. He will give book references, his own observations and experience and suggest certain questions for solution, which may stimulate thought. He may give one group talk to the class to impart factual information or to give a setting to the piece of work to be undertaken, but the basic principle is that each pupil shall then, in his own time, pursue the work assigned. He is at liberty to consult the teacher whenever he wishes or to work with one of the other pupils; team work of the latter kind, in fact, forms a feature of this method. When an assignment has been made, the pupil organises his work as he wishes, provided he completes it in the specified period.

One of the underlying principles of the Dalton Method is that the first-hand experience of the individual is paramount in education. Joseph Payne had occasion to summarise the principles of the educationalist, Pestalozzi. Two of these are :—

(1) "Instruction must be based on the learner's own experience," and

(2) "All education (*including* instruction) must be grounded on the learner's own observation at first-hand—on his own personal experience.

This is the one basis of all his knowledge. First the reality, then the symbol, first the thing, then the word, not vice versa." Daltonians subscribe to these principles.

Helen Parkhurst says, "Broadly speaking, the old type of school

[1] See Helen Parkhurst, "Education on the Dalton Plan," 1930, and C. W. Kimmins and Belle Rennie, "The Triumph of the Dalton Plan," 1932.

may be said to stand for culture, while the modern type of school stands for experience." The first principle, then, is experience.

A second principle, to ensure that the particular interests of the individual are brought into full play, is that of voluntary activity. The pupil is ensured the fullest possible activity in those subjects or topics which most interest him, since the choice of work at any particular time is his. Matter learnt with the incentive of interest is more effective in the educational process, according to the Daltonians. "It is a common experience that what we find out ourselves is what we are most interested in and remember the longest."

Education on the Dalton Plan does not consist only of the more effective acquisition of knowledge. Social activities are encouraged during, as well as outside, school hours. The regulation of classroom affairs and school-life is largely in the hands of the pupils. In this way opportunity is given for developing the art of learning together, and becoming aware of the necessity for recognising the rights of others if each is to have his fullest possible development of personality. The whole of the activity of pupils, both academic and social, is characterised by initiative of the individual, co-operation and team work, learning by experience and the incentive of interest. One of the results, as far as the individual is concerned, is that "the child gains courage in attacking a mental problem unaided".

Enthusiasts speak highly of the atmosphere of happy industry and drive in such a group. A certain Inspector visiting a Dalton school found that ". . . side by side with the development of individual work, there had been a corresponding development in initiative and self-government—and he emphasised that in the schools where it (the plan) had been employed, there was a new outlook, together with a new spirit and a new industry".[1]

Gordon Mackay's Experiments in Educational Self-government.[2] These experiments were conducted among various groups, covering a wide age range, in school classes in Australia.

The experiment which is described here was undertaken with a class of secondary-school boys.

On the plan adopted, education covered both the social life of the class and its subject-work. The happy pursuit of the latter was regarded as following on directly from the achievement of success in the former.

To initiate the experiment, a simple explanation was given of the changes that were to take place. The master then assumed an unobtrusive place with the boys at the rear of the classroom, at the same time inviting them to appoint one of their own number as a chairman

[1] C. W. Kimmins and Belle Rennie, "The Triumph of the Dalton Plan," 1932, pp. 54–55.

[2] A. L. G. Mackay, "Experiments in Educational Self-government," 1938.

preparatory to turning the class into a meeting. A minute-keeper was also appointed and the boys were then invited to go to the front of the class to make speeches on any topic in which they were interested.

The master considered that, at this stage, the boys should solve their own problems and refrained from answering their appeals for help except in cases where there was an *impasse* in the solution of a problem due to lack of knowledge of a factual or technical nature.

Subsequent upon freedom being given to the boys to control their affairs, MacKay found that some three weeks elapsed before any sort of order or self-confidence emerged.

The type of problem which the class had to solve during this period was, for example, concerned with the best way of recording proceedings, or the ways and means of procuring a minute-book.

This type of activity was considered to be important enough to occupy the whole of the first three weeks, to the exclusion of subject-work; such time lost in subject-work was, it was claimed, amply overtaken later in the year.

Subject-work was carried out by boys themselves at these class meetings under the direction of a boy chairman. The master acted as guide and technical adviser, making his contribution in the same way as the pupils—by requesting permission to speak to the meeting (this permission was not invariably granted).

It was the business of the boys to arbitrate in matters of discipline. MacKay refused to solve their disciplinary problems for them. Some interesting accounts are given by him of the situations dealt with in this respect and of the unexpected solutions at which the group arrived.

MacKay considered these problematic situations to consist of mental conflicts forming complexes. Frank discussion brought these to the conscious mind where they could be examined rationally. A conflict then being resolved, the boys were able confidently to direct their emotional energy to more constructive occupations.

To educate effectively both through subject learning and social training in this way, MacKay lays down three conditions :—

"(1) Opportunity for freedom, in which to give the instincts full play.

"(2) Release and sublimation of the energy attached to these instincts.

"(3) An opportunity for the teacher to act as an impartial observer, so as to be able to interpret the various forms of the manifestations of the instincts."

The tradition of liberty established in his experimental classes enabled the teacher to be absent either by his own wish or by the wish

of the class. This gave even greater opportunity for the boys to solve their own problems.

MacKay justifies the results of his experiments by stating that the examination performance of the pupils concerned was at least as good as, and in many cases better than, parallel classes taught by traditional methods. He found the group, moreover, frank and confident and much easier with which to make friendships.

The George Junior Republic.[1] There existed, towards the end of the last century, in the New York slums, a gang of boys known as the "Sons of Arrest". The passport to membership was the fact of having been arrested at least once.

W. R. George, a citizen of the same city, had succeeded, as a result of the admiration he aroused because of his prowess with his fists, in turning this gang into a "Law and Order Gang" assisting the police. Whereas previously law-breaking activities provided adventure and the chance of a "rough-house", this was now feasible by law-abiding activities.

As a result of his experience with this group, George established in 1890 the first of a series of Holiday Camps, which later developed into Residental Colonies in various parts of the United States.

At his first camp military-type discipline was enforced. The disappointing results of this system were deceitfulness and selfishness; authority, in the person of George himself, became a legitimate object against which to revolt.

In his second camp he decided that, since gifts of clothing brought little appreciation for these things, each must in future earn them. Thenceforward his motto was "Nothing without Labour". Thenceforth also, property was respected.

At his third camp he suddenly realised that he was still an object of authority against which to rebel. He therefore turned over matters of misbehaviour and discipline to the campers or "citizens" themselves. Thenceforward the bitter fruits of experience proved a stronger deterrent to would-be offenders than all George's traditional punishment methods.

After this camp he stayed on for the winter with a small group of boys at Freeville, where the camps were held. Here they were thrown back upon their own resources, living as a community where each took responsibility for a share of the work; where they established their own currency system; where the laws of the community were made and kept by agreement of all members; where disciplinary action was by the agreement of all.

It was in the following summer that the first Junior Republic was established. In its fully developed state it was a self-governing community maintained by the citizens. Each had to earn his own wages,

[1] See W. R. George and L. Beecher Stowe, "Citizens Made and Remade," 1913.

and out of them paid for his board residence at a cottage. Laws were made at Town meetings, whilst they were enforced by police officers elected for the purpose. Offenders could be committed to jail. Goods were bought from the general store.

George considered that citizens first deflected their energy from anti-social to social behaviour merely because experience taught them that it paid. Then came a reorientation whereby the citizen continued law-abiding in order to further the life of the community, even at cost to himself. He considered that :—

(1) Self-respect comes from self-support.
(2) Sense of responsibility comes from being a citizen.
(3) Conscience comes from religious and ethical teaching.
(4) Inspiration comes from contact with fine men and women.

It is only fair to point out that there were certain weaknesses in the George Junior Republic, which appear to have arisen from a slavish imitation of the U.S. system of government in cases where psychological considerations would have been more appropriate guides.

The Little Commonwealth.[1] Between 1914 and 1918 an American, Homer T. Lane, was entrusted with the establishment and development of a reformatory promoted by a voluntary organisation. The reformatory became known as the Little Commonwealth, with its home on a farm in Dorsetshire. Step by step Lane built up his numbers. This gradual building up pervaded the whole life of the Commonwealth. With great psychological insight, Lane chose the right moment for innovations.

From the first, the group was given the responsibility of regulating the life of the community. It planned, for example, ways and means of building the cottages in which its members were to live as families. Later it was obliged to wrestle with problems concerned with ways and means of existing.

A natural consequence was the obligation upon each "citizen to work, if he would eat"; this became a fundamental feature. In return for his work the citizen was entitled to money, with which he paid for his board residence to the family pool of his cottage. In this way one would be an engineer attending to the lighting plant, another a carpenter and yet another the shop-keeper.

At twice-weekly meetings of the group all were present except those who were ill. At the first meeting of the week matters of policy and legislation were carried out. The staff had no veto, but only an equal say with the younger citizens. At the second meeting disciplinary action was taken by a judge in front of the others, the latter upholding or, if necessary, challenging his or her decisions.

[1] E. T. Bazely, "Homer Lane and the Little Commonwealth," 1918.

When problems arose, Lane preferred not to put forward his opinion or advice, even when asked to do so, except in a matter where he was able, by his greater experience of life, to give guidance or factual information which the citizens could not be expected to have acquired in the course of their own experience.

There were times when inefficiency of all kinds would creep into the colony; for example, the farm-yard would become filthy with the unattended refuse of upturned waste-bins. It was Lane's policy to leave these things until the reaction of the citizens to the dirt and refuse caused a vigorous drive for cleanliness in the colony and a consequent beneficial mental catharsis.

Finally, it was ruled by the citizens that a school be instituted; this gave an opportunity for enlightening them as to the true meaning of education and of establishing the so-called "new methods of education". Before this could be carried very far, however, the colony was obliged, for extraneous reasons, to close down. It is unfortunate that this experiment should have suffered such an untimely curtailment, as it could have taught much about the methods under discussion.

It may be surmised from the brief outline descriptions of the foregoing experiments that it was possible to facilitate for the young people concerned the sublimation of certain instinctive impulses. A study of the full accounts of these experiments will show that this was, in fact, the case.

The Gregarious Impulse. This is the impulse which is perhaps most readily sublimated into the service of an active group life. Apart from the fact that the people concerned are, by force of circumstances, living in a group, they tend very much to seek each other's company. At first there is not necessarily very much sociability between them; cliques of two or three may form an attachment, but there is a need for some worthwhile things in the life of the group, towards which the members can strive. At first they will wish selfishly to improve their material conditions and consequently will unite in getting a job done; at a later stage they will enjoy not only being together but actively working together for the common life of the community. At this stage the goals towards which their gregarious impulse urges them will probably be in the form of ideals and standards of living, of an unselfish kind, rather than mere material well-being.

Self-assertive Impulse. The feeling of being important in and necessary to the group, the effort to detach oneself as an individual from the rest of it and the tendency to seek the approbation of one's equals are all important manifestations of this impulse. It would appear to play a most important rôle in the behaviour of the adolescent.

It is doubtless reinforced from time to time by the energy diverted to it by the innate sex tendency. The experimenters whose work has been described have all realised what can happen, in varying circumstances and with boys and girls of differing temperament, to the energy guided by this impulse. Like all other forms of the emotional energy, it will not be suppressed; it will out in some form or another. If the child in question is of an inhibited nature, then the energy will be repressed and set to work not through muscular activity, but through a disturbing mental complex; the resulting type of child will probably be the nervous one with the inferiority complex. On the other hand, if he is of the uninhibited type we may find him as the anti-social lad who either breaks up furniture and equipment, or sabotages the efforts of others, or is given to swearing and obscenity or to the kind of adventures classed as juvenile delinquency.

The sublimation of this impulse gives the individual a sentiment of self-regard or self-respect. Without having to prove to himself his own importance by a series of physical demonstrations, he attains this in an unselfish manner by serving the group. This impulse thus becomes deflected away from his own selfish needs towards objects of service in the life of the group. It will be obvious that the sublimation of the gregarious impulse aids this deflection. Unless the individual can, in this way, form a sentiment of regard for himself, which is continuously energised from its instinctive source, he will not be able to form sentiments from his other emotions, for this sentiment is the most closely related to the most beloved object, as far as the individual is concerned—that is, the self or ego. For this reason, the sentiment of self-regard may be looked upon as the master sentiment. It is paramount, therefore, to facilitate for the boy or girl, as the foregoing experiments have demonstrated, the sublimation of this impulse.

The Pugnacious Impulse. One of the most obvious innate tendencies in the animal is the impulse to fight and the accompanying emotion of anger. In general, this tendency is aroused when the animal is frustrated or threatened in some way; when the cause of aggravation is removed the activity of the tendency dies down. This is very much the case with the adolescent boy. It is noticeable, from the experiments described, that as this impulse is effectively deflected, the objects to which its energy is directed are to be found in the life of the group. The individual fights now, not necessarily a muscular opponent, like himself, but a problem or an injustice or the difficulties which stand in the way of some desirable development in the life of the group. Moreover, this fight for the general well-being of his fellows is a continuous steady business of an altruistic kind, as distinct from the spasmodic selfish operation of the fighting tendency which is typical before sublimation takes place.

The Æsthetic Impulses. With the onset of adolescence, certain impulses, which have lain latent, appear for the first time. These can be called roughly the æsthetic impulses. They concern themselves, for example, with religion, the creative spheres of Nature, art, craft and literature. It will be seen that in groups where boys and girls are able to experiment with various types of activity which take up these impulses, it is possible, by judicious guidance, to help the individual to direct his energy to objects of a cultural and æsthetic value. Unless he directs it to these objects he will expend it on objects of a selfish kind, such as the sensual satisfaction of the emotions, or other objects of bad taste.

Now, the deflection of energy from natural immediate objectives to similar socially determined objects (which constitutes the process of sublimation) is not automatic; if this were the case, it would hardly be necessary to foster a special type of adolescent community, examples of which have been described, since society itself provides worthy objects, of an altruistic kind, towards which the individual may direct his energy. The fact is, however, that certain other mental processes are necessary in order to initiate the change of direction of the energy, so that the individual can guide it towards the new objective. It will be noted that in the experiments described a certain number of these recur time and time again, so that one may enunciate some guiding principles for self-government, based on these processes.

Experience. In the first place, there is the all-important rôle of experience. Experiencing a situation, or the effect of one's actions on others, is most effective in determining one's future reactions in a similar situation. It is a fact that the pleasant or unpleasant emotional accompaniment to an activity is a powerful factor in deterring or encouraging the individual in similar future activity. The late Sir Percy Nunn wrote :—

> "It is undoubtedly a sound principle that the power of moral ideas depends, in general, upon their being learnt from first hand experience and used as guides to one's own responsible actions. Here, rather than in some metaphysical dogma of Natural Goodness is the true sanction—so far as is feasible—upon the governed. The principle is so important that, rather than sacrifice it a teacher may justifiably tolerate much minor evil, waiting patiently for the spontaneous reaction that will generally come when experience reveals its unpleasant fruits."[1]

W. R. George noted that his "citizens", in the change from anti-social to socially acceptable behaviour of an altruistic kind, passed

[1] T. P. Nunn, "Education : Its Data and First Principles," 1945, p. 111.

through a vital intermediary stage brought about by this important factor of experience. His citizens, for example, would be dishonest in their dealings with other people in the group, because it profited them personally; very soon they would find that it did not pay to be dishonest, because such activities in the community had unpleasant consequences for themselves and others; rather, it paid in terms of comfort and pleasure to be honest. At this stage the individual citizen's motives were still selfish and concerned with expediency. The final stage of development was that in which he behaved in a socially acceptable manner because he was working for the good of the community and not just for himself. It is the change to this final stage from the previous one that the adult leader must bring about in a tactful manner, by unobtrusively guiding the citizen towards these altruistic causes, interests and activities in the life of the community. It is not the leader only who will act as guide; the enthusiasm of those citizens who have already achieved this stage will be a powerful factor. The citizen, of course, helps himself in this direction by the fact that the impulse of curiosity urges him to investigate new activities and interests which are in evidence all about him.

Problem Solving. In his study of the process of remembering, Professor F. C. Bartlett [1] carried out experiments which led him to conclude that the factor which determined which situation or details of a situation would be remembered was the attitude to or the interest of the individual in this situation; it is, in other words, the emotional accompaniment which is important in an act of remembering, and therefore in an act of learning. To reinforce the experience provided by contacts in the group (as already described), it is essential that circumstances should be such that the individual can learn from situations with an emotional content, so that he may, by so doing, learn effectively. That is to say that the organisation of the community should be such as will give rise continuously to problems which the individual must solve himself; problems of discipline, of conduct, of practical organisation, of programme planning and of finance, for example. Mental life consists, as has already been shown, of a striving towards certain goals or consummatory states; it is an infinite series of tensions being set up and relieved—that is, of problems arising and being solved. The kind of training with which problem solving can provide the individual will, therefore, be admirably suited to character formation.

Self-government in the Club Setting. There are several differences between the kind of organisation feasible with the majority

[1] F. C. Bartlett, "Remembering," 1932.

of boys and girls between fifteen and twenty and the kinds already described :—

(*a*) Attendance at schools and colonies is compulsory; this may not be necessarily so with the young people we have in mind.

(*b*) There will be a large percentage of adolescents of the lower range of intelligence; school experiments described have been with secondary school children only.

(*c*) The vast majority of the adolescent trainees will be emotionally normal, although there will be minor maladjustments, due to home and other circumstances.

The colony boys and girls were delinquent, and therefore emotionally maladjusted.

The question therefore arises as to whether self-government can be successfully practised in the Club-type of group. Evidence on this subject is to be obtained by examining the results of a detailed investigation into this matter carried out in a certain youth club between 1942 and 1947, and by examining the corroborative evidence revealed by some other youth clubs.

Y.M.C.A. club X is situated on a large municipal housing estate of some 10,000 families, in a large city. The vast majority of its boys and girls of fourteen years plus work in factories; a small percentage work in the distributive trades and offices, whilst a still smaller proportion are in Secondary, Grammar or Technical Schools. Between 5 and 10 per cent of the juvenile population is delinquent.[1]

The need for club facilities for boys of the district led to a group of school-leavers being approached about the matter. The first club meeting consisted of a cycle-ride in which the full-time leader and three lads took part. At a " post-mortem " meeting in the back room of the small local Baptist Chapel the following night certain basic matters were decided. The leader immediately encouraged the group to decide as much for themselves as possible. It was agreed that there would be a week-end cycle run and a weekly meeting; that each one must pay an equal subscription; that each member could introduce prospective new members, who must be approved by the others, before being accepted for membership.

The first principles, therefore, to be laid down were that the demand for activities should come from the members; that membership numbers should not be sought at the expense of quality in club life; that the leader should be an adviser and suggestor of ideas.

By June 1943 the demand for activities had resulted in other club evenings; the main club night, which all members were expected to attend, was held at a church hall where organised recreational floor-games and table-games took place for most of the evening; then all

[1] These figures are not based on statistics, but form merely a subjective estimate.

would gather round for a short story—a detective or travel yarn—followed by prayers. On another night a handicraft group met in a classroom of the local school; all tools and materials were, perforce, carried to and from the school each night and the room left in good order, as it was found at the beginning of the evening. Another group had become interested in short one-minute sketches performed as party items; encouraging this, a voluntary helper was able to lead the boys later to undertake longer sketches partly written by themselves, so that a " Gang Show " was produced by June 1943.

The great value of the development and conditions of this first year lay in the fact that unsuitable premises gave the members many problems to solve; they were obliged to expend no little physical effort in the organisation of their activities. Many activities had been initiated as a result of working from within the group and starting from the interests of the members. Every member was actively contributing to the life of the club.

Since there was no building of its own which could act as a visible symbol of its existence, it was most important that there should be a continuing factor in the club which would bind the members together into a community. This factor was already present in the form of a subscription and a common recreational club night; at this stage, however, something more was needed.

In twelve months the leaders in the club—those older boys who had been prepared to assume responsibility for booking table-tennis or who had unobtrusively helped in one way and another—had shown up against the background of other members. Already a camp secretary had been appointed, who took the fees of fellows attending week-end camps and looked after the general details in connection with these. Secretaries were subsequently appointed for other groups.

It was now suggested that all members were capable of taking over more responsibility for activities, and that, accordingly, some sort of team system should be evolved. This was enthusiastically accepted, and it was decided that a House System should be inaugurated. The members were divided into three Houses, with a balance of age-groups and interests in each. Each then elected a captain and secretary, the six House officers being appointed as a club committee. The leader and voluntary helpers were to attend without vote. Each House chose itself a name. The Houses met each month, when it was the business of each boy to make his suggestions or criticisms and bring up any matter of importance for the club's well-being. The House officers would then bring forward at the committee meeting all matters entrusted to them; after this the committee would come to certain decisions, which then became club law. They were naturally encouraged to concentrate on the best decisions for the club as a whole

and to subdue their personal feelings; this attitude took some little time to achieve.

It soon became evident to the members that the Houses could be used as the basis for a rota system in various duties. Gradually, as need arose and became apparent to the members, it was possible to influence them to undertake innovations; for example, each House secretary or captain was made responsible for collecting the subscriptions from the members in his House; each House provided canteen "wallahs" (as they were called), who were responsible for seeing that refreshments were provided. The canteen "wallahs" knew at what time they were expected to start preparing refreshments and what items they were to prepare. It was left entirely to them. If, due to the slackness of a member, refreshments were not produced, the leader did not step into the breach; he merely made a fuss, like all the other members, saying he was famished and thirsty and didn't think much of the people who were supposed to produce refreshments. Social pressure of this kind provided the experience which it was necessary for members to undergo before they reached the stage where they took a pride in producing the best possible refreshments at the agreed hour and in leaving the canteen in a clean state.

Besides taking part in activities in which he was particularly interested, a member was contributing in various ways, through his House organisation, to the common life of the club. In House meetings he was able to make a vital contribution, in the sense that he was helping to maintain its life. Houses were invaluable, if only from this point of view, because they provided a small intimate group for this kind of deliberation. At a general meeting of the club boys would have been shy of speaking their thoughts in front of so large a group.

By the end of 1943 another function had devolved upon the Houses —that of inter-House games. These latter were played in the form of a competition in floor- and table-games. This provided the opportunity for developing an interest in something more than games only. The generosity of a voluntary helper enabled the club to acquire a Challenge Cup. This was to be won in competition by the best House; points were gained not only for games, but for general attendance, attendance at activities and payment of subscriptions. In addition, a smaller cup was awarded to the boy who was considered to have rendered the best individual service to the club during the year.

During the next fifteen months until March 1945 the members took more and more responsibility for their affairs, boys finding opportunities for development in many ways and noticeably directing their energy towards the life of the club and its well-being.

Activities increased during this period. After a while it was possible to predict the course of or lay down principles for the in-

auguration of new activities. The club's discussion group on the one hand and its handicraft group on the other illustrate these principles.

At one time it was decided to use the B.B.C. Listening Group Series entitled " To Start You Talking ". There were considerable listening difficulties, but apart from these, the group was not successful for the following reasons :—

(*a*) The subjects were not chosen by the members.
(*b*) They did not actively take part in discussion until after the broadcast.
(*c*) The discussion was not spontaneous.

On several occasions, and in particular in 1947, the group was successful on different lines. On this latter occasion the subjects were chosen by the group at the beginning of the session. Then each member volunteered to open the discussion on a particular subject. He was then expected to consult the leader as to what books or films or other sources would provide information on the topic. He would then look up this information himself and open his discussion. A chairman was appointed to conduct meetings. Previous to this system being adopted the members had decided to have a discussion group without planning ahead the subjects. The leader did not interfere in this arrangement. After the first two meetings of this kind it was found that the group wasted much time and obtained little satisfaction. The discussion group eventually succeeded because :—

(*a*) The subjects were chosen by the members.
(*b*) They learned by experience that one must work hard to obtain factual information, for the discussion to be profitable.
(*c*) They were active in the discussion all the time and provided the drive for the group.
(*d*) The group had sprung up from unorganised conversational discussions, overheard by the leader or in which he was himself engaged, about various things which interested the members.

The value of this kind of subject teaching, closely allied to the methods of the two School experiments described, will be seen time and time again in club life.

In 1946 the Handicraft group expressed a wish to build and operate a marionette theatre. When the leader was approached about the matter, he asked if the group would like him to find an instructor. It decided against this and assiduously plunged into reading about the subject from Public Library books. The leader, a novice to this art, took an active interest with the members and helped where possible. Upon entering the craft room one evening (for the club had now acquired its own premises) he saw some apparently discarded puppet-body components lying on the work-bench. He asked a member for what purpose they were intended. The member replied, " These were

the first we made, and are finished with now; we found out faults in them, but it showed us how to make 'em properly—after all, that's how you learn, isn't it?" This was a sound object lesson for the leader. It is by experience that profitable learning is brought about.

The puppet theatre taught at least one further valuable principle. The leader had been asked to obtain certain materials by a certain evening. He had failed to do this and was roundly reprimanded by the members for not doing so, and was told that work was now held up. The leader apologised to the group, but pointed out that the criticism was not fair, as there were at least three puppets lying on the bench which had not reached the stage where the materials in question were required. The members replied, however, that they wished to get one puppet completed rather than have half a dozen incomplete. There was the desire not to see the parts, but to see the whole. During the five years since the club had been established the importance of this principle was impressed upon the leader time and time again; in inaugurating, for example, the French Circle, the Male Voice Choir and the Drama Group (which in two years was performing Shakespeare), a whole unit—a quick preview of the completed object—whether it be a song or a French sentence or a sketch, was the working component. Add to this the fact that the component was one in which members were directly interested and had chosen themselves and it will be seen that there was a reasonable chance of directing the boys' æsthetic impulses to a satisfying, socially useful goal.

When the members of the club, in its first year, had increased to a maximum of forty-five (stipulated by the members themselves), it was natural that there should be much destructive behaviour; not only destruction of property, but sabotage of activities by way of diversion. The leader needs must, at first, deal with this, achieving merely repressive results. As members had responsibility thrown upon them, they voluntarily curbed their destructive behaviour, because they knew that they were hampering their own pleasure and because much of their energy was taken up in carrying out their responsibilities. At the end of the third year, therefore, the position was reached where the leader had comparatively few disciplinary matters with which to deal. He still represented authority in the club and, as such, however benevolent, was a legitimate object against which to revolt; as long as this position continued there must, necessarily, be an appreciable amount of misbehaviour. At the end of 1945 it was therefore agreed that the Members' Committee should deal with discipline. Being elected by the members in a responsible manner, most committee men would command their respect and their verdict in matters of disciplinary action would also be respected. There would be no fun in acting in opposition to the considered opinion of one's fellow-members, however enjoyable it might be to revolt against the leader.

Another factor entered into this question of investing the Members' Committee with a disciplinary function. The phenomenon of suggestion has many characteristics. Two of these are the power of mass suggestion and the fact that the effectiveness of a suggestion depends very much on the prestige with which the receiver of the idea regards the suggestor of the idea. Clearly, then, six or more boys, the elected representatives of the members, will be far more effective in suggesting standards of conduct than the leader himself. The latter will try, rather, to help these older boys to orientate themselves towards higher standards of conduct.

By placing disciplinary functions in the hands of the Members' Committee (with the agreement of the members) it was found that the well-being of the club became more than ever the object of their efforts and that, moreover, the members in general now turned their efforts in this direction away from purely negative destructive behaviour.

During the six months from September 1946 to March 1947, due to the constant flow of boys to the Forces, the membership became composed of a large majority of comparatively new (some quite new) members and a small minority of the old long-standing members, most of whom were also committee men. The consequence was that the committee represented a tradition which its members had helped to build but which meant nothing to other newer club members. When, therefore, a member was disciplined by the committee, it was almost as if the leader were doing so—that is, the committee had come to represent authority and not the common life. For this reason it was necessary to persuade them that the time had come for disciplinary matters to be dealt with by the members themselves, so that experience might teach tham the fruits of misconduct. It was therefore agreed by the members that, among other changes, when a boy misbehaved, a committee of five would be elected on the spot to deal with the matter. As a result, one might to-day be the judge and to-morrow the judged. During the six months following this innovation, it had not been necessary to call a single committee meeting (no record beyond this point was available).

It must be said, finally, that very soon after the club commenced to assume responsibility for its own affairs it became the custom for the committee not to make decisions for the club, but to make recommendations which the club was obliged to adopt, reject or modify. In this way it was the members who in the first place suggested changes, whilst the committee then hammered them into shape in the form of recommendations which the whole club eventually debated, finally making a decision. Every member was therefore responsible for making club law and was expected to see that it was upheld.[1]

[1] The question of justice and discipline in children is dealt with most interestingly by Jean Piaget in his " The Moral Judgement of the Child," 1932, where he traces the change from the " law of constraint to the law of co-operation."

Results. It will be seen that it is possible to practice self-government in a Youth Club in which every member has a fundamental part to play. In the Club described, the cardinal principles of experience, responsibility and problem-solving have been applied. What of the results, however, in terms of character formation? Careful detailed case-notes on fifty members of the club were kept over varying periods up to five years. These show that in forty-two of these cases members appear to have achieved varying degrees of sublimation and that the interests and ideals and tradition of the club, established by the members, have provided the objects towards which their sentiments have directed their energy. Of the eight who did not achieve a degree of sublimation, two, it is reasonable to suppose, would have achieved this had they not been called up for the Forces and consequently left the club, whilst the other six were affected by abnormally adverse home circumstances.

In order to investigate the full value of self-government in the club, it was necessary to ascertain whether this was really the cause of sublimation in the members or whether the cause lay elsewhere. For this purpose a questionnaire [1] which was answered by members of Club X and of two other clubs was designed to find out experimentally :

(*a*) Whether the club answering was, in fact, self-governing (i.e., to verify the leader's opinion).

(*b*) What evidence there was of sublimation among the members answering (verification of the conclusions drawn from case notes).

(*c*) What relation there was between length of membership and sublimation on the one hand and age and sublimation on the other.

It is not possible to give detailed results, but the following points are of interest :—

(i) The members' answers to the questionnaire were assumed to reflect their true opinions; to ensure this care was taken in its design and in its presentation to the members and a subsequent statistical test [2] applied to the results showed that this might be assumed to be so.

(ii) A group of questions—e.g., 1 and 5—established that in the opinion of about 90 per cent of the members Club X was self-governing. The questionnaire having been answered by a group of members from two other clubs, it was clear that one of these was self-governing, whilst the other, although purporting to be such, was not, in effect, so.

[1] See p. 136.

[2] Pairs of questions were chosen which tested the same factor (e.g. questions 1 and 5). The tetrachoric correlation coefficient (r_t) was calculated between the answers to each pair. This was done with ten pairs of questions the values of r then being averaged. N ranged from 100 to 103; individual values of r_t ranged from $+0{\cdot}62$ to $+0{\cdot}9$ with P.E.'s ranging from $\pm 0{\cdot}06$ to $\pm 0{\cdot}11$; average value or $r_t = 0{\cdot}775$. This value of r_t is therefore significant and indicates a high correlation.

The answers from all three groups to such questions as 2, 3, 6, 8, 9, for example, indicated that the vast majority of the members (boys and girls—for both boy and girl members of group 2 answered the questionnaire) were in favour of administering their own affairs. This is most important, as self-government has, by virtue of this fact, a large factor in its favour—it caters admirably for the natural urge of the members to administer their own affairs.

(iii) The answers to all questions, except those which seek to establish facts about the particular system of club government (some of which have already been mentioned), indicate whether the member answering has orientated himself towards the life and ideals of the club and the well-being of fellow-members, or whether his energy is still serving only his selfish interests—that is, they establish whether the member has achieved a measure of sublimation or not.

The percentage of answers to these questions showed that, at the club described and at one of the other two clubs answering the questionnaire, in the vast majority of cases a degree of sublimation had taken place. In the remaining club, in only approximately 50 per cent of cases could this conclusion be drawn. This latter club was that in which self-government was apparently not practised. One may therefore tentatively conclude that since two clubs practise self-government and their members achieve sublimation, and since a third club does not practise this and 50 per cent of its members do not achieve sublimation, that there is a reasonable probability that self-government is a factor favouring sublimation.

(iv) Can this last conclusion be more closely investigated? It can be in two ways :—

(*a*) If self-government in the club directly and quite simply causes sublimation or is a primary factor, then one would expect that the boy who has been longest in the club will have achieved the highest degree of sublimation and that those who have been members for shorter periods will have achieved correspondingly lesser degrees of sublimation or none at all. Now, by applying statistical tests of a certain kind [1] to the questionnaire answers, it is possible to investi-

[1] Chi-square (χ^2) Test of Association (R. A. Fisher, "Statistical Methods for Research Workers," Biological Monographs and Manuals, 10th Ed., 1946, pp. 86–95), and calculation of Coefficient of Colligation from Abac Graph (C. Burt, "Mental and Scholastic Tests," 1927, pp. 216–20). The questions which indicated sublimation and non-sublimation (see above) were tested one by one using the three groups separately. Answers to each question were grouped as indicating sublimation (+) or its opposite (−), so that one of these two classes was possible for each answer. Each answer was further classified into one of two categories, thus : "over two years membership" (+) or "under two years membership" (−). For the second test the first dichotomy remained whilst a new classification was used thus "over sixteen years old" (+), "under sixteen years old" (−). These dichotomies enabled the data to be arranged in the form of 2 × 2 Tables. Neither the values of P nor of the Coefficient of Colligation obtained were significant. There was one degree of freedom for calculation.

gate this hypothesis for each group as a whole. The results of this test showed that, in the three groups of questionnaires tested separately, sublimation did not depend on the length of time a lad had been a member (and therefore on the time he had been open to the influence of his club's system of self-government).

(*b*) Is there a direct connection, then, between the lad's age and his degree of sublimation? By applying the same tests [1] with different data from the same three groups of questionnaires it was possible to ascertain that in these groups one could not conclude that sublimation depended on the boy's age.

(v) One further test of association was applied to other information about fifty-two boys of Club X. The leader knew the homes of these boys and was also able to make a judgement as to whether they had succeeded in sublimating some of their energy (either before or since joining the club). This test showed [2] that there was a significant relationship between sublimation and a good home.

To sum up the results of this statistical treatment, it may be inferred that when a club is truly self-governing (according to the principles already enunciated), the vast majority of members do achieve a substantial degree of sublimation. It has been shown, however, that this observed phenomenon is not in any special way dependent on the influence of self-government or on the age of the member. It does, however, appear to be connected closely with the influence of home life. What theory, therefore, can plausibly be formulated that will interpret these facts in a helpful manner? It would seem that the answer is that the boy's capacity to sublimate is strongly determined by his home life; the interaction of the latter with his temperament will be important. The self-governing club will then provide, for the boy with the capacity to sublimate, the altruistic objects and sentiments to which he may direct his energy in sublimated form. He does not, of course, make use of these channels immediately, but only gradually. It would appear that, provided adolescence has been reached (the information of this investigation does not tell us about younger boys), sublimation can commence at any age, developing with maturation. We may therefore conclude that, however soundly developed is the system of self-government in the club or college group, the boy will be unable to deflect his energy towards its ideals, if an unsatisfactory home life has prevented him from acquiring the capacity to sublimate. That is to say that his home circumstances may have caused a serious mental conflict, in which he has been obliged to use his mental energy,

[1] See footnote, p. 134.

[2] These members were divided into two categories thus: "Satisfactory home" or "Unsatisfactory home"; they were further classified as being "sublimated" or "unsublimated". A χ^2 test (see footnote, p. 134) was applied for which the significant value $P = 0{\cdot}03$ was obtained there being one degree of freedom for calculation.

instead of giving to it normal, healthy expression. Consequently, his energy, unbeknown to him, will be continually serving the resultant complex, so that he is, in fact, unable to direct it elsewhere.[1]

The practical implications of these conclusions are that :—

(*a*) The leader or teacher must be sufficiently aware of the home life and mental processes of his members or pupils to be able to discern a psychological repression of the kind mentioned, so that he can either help the boy, by judicious advice at the appropriate time and by unobtrusively pushing him into certain experiences to relieve this repression, or refer him, in other cases, to a competent psychologist.

(*b*) As a result of this need to become well acquainted with members and their homes, the number of boys or girls in the group for which the leader or teacher is responsible should be sufficiently small for him to be able to give detailed individual attention.

One might sum up by saying that since sublimation is the key to character, the latter can never be developed through a repressive discipline; the dictatorial club leader or teacher will therefore not be able to help boys or girls to sound character, and therefore good citizenship. Let it be further remembered that the majority of industrial lads and girls suffer during working hours from repressive and character destroying discipline, and that out of working hours it is therefore more than ever essential that they should be able to develop in a free, dynamic atmosphere.

INSTRUCTION SHEET AND QUESTIONNAIRE

TO THE CLUB MEMBER WHO HAS CONSENTED TO ANSWER THE ATTACHED QUESTIONS

We want to be sure that a Club such as ours gives the greatest benefit and enjoyment to all concerned. That's plain common sense. It is therefore necessary to find out whether we and other Clubs are running our club affairs in the best way. That is why you are being requested to give your frank opinions.

Below are some questions which you are asked to answer *thoughtfully*, *honestly*, and *frankly*.

Note carefully the following remarks :—

(a) *I don't know who you are.*

(b) *Any written answers will be typewritten before I see them, so I won't know you by your writing.*

[1] These conclusions and the implications which follow them are corroborated by the Club X case-notes and by the results of classical experiments in self-government.

(c) *It doesn't matter two hoots what you say about the Club or the Leader as long as you give honest opinions.*

(d) *Don't write your name anywhere—Just fill in the two spaces at the bottom of this page, saying how old you are and how long you've been a member of the Club.*

V. S. P.

How to answer the Questions.

1. By underlining the word which gives the answer you wish to give. For example :—

YES/NO/SOMETIMES.

2. By putting a cross (×) by the statement which contains the answer you wish to give. For example :—

× (*a*) When we make it.
(*b*) When it is done by someone else.

AGE.....Yrs.....months.

MEMBER OF CLUB for :.....years.....months.

QUESTION	*ANSWER*
1. Do you consider that every opportunity is given you for expressing your views on the Club programme ?	YES/NO.
2. Do you like to have a " say " in the Club programme ?	YES/NO.
3. Would you like the programme to be decided upon by the grown-up Committee ?	YES/NO/THE GREATER PART OF IT/ SOME OF IT/ A LITTLE OF IT.
4. If you thought the programme was " dry " which of these would you do ?	(*a*) Leave the Club. (*b*) Complain about it to a Committee member. (*c*) Complain about it to the Leader. (*d*) Do nothing about it. (*e*) " Play up."
5. Do you consider that you have a " say " in the government of the Club ?	YES/NO.
6. Do you like having a " say " in the government of the Club ?	YES/NO.
7. Do you feel that this " say " carries weight with the Members' Committee and the Leader ?	YES/NO.
8. Do you like making the rules of the Club yourself ?	YES/NO.
9. Would you prefer the rules to be made by the Leader ?	YES/NO/SOME OF THEM.
10. Do you feel that you are a " nobody " in the Club ?	YES/NO/SOMETIMES.
11. Do you prefer to be judged for misbehaviour by your fellow members on the Committee or the Leader ?	FELLOW-MEMBER/LEADER.

QUESTION	*ANSWER*
12. Which has more effect on you—being disciplined by the Members Committee or by the Leader ?	MEMBERS COMMITTEE/LEADER.
13. Do you use your right of expressing your views on the organisation of the Club ?	YES/NO/SOMETIMES.
14. When your House Captain, Secretary and Junior representative were elected, you voted for certain boys. Why did you vote for these particular lads ?	(*a*) They were your particular friends. (*b*) You thought that you would benefit personally by having them on the Committee. (*c*) You considered them the best men for the job. (*d*) You considered that they would do their best to benefit the Club. (*e*) A particular member would have done the job well, but as you had a grudge against him you voted for someone else.
15. Do you respect the Committee members ?	YES/NO/SOME OF THEM/MOST OF THEM.
16. Do you feel that the Committee members are sincerely working for the benefit of the Club ?	YES/NO/SOME OF THEM/MOST OF THEM.
17. Do you feel that you and the other members, the Members Committee and the Leader are one mob working together ?	YES/NO.
18. Does the Club mean a lot to you ?	YES/NO.
19. Does it arouse any loyalty in you if you feel that it is being let down in the eyes of the public ?	YES/NO.
20. Which do you put first ?	(*a*) To get as much enjoyment out of the Club and never mind what happens to the Club itself. (*b*) To get as much enjoyment but not at the expense of the other members of the Club.
21. Is the Club run in such a way that it is easy to get to know *pretty well all* the activities of the Club ?	YES/NO.
22. Is it just a place where you can get a game of table tennis and listen to the radiogram, etc. ?	YES/NO.
23 Is it a series of little groups each interested in its own particular activities only ?	YES/NO/FOR SOME MEMBERS.
24. Do you try to get out of paying your subscriptions if you can ?	YES/NO.
25. Do you drop behind in your payments without meaning to ?	YES/NO/SOMETIMES.
26. How do you look upon the Leader ?	(*a*) As a Dictator or boss. (e) As someone to be played up or defied as much as possible. (*c*) As a well-meaning dictator with whom to co-operate as much as possible. (*d*) As an equal but elder member with yourself.

QUESTION	*ANSWER*
27. Do you tend to flare up if another fellow annoys you?	YES/NO/SOMETIMES.
28. If so, does your anger as quickly cool down?	YES/NO.
29. If you do not *now* tend to flare up, did you at one time?	YES/NO.
30. Do you *now* take a determined but more patient attitude towards such a fellow?	YES/NO.
31. If you see someone damaging Club property what do you do?	JOIN IN/NOTHING/TELL HIM TO STOP.
32. Are you always on the look-out to see that every member is treated fairly by every one else?	YES/NO.
33. Are you always on the look-out to see the Club as a whole flourishes?	YES/NO.
34. Do you accept the ruling of other boys rather than express your own opinion?	YES/NO.

CITIZENSHIP THROUGH SOCIAL EXPERIENCE

BY

JAMES HEMMING

Research Officer, The Association for Education in Citizenship. Author of "Teach Them to Live"; "Democracy in School Life"; "The Teaching of Social Studies"

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A GLANCE at the Oxford Dictionary suffices to show that "citizenship" is one of those words the use and meaning of which have been considerably stretched of late years. Such extensions of meaning usually occur to make good a gap in current vocabulary when a need is felt to describe some recently developed feature of contemporary society or, perhaps, some feature of which society has only just become aware. By this adaptation of words to needs—"integration" is another example of the process—we are able to isolate and emphasise some general aspect, quality, requirement, or deficiency of the prevailing scene. A frequent consequence of this, since the adaptation of meaning follows upon a widely-felt need, is that words so modified are immediately over-used; they are found so neatly to suit situations within society that they are gratefully seized upon in all quarters. The need to give a name to a new aspect of the social problem, the extension of an old word to serve that need, and subsequent over-use of it may all be observed in regard to "citizenship".

It is necessary, therefore, to state forthwith that "citizenship" will be used here in its extended sense—that is, as the name for an organic, reciprocal relationship between persons and the communities they form; a relationship which is mutually advantageous in stimulating the most full, most productive, most appropriate development in persons and society. Citizenship so defined obviously involves much more than the rights of the inhabitant or the duties of a freeman; it embraces conscious social purpose; a feeling of responsibility for what is happening; a sense of participation in the struggles of man to overcome his difficulties, whether local, national, or world-wide; an understanding of co-operation; adequate knowledge of the structure of society and the nature of its problems; an eagerness to be informed; and a sense of at-oneness with one's fellows and ultimately with mankind. Thus citizenship in the modern sense implies dynamic social interest. And that, as the research of the social psychologists has made plain, is caught from experience rather than taught by precept.

Effective training for citizenship in the modern world, therefore, depends on the building up, through social experience, of social attitudes appropriate to the needs of the times and based on a full

appreciation of the relationships that link men to each other and to their community in forming the social structure of a civilised society. Thus, every young person, as he travels along his road to maturity, needs to be provided not only with the knowledge required for responsible citizenship, but also with the social experience necessary for him to acquire a citizen's approach to life. The purpose of this paper, therefore, is to suggest how we may introduce our young people to such meaningful experiences of "being and doing with others" that they may grow, not into timid or aggressive isolates—the characteristic neurotics of our times—nor yet into merely arm-chair or bar-rail critics of the efforts of others, but into purposeful, aware contributors towards their society's and their world's well-being; into persons-in-community, that is, constructive in approach, co-operative by habit, clear in thought, flexible in mind, at ease with human relations, and readily articulate. To put it another way, we have to seek how we may help to eliminate social irresponsibility and apathy from our society by providing for our young people a thorough education in purposeful social experience.

We may start out to plan for this with the greater confidence since research into the behaviour of young people has amply proved that children and adolescents are eager to be social, co-operative and loyal, to be of service, and to focus their enthusiasms upon a purpose higher than individual advantage, always provided that they feel assured their personal independence and right to a point of view of their own will be respected. We also know that, conversely, the anti-social responses of young people, whether they are manifested positively as impertinence, hooliganism or delinquency, or negatively as apathy and indifference, are not the result of congenital social inadequacy, but are mechanisms of defence against discouragement or belittlement at the hands of adults and, in fact, need not occur at all.[1]

In training citizens, therefore, we have to see how best we may nourish the social and co-operative capacities of the child so that, as emotional and intellectual horizons broaden with growth and maturation, co-operative capacity will be developed proportionately and social interest extended.

If we succeed in keeping social education in step with the rest of education, the young person, during his last years at school, and during his early adult life, will be ready to orientate his energies and enthusiasms towards the life of his community. On the other hand, if social education is neglected, in place of a flowering of social interest and loyalty during the late teens and early twenties, there is likely to occur an excessive absorption with personal prestige which will

[1] This evidence has recently been made available in the book, *Adolescence*, by Dr. C. M. Fleming, published by Kegan Paul.

seriously hinder the individual from establishing those confident and enduring relationships with the wider community through which responsible citizenship can develop.

What sort of formative social experience should we aim to provide at the pre-adult period of life as a basis for adult citizenship? As a preliminary we have to consider in outline the desirable features of earlier social education, for the final stage is all of one piece with those preceding it.

At every age the same objectives of social education have to be pursued—to give the child experience and understanding of co-operation, and a sense of rôle. Unfortunately a great deal of damage is often done by postponing these objectives until too late, in the belief that they are matters for adults rather than for children and infants. On the contrary, it has been shown that even a baby not only can but needs to contribute its own share to the business of living, even as early as the period at the breast.[1] Social education, therefore, starts with birth. At the toddler stage, children are ready to learn to mix and to share and to undertake simple responsibilities. They need the experience of being depended on in small matters to offset their oppressive consciousness of dependence. Whether at home or school, if respect for self and others is to be engendered, children need to be treated as persons, and to have their own point of view acknowledged. Recent research has also plainly indicated that children learn consideration for others willingly enough if they are not rendered timid or aggressive, by pampering or excessive strictness. If they see that the kudos they hunger for—the delight of being treated as responsible by adults—is best to be won by social behaviour, they will behave socially. And they will gain in social courage at every successful social experience.

At junior school and in their early secondary years children may be taught how to co-operate in their working relationships through participation in active project studies—surveys, model-building and the like—in which they have their special tasks, but are also working alongside their fellows and their teachers for the attainment of a common objective. Discussing such projects together, and working out community problems in form meetings, provide further social experience. Finally, during their later years at school the young people may be given increased social responsibilities both as individuals (prefects, etc.) and in groups (school councils, dramatic societies, etc.). From such formative experiences the final step to complete adult citizenship is short enough to be taken easily, whereas, if preliminary experience is neglected, the gap between individual and civic responsibility seems too broad to be attempted, and many, left unprepared,

[1] See "The Peckham Experiment", Pearse and Crocker (Geo. Allen & Unwin, Ltd.).

prefer the security of their isolation to risking what seems a dangerous jump into the unknown.

So much for the desirable course of social education. We have now to consider the final stage in greater detail. This needs to be planned the more carefully because the need of children at all ages for social education through experience is still so little understood, and because the wrong adult–child relationship of domination–subservience, with its false goal of imposing conformity, is still frequently to be found in both schools and homes, instead of co-operative relationships that encourage social growth. Thus, those working with adolescents often find themselves obliged to undertake more than their particular share of social education owing to the inadequacy of what has gone before, which leaves them with a problem of making good neglect as well. By way of illustrating this point a teacher in a school noted for its democratic methods recently compared the development of proper citizen attitudes to the acquisition of road sense. If a person has successfully passed through the stages of scooter, tricycle, miniature cycle, bicycle, motor cycle and small car, he will easily—indeed, eagerly—graduate to a large high-powered automobile when the opportunity occurs, but the person who has never learnt to ride along the road at all will be horrified at what seem to him the appalling risks of driving a large car on the busy streets, and he will shrink timidly away from such an undertaking. Just so, the young person who has not been educated socially, when suddenly confronted by the whole demands of social maturity, will lose heart and retreat before what seems an impossible task of adjustment. When such is the case, we have not only to place appropriate pre-adult opportunities for co-operation in social usefulness before the young person, but also to recondition and encourage him in order that he may get rid of his inhibiting feeling of inadequacy.

There are additional reasons why the social experience provided in the pre-adult period (fourteen to eighteen approximately) is of especial importance. For one thing, it offers the last chance of getting essential lessons home. Also, during this particular phase of maturation the young person can easily be encouraged to turn his interest, thought and enthusiasm towards the wider social problems.

Thus, adolescence, which should be seen as the infancy of adulthood rather than the end of childhood—the healthy adolescent is essentially forward-looking—is an especially significant period in social education; it is the phase at which social attitudes begin to take on at least a semi-permanent form, determined by the sum total of effect of present and past experience. Indeed, attitudes developed at this stage may last a lifetime, and, at the least, will determine whether the relationship the young person adopts towards the world is grasping and self-centred or co-operative and social.

Apart from home and personal influences, the most decisive factor governing whether the social experience of the adolescent is citizenship-promoting or citizenship-obstructing appears to be the quality of interpersonal relations existing within the social unit, whether school, factory or otherwise, where the young person spends his working hours. And of these relationships, that between authority and rank-and-file is crucial because the adolescent is very sensitive to the way he is treated by his superiors; he is eager to be loyal, ready to be co-operative, but, at the same time, he will fight and obstruct with the utmost determination if he feels authority to be such that it threatens his personal independence.

The types of authority at present to be found throughout our society may roughly be classified as dictatorial, authoritarian and democratic. If we take as our criterion of a citizen the presence or absence of such qualities as we have already outlined—a sense of responsibility, a capacity for co-operation, powers of initiative, social outlook, etc.—it is not difficult to show that only the last pattern of authority, the democratic, is able to develop those attributes properly.

By a dictatorial authority pattern we refer to that found in a school or factory which is ruled by a single man's domination. The resulting social framework denies the means to expression of all the chief attributes of a citizen. In such a school or factory there can only be one effective purpose—to carry out the absolute will of its ruler—and only two possible responses: to accept or resist that will. Genuine co-operation is not possible because co-operation is a reciprocal relationship—much more than unquestioning acquiescence. Nor can a sense of personal responsibility develop properly under autocracy, because the sense of responsibility does not grow merely from being held responsible *for* something, but requires an element of participation. Acceptance of responsibility should always be based upon a willing personal decision arising from an informed understanding of the need for, and purpose of, the responsibility in question. In an autocratic atmosphere, initiative, which is always up against the threat of an absolute No!, is unlikely to flourish, while social vision is cut short by the constant absorption of everybody with the demands of the immediate autocracy and the need to come to some sort of workable adjustment with it. Thus autocracy, however much it may preserve an appearance of action and purpose, in fact breeds apathy.

An example will serve to illustrate this. A democratic Headmaster, who was recently appointed on the retirement of an autocratic predecessor, made arrangements to hold regular staff meetings, only to find that none of the members of the staff was prepared to advance any ideas of his own. At every meeting they waited pathetically for the Headmaster to give a lead, and then fell in behind it. This lack of

initiative took months to overcome, so completely had the staff forgotten how to participate in their own affairs. If the attributes of citizenship can grow so numb even among the adult members of an autocratic school community, what hope can there be of promoting these attributes in the pupil body? It must be added that, in its autocratic days, this school, judged by accepted standards, was by no means a bad school. The behaviour was good, the curriculum sound, the output of scholars, as such, above average. Yet this school was not training its pupils for citizenship in the modern sense. It was incapable of doing so because of its social atmosphere.

The establishments that may be classified as authoritarian differ only from the dictatorial type in that the powers of absolute authority are shared by the whole authority-carrying group. In such establishments the development of an attitude of responsible participation among the rank and file is inhibited as much as in the case of a personal absolutism. In a school of this type, although the staff are participating in their own affairs, the pupils are not. Between the "we" who make and impose rules and plans and the "they" who have to submit to them a great gulf is fixed, in spite of the fact that the actual personal relations between staff and pupils may be pleasantly friendly. Uninformed, unquestioning acceptance of the plans of others for oneself, and the habit of regarding the forces of government as beyond one's personal influence, are obviously the antithesis of everything we hope to find in the citizen. People, therefore, who support authoritarian régimes for youth in school or factory, and at the same time slate the non-voter for his lack of responsible civic participation, are being hopelessly inconsistent. They blame a state of mind in the adult which they are themselves cultivating in the young person.

In contrast, a framework of democratic interpersonal relations constantly stimulates the development of all the attitudes and attributes of responsible citizenship. Rid of the rigid domination of an authoritarian will, members of a democratic school or factory are able to think out their purpose, and conduct their affairs, in a way that draws everyone into co-operative participation for agreed objectives. Authority in such a community ceases to be the prerogative of certain privileged members and becomes instead a function of responsibility. The rule is simply that those who hold responsibility at any level shall be endowed with the authority necessary for the efficient performance of the tasks involved. Authority of such a type is not something which must either be resisted or submitted to; it is just part of the equipment for a job that by common consent has to be carried out in the achievement of the common purpose. Moreover, since the objective of the democratic establishment is to mobilise its total human resources in fulfilling its objectives, all its members are welcomed into active participation. This leads naturally to consultation at all levels and

between all groupings, the sharing of information necessary to make correct decisions in terms of purpose, and the encouragement of initiative. That things do work out thus in practice may be observed in any of the democratically-run schools, factories and other institutions of Britain, which, though still too few, are growing in number. It is most noticeable that these establishments are not dominated by a will, but by a purpose, and in all matters, whether small or great, acknowledge absolute obedience only to the actual demands of each situation as it arises in the forward movement of the whole community towards a more and more complete and efficient fulfilment of its avowed, understood, and commonly-shared purposes.

A young person growing up within such a community finds what he needs to give him skill and confidence as a citizen. He can depend on his views being listened to with respect. He knows that any good idea he has is likely to be adopted for general use. He is conscious of a personal rôle that is socially valuable and socially valued. In fact, he feels he is trusted and that he is free to be effective to the limits of his capacity. He is not goaded to fight authority in defence of his independence, because he himself shares in that authority; instead his energies are released in ways that are both socially constructive and personally satisfying. Even a socially retarded young person is, by such an encouraging environment, given a maximum opportunity of entering adulthood equipped with the social courage, broadened vision and co-operative capacity of the mature citizen. On the other hand, if the society of their pre-adult years fails to give young people the experience of socialised authority and co-operative interpersonal relationships, vision and loyalties are together torn to pieces by the conflict generated in their minds over whether they shall fight or accept the demands of society upon their personal lives. Indeed, such conflict, unless resolved, not only cripples young people as citizens, but may drive them to the anti-social extremes of delinquency and crime, or the escapes of neurosis or breakdown. An infantile attitude to authority is characteristic of both criminals and neurotics.

However, although the quality of social relations existing throughout the whole community within which the pre-adult working years are spent is immensely important in itself, this is not the only social factor involved in training citizens. The social structure of the establishment is also important. This will be treated under two headings: intimate group relations and social co-ordination.

The formative effect on character and attitude of the small groups into which every larger social unit becomes divided has only recently been appreciated. The fact that there is no social equivalent of "gang"—a word which itself usually carries strong anti-social implications—demonstrates how informal associations have been held

suspect in the past. Thus, Le Bon, in his famous treatise on "The Crowd" [1] writes :

> "As soon as a few individuals are gathered together they constitute a crowd, and, though they should be distinguished men of learning, they assume all the characteristics of crowds with regard to matters outside their speciality. The faculty of observation and the critical spirit possessed by each of them individually at once disappear."

This is typical of opinion fifty years ago. It appears that western man was so blinded by the fear of having his individuality swamped within the mass that he failed to see that it is, in fact, through the give and take of group relationships that personality develops.

During this century, however, the researches of Moreno, Lewin and other social psychologists, and the parallel work of educational psychologists, have transformed opinion. We now know a person's small-group experience is an essential step in that process of social adjustment which begins at the one extreme with the child–mother relationship and ends at the other—ideally, at any rate—in the mature citizen of the world. As with all biological processes, no step may be missed out without loss and deformity. Hence the need to provide for meaningful, satisfying intimate group life for young people. If they are deprived of such experience, their ties with society as a whole are weakened or severed. "Community influences," writes Dr. C. M. Fleming, "reach individuals through the mediation of smaller groups." [2]

Within all larger social units, therefore, the existence of smaller groupings should be planned, and independent functions for them encouraged. These intimate groups will be of several types. Some will be formed by breaking down the whole social structure into convenient units, as a school is divided into forms, or a factory into shops. Some will be relatively informal—clubs, societies, and the like—and others will be completely informal : those groups of friends, or cliques of interests, that spring up spontaneously within all human communities. The lesson of recent research is that *all* such groupings are important. Experience within these groups considerably affects the attitude developed by their members towards the establishment of which they are a part, and ultimately their attitude to society as a whole. Reciprocally the intimate group life is diagnostic of the interrelations of the establishment. "If I can listen to informal group conversations in a factory," an industrial psychologist explained recently, "I can tell whether the organism is in good health as certainly as a physician can by listening to a patient's heart and breathing."

[1] Recently reprinted, Ernest Benn, Ltd.
[2] "The Social Psychology of Education" (Kegan Paul).

It follows that the formal intimate groups of any organisation must be planned with these facts in mind. We may usefully consider a contrast. Some schools, neglecting the social factors, arrange their forms as convenient numerical units, all of whose members are sufficiently on a par intellectually to facilitate subject teaching. In sequence, teachers drop in for periods of under an hour to impart their specialist knowledge to the children so assorted; the teacher in charge of the form often sees little more of it than any other teacher; no form meetings are held; and activities and responsibilities which the form can really feel to be their own barely exist. The total experience thus offered is so meaningless and disintegrated socially that considerable numbers of children retreat from any attempt at participation into sullen, discouraged apathy. Other schools, in contrast, build the school life upon the form as a social unit. Form meetings are held; teacher and form are given plenty of time together; each form has its own activities and responsibilities apart from lessons; and each member of the form is fully aware of the function of the form, its relationship to the school as a whole, and the relationship of the school to society. In schools of this type the social life sometimes reaches so high a standard that such common symptoms of anti-social attitudes as destructiveness and petty theft are unknown, while a much keener interest than normal in the world elsewhere is to be observed among the pupils. Citizenship thrives in such a social atmosphere.

Further, the school community that is well-designed socially appears to be much more articulate—as distinct from merely talkative—than one which is rigidly planned for administrative convenience. The writer was nonplussed for an explanation of why pupils of the same age, intelligence and environment, who were following similar scholastic courses, varied so much in their capacity for ready self-expression between school and school until the findings of the American Eight-Year Study of secondary education gave him the hint to apply a social criterion. Research with backward children futher supports the view that self-expression develops best amid friendly group relations. Other factors are, of course, involved in training ready articulation, but, since the capacity to speak one's mind clearly is a citizen attribute still much too rare in our society, the influence upon its development of stimulating group experience must not be overlooked.

In addition, the development of a sound attitude to authority (and, therefore, to society) is also dependent to no small extent on the mediating experience of leader–led relationships within the intimacy and security of the small group. "We are learning some of the conditions in which 'reactivity' declines," writes Professor G. W. Allport in a paper on "The Psychology of Participation".[1] "Friendly, unaffected, social relations are the indispensable condition." ("Re-

1 "Occupational Psychology," April 1946.

activity" is psychological jargon for "an exaggerated reaction".) The best way for "friendly, unaffected, social relations" to be experienced and understood by the young person is obviously through the units of social structure that are small and intimate but which, nevertheless, carry the status of official sanction, and are, therefore, representative of the authority of society.

A sound social structure, however, does not depend only on the formation and encouragement of small groups within the establishment, but also on their co-ordination with each other and with the whole. Unorganised groupings—that is, groupings lacking adequate interrelation—easily degenerate into cliques which become isolated from the main structure in the same way that an individual sometimes does from society as a whole. This essential co-ordination of social structure depends on a clear understanding and acceptance of a common purpose. Each group, we have seen, needs to be aware of its own function. The life of the group should be such that each member appreciates fully what this function is. In addition, the members should be equally aware of the purpose of the whole establishment—its *raison d'être*. If both minor and major purposes are fully in the consciousness of participants, then group life will not only be valued for itself, but also because of its relation to the wider purpose. This unifying of lesser purposes with greater and of partial experiences into a complete experience depends on such a degree of social co-ordination having been reached that every group and every person is embraced within it. How may such co-ordination be attained?

Social co-ordination is partly a publicity problem, partly a matter of organisation. Research in all sorts of establishments has shown that the more "everybody knows what is happening everywhere",—to quote a particular Headmistress—the closer-knit the social structure becomes, and the more complete and satisfying is the consciousness of rôle in the mind of every member. To reach this state of affairs the will to it needs to be supported by the machinery for maintaining it; a point which is not always clearly understood. It will not be possible to go into details here about the variety and relative efficiency of various arrangements that are in use. Suffice it to say that there appear to be three chief principles involved: an efficient organisation must exist for sharing information about future plans, present achievements, new suggestions, etc.; key personnel must "circulate" sufficiently throughout the establishment, and must be reasonably available to every member of it; and there must be a sufficient degree of cross-contacts between section and section, group and group, to make the fabric of social structure one whole piece. All this organisation, it need hardly be said, is ultimately concerned with the understanding and achievement of purpose. Diffusion of interests is one enemy of social structure; exclusiveness is another. The successful organisa-

tion will keep a balance between the two. "If too many 'we' and 'they' conversations go on, we know we have failed", a managing director said of his factory. The remark would apply equally well if made by the principal of a school. In fact, the less "we" and "they" there is in any establishment where youth is the better it is as a training-ground for citizenship.

It has been necessary to touch on social structure, even though thus briefly, because it is purposeful life within an organised but flexible social structure that seems to provide young people—indeed, all people—with the experience they need in order to understand their rôle in the more complex structure of society itself. As Sir Cyril Burt points out in his paper in the *Universities Quarterly* for May, 1947, purposes, attitudes, and broad ideals *do* transfer from one situation to another. The desocialised person, it would appear, isolates himself from participation in the life of his community because he fails to understand his rôle and the relationships that link him to society.[1] If we can once develop a mature sense of rôle and relationships, however, it is unlikely to be lost. Hence the significance of social organisation for education in citizenship. It is clear that the better the design of a social structure the easier it is for members to understand their rôles, their interrelations, and the relationship between the establishment concerned and society, and so to acquire an outlook which is essentially that of the citizen.

Personal influence as well as social influence is, of course, formative. Since people, in our civilisation, are very much aware of the former, while only just beginning to pay attention to the latter, this paper has mainly stressed the social side. A few points on personal influence need to be raised, however. They will be treated separately for convenience, although in reality personal influences are closely interwoven with social influences, especially in democratic establishments.

The adolescent, while responsive to all personal contacts, is especially sensitive to the qualities and bearing of the leaders within his social environment. This is partly because a young person instinctively seeks models upon which to mould his own behaviour and attitudes, and partly because, as has already been mentioned, the adolescent is hypersensitive to authority. If, therefore, we wish our young people to be helped towards citizenship by their social experience, we must pay attention to the personality of those in authority as well as to the type of authority itself. Mr. M. L. Jacks in his book "Total Education" (Kegan Paul) makes a plea for selecting and training teachers who will combine in their personalities integration of mind, emotional integration, integration of experience, and the capacity to clarify and interpret. Industrial psychologists are also giving qualities of

[1] See Adam Curle's paper, "Transitional Communities and Social Re-connections", in "Human Relations", Vol. I, i and ii.

character first priority in their formula for leadership in place of the amalgam of aloofness and domination that was once so highly esteemed. In this regard a statement made at Cambridge University by Dr. W. H. R. Rivers twenty-five years ago is worth study, since it shows the close relationship between good leadership and fruitful group life :

> " Whether it be the smaller field of the group constituted by the family, the larger group formed by the school or college, or the still larger group formed by the nation, the leader should be one who is not satisfied to impose his will upon the group by the power of his personality and position, relying in the main upon the agencies of suggestion and faith, but should be one who takes the group into his confidence, leads them to see and understand what is amiss when evil conditions need to be remedied, and seeks to bring leader and led into a relation in which they work together with a common understanding towards a common goal." [1]

It follows that there should be far greater care in selecting those who are to lead youth than is at present customary. For instance, whereas a firm is nowadays willing to give two or three days of experts' time in order to select the right candidate for Personnel Officer, Head Teachers are often chosen during the course of an afternoon by an unskilled panel, although a firm is much better able to remedy a bad choice than is an Education Committee. In selecting the adult leaders of youth, the wrong questions are too often asked. " Is this man a scholar and an administrator ? " *is* relevant to the selection of a teacher or club leader, but the really fundamental questions are : " Has this man the standards and attitudes we wish to see in our young citizens ? Will they *want* to emulate him ? "

One further problem remains—that of transition. When a child who has been taught co-operation and participant responsibility in the home suddenly finds himself in the alien environment of an autocratic school, or when a young person experienced in the practices of a democratic school community finds himself in a factory where the style of authority and pattern of relationships belie everything he has hitherto learnt, social shock, discouragement, and regression into social isolation may occur. Conversely, an autocratic home will ill-prepare a child for a democratic school, while an autocratic school will turn out pupils who need to be rehabilitated in their attitude to authority and society before they can reach the standard of co-operative responsibility that is expected in a democratically-run factory.

In the interests of our young people, a reasonable degree of consistency between the social atmospheres they encounter in growing up is obviously imperative. However, the truth is that between home and home, school and school, factory and factory, the most glaring

[1] This lecture is printed in " Psychology and Politics " (Kegan Paul).

inconsistency of social atmosphere exists to-day. No one, of course, wishes for standardisation of practice, but something nearer a conformity of democratic social principles throughout the institutions of our society is urgently required. It is useless for Britain to expect its young people to grow up into mature democratic citizens if they have been subjected to dictatorship in home, school or factory. The response of children and adolescents who have been left to find their way among the bewildering inconsistency of social values and interpersonal relationships is often to withdraw from their struggle to make sense of experience. They retreat into egocentric seclusion coloured by the compensations of fantasy, or find security in gangs with other socially lost souls. This inconsistency of social environment cannot be cleared up over-night. Its elimination is a social, industrial and educational problem. But at least, through the quality of social life in our schools, we can promote a rapid improvement within a generation. This means, again, that teachers must be selected for their human qualities, and must be given training which will reveal to them the importance of the social factors in education. This is no new idea. Dr. H. G. Stead made an appeal for such an approach in "The Education of a Community", published in 1942.[1] What is new is the urgency of the present need. The atom bomb had not fallen in 1942, nor had history forced the lesson upon this country that national survival depends on an overall increase in social consciousness and mature citizenship.

Let us sum up. The case has been put forward that citizenship in the modern world depends on the right attitudes being developed in youth, and that these attitudes grow out of the right sort of social experience during infancy, childhood and adolescence—the only means by which they may be satisfactorily imparted. The proper social pattern has been taken as that of the democratic community in which all are encouraged to participate co-operatively; authority is not dominant, but functional; social structure is broken down into intimate groupings; interpersonal relations are friendly and sound; and the whole is unified in the working out of a clearly-defined purpose. By seeing that our young people are brought up in such communities we shall secure the mature citizens that our democratic society needs; to the extent that we fail in this, we shall instead breed isolates and non-co-operators. An especial threat to the development of citizenship by social means is the inconsistency that is to be found to-day between one and another of the environments in which a child is called upon to play a part. This inconsistency should be tackled by giving greater emphasis to the principles of democratic life in the training offered at school, and in the selection and training of those who seek to act as the guides of youth, whether in education or in club life.

[1] University of London Press.

Does this case over-rate the significance of social experience in education for citizenship? The writer believes not. There are scattered about the country numbers of schools, highly praised for the alert, co-operative attitude of their students, whose success is clearly due to the standard of social education provided. Experimental types of Approved Schools have shown that there is nothing more important in reclaiming young delinquents for society than the quality of the social experience offered to the boys and girls, including the human relations with which they are surrounded. In dealing with backward children, a good social atmosphere has been found to be the prerequisite for rescuing the young people from their sense of isolation, and awakening co-operation. Much similar evidence is available. In fact, wherever it has been put to the test, social experience has been found to be of unexpected significance in training young people for their adult responsibilities. Citizenship requires much more than social experience as the basis for its development; it requires some detailed knowledge, and a good deal of background knowledge; it requires clear thought, clear speech and other skills; but there is a growing body of evidence to show that, unless all these are imparted against a background of democratic, social experience, their influence will fall short of producing that sort of dynamic, reciprocal relationship between individual and society which we call citizenship.

DISCUSSION IN INDUSTRY

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1. *Discussion as an Educational Method.* Group discussion is a form of education, indeed the only form, involving active participation of the members in a co-operative effort of mutual enlightenment. As a method, discussion differs from both the lecture (and the question-and-answer exchange frequently associated with it, sometimes loosely described as discussion) and from the lesson or instructional class. Its distinctive characteristic is that the individuals associated in its operation share a common purpose and their relationship is given full scope for active development; that is to say, instead of one person having a separate, active rôle (either as lecturer, teacher or tutor) while a number of others are in the main passively engaged (he the giver or talker, they the receivers or listeners), the discussion group implies a social obligation on the part of *all* alike. As a result, group discussion is primarily a matter of human relationships rather than of subjects or syllabi; thus obviously a group will be expressive of its best and worst components; in addition, however, experience shows that, when a group "finds itself", and, by a well-balanced adjustment of its members, achieves collective expression, the group-impetus or "dynamic" therefrom is capable of results out of all proportion to reasonable expectation. A great deal of attention is being given at present to the analysis of group behaviourism and to the direction of group influences for good or ill. What is relevant to the educational field is the realisation of the power of group-association as a means of inducing maximum individual effort towards active learning or the solving of common problems.

As in all social activities, the interplay of emotions and the drama of conflicting or converging personalities are of more interest alike to the casual observer and to the student of social science or psychology than the actual or ostensible purpose bringing them together. Consequently too little and too much may be claimed for the discussion group, some, on the one hand, suggesting that one effect of war-time discussions was to produce a new Government, or that the solution of our post-war difficulties in industrial relationships lies in discussion; others, on the other hand, insisting that discussion gets nowhere, and, so far from being of educational value, is merely an opportunity for

airing grievances or prejudices and interchanging clichés or half-baked ideas. All these factors must be taken into account in considering the application of the discussion method in industry and commerce. Before groups are introduced, moreover, their intention should be clearly understood—are they to be educational in the broadest, social sense (welfare); are they to be an extension of joint consultation (production- or efficiency-promotion); or are they to be a means of getting technical problems understood through the co-operative approach (training)?

Whatever types of group are formed, in action they will have—or should have—similarities of size, structure and atmosphere as well as procedure, but their composition will be determined by their purpose.

First, then, let us consider the common elements and later the various different aspects of the several kinds of discussion groups.

2. *The Group Itself.* As previously emphasised, the basis of discussion is participation; so obviously the size of the group is determined by the number who can be expected to contribute in the time available, eight to ten members in practice being found ideal for discussions lasting an hour. For the same reason, the physical grouping requires careful arrangement to effect a natural conversational relationship, alternatives being the semi-circular setting or the round-a-table circle (or square), according to the informal, semi-formal or business-like tone most suitable to the conduct of the group's affairs (but never in rows, one behind another). Once discussion has started, similarities of conduct will be found in all types of group, for a recognised drill and discipline is essential if the proceedings are to be orderly and worthwhile—from every point of view, whether social or recreational, instructional or immediately purposeful. First, there must be an agenda—one or more questions for discussion; secondly, a time-limit for the meeting and an agreed method of opening and closing down; thirdly, during the actual give-and-take of the "organised conversation" those present must have some means of ensuring fair shares all round. The imposition of this discipline can be exercised by the group members themselves as a collective act of government-by-consent at each stage of the proceedings (i.e., a leaderless group) or entrusted to one person to act as chairman, leader or referee. In addition, for whatever reason the group is constituted, its meetings must be regular if the members are to progress in their knowledge of one another and in the interchange of experience and opinions, with a consequent increase in the ability of the group, as a group, to make the most effective use of their association. Their deliberations should, moreover, be related one to the other in some sort of sequence which will bring about a natural development of interests and ideas,

3. *Application in Industry.* Association in groups depends on the interests of the members; they can be induced by various techniques, including the discussion method, to take part in a co-operative effort only if they share some common interest which is the basis of their association. In the working community, members of the same firm or section naturally share many general and even more small, detailed interests arising from being on the same job. If a group of them are organised for discussion, therefore, they start with many advantages. But all discussions are discussions with a purpose, and the purpose for which groups may be formed among men and women working together will determine which individuals should constitute which groups. Three main categories have already been suggested.

(i) *The General-interest Group.* During the war[1] "ABCA" Discussions in the Services were introduced to enable men and women working together in uniform to understand week by week what was going on in the world around them, so that they would be informed of the progress of the war and would understand their part in it. At the same time, an attempt was made to start Industrial Discussion Groups on the same pattern. Confusion has, however, arisen because ABCA was an officially sponsored activity "in the King's time", whereas the organisers of the industrial equivalent were unofficial visitors to works, etc., and usually conducted groups in the dinner hour or other free time. Any facilities provided for discussion among workers *in their own time*, however desirable, obviously rank with other Welfare amenities, and discussion groups in such a context are not strictly an industrial concern. Indeed, one danger of even leisure-time groups consisting entirely of people drawn from one particular section of the community is that they are inevitably disposed towards a particular sectional outlook. Discussion in its proper social setting should be as representative as possible of society as a whole. For this reason many representatives of the T.U.C. are against the holding of discussions confined to groups of workers drawn from the same restricted working environment.

(ii) *The Problem-solving Group.* Some of the most valuable ABCA discussions were a combination of the general-interest and the problem-solving types, as, for instance, when a group of machine-

[1] Weekly discussions conducted as an obligatory duty by the Regimental Officer with his men on a platoon or equivalent basis on "some topic of current interest," called "ABCA", after the War Office Branch, the Army Bureau of Current Affairs, established to supply discussion aids of every kind, including weekly pamphlets, map reviews pictorialising news events, photographic exhibitions and sets of pictures, also to train officers in discussion group leadership by means of short courses. The civilian Bureau of Current Affairs, 117 Piccadilly, London, W. 1, continues these services both for the Armed Forces and for industrial, commercial, professional, social, cultural, political and religious organisations.

gunners had a mixed interest in the Middle East Campaign, with its over-extended lines of communications, which not only slowed up the whole war but resulted in the necessity for their own re-training as transport drivers. The effect of group consideration of day-to-day difficulties and perplexities in their wider perspective invariably has a healthy influence productive of a unifying effect in the group itself—morale in military language. Obviously, there are many ready-made groups in industry which could benefit (a certain number indeed already do) from adapting the discussion method for working out many of the problems of the times, both normal and abnormal.

Progress is, however, hampered by a feeling of suspicion on the side of managements and of Trade Unions that "free discussion" as an extension of Joint Production Committees, etc., would lead to a weakening of the existing consultative machinery. Even within the framework of recognised conference groups, however, there would appear to be room both for wider appreciation of the discussion technique and for a broadening of the field of discussion to include some attention to subjects of regional, national and international importance, as well as those of immediate local concern, the relation between all four being closer than is either usually apparent or as yet widely appreciated. In this country, moreover, the potentialities of industrial discussion groups have not been fully explored in relation to the development of democratic management or group-incentive schemes.

(iii) *The Training Group.* The discussion or co-operative approach to the understanding of technical problems is a natural and logical adaptation of the types already described. But because it most nearly resembles the class-tutorial discussion or lesson, it is frequently confused with "instruction". The difference is that in discussion of all types the onus of problem-solving (including technical problems) is shared equally by all members of the group which may or may not include experts—in other words, it is self-training. Hence, Training Within Industry, which depends on the supervision of an instructor or trainer as well as on a degree of group-participation, must be distinguished from discussion. Indeed, the whole concept of discussion as a distinctive educational medium placing primary emphasis on participation is founded on educational principles representing a viewpoint fundamentally opposed to that which produced T.W.I. This does not imply any inherent superiority for either method, but rather underlines the applicability of different methods to different purposes.

4. *The ABCA Pattern.* During the war a large-scale experiment was conducted from which industry has many lessons to learn with very little cost to itself, for the experiment was financed from

public funds, and the men and women who took part in it are at hand in every branch of industry to give evidence about its effects. What they may not, however, have seen clearly from close range was the threefold object of the scheme—one, to give information about the business on which all were engaged (as part of a comprehensive scheme of welfare and education); two, to train junior officers in group leadership and all others in the democratic method of consultation (training); three, to inculcate group-spirit on a basis of common understanding of the tasks to be shared (morale; efficiency- or production-promotion). Wherever ABCA was well run, it was possible to see its benefits from all three angles, but the measure of its success or failure was the measure of the capacity for leadership of those who led the groups and for democratic co-operation on the part of the group-members even in the midst of an authoritarian regime. To equip both sides for the job, officers received a weekly factual outline of some current topic, and Information Rooms or Corners provided Other Ranks with the means of keeping abreast of the progress of events. Short Courses were also organised in "the tricks of the Chairman's trade", and the whole undertaking was officially sponsored by the highest authorities. Perhaps its most striking feature was that its sponsors looked the human situation right in the face, grasped all the nettles firmly, and flung into the heart of military life and training an innovation calculated to produce all the most unfavourable reactions from all sides. Summarised by one Sergeant-Major, "The men are now encouraged to say things on parade—in fact, ordered to parade for the purpose—which would have got them marched straight to the Guard Room before the war . . . and a blankety blank good thing, too."

For, once a week, stripes and pips were forgotten, and everyone was allowed equal opportunity for expression of individual opinion and encouraged to prove false the theories of any other member of the group, of any rank, provided that the views were reinforced by factual evidence. As an underlying justification for this reversal of all normal relationships in a uniformed service was the honest conviction that democratic management, if given a chance, can be proved superior to autocracy, even of the benevolent kind. This is not to suggest that a weekly Current Affairs discussion in any way changed the traditional chain of command or altered the system of responsible control. It did, however, give official recognition to, and a focal point for, the need of free citizens of a democratic State to raise their voice on matters affecting the conduct of their own affairs. For similar reasons the Montgomery Conference method of briefing came to prominence, and proved successful at all levels of operational and administrative responsibility. Thus, even in an organisation based on the feudal system, the right of participation in management has come to be recognised as a right, and no longer as a privilege.

When that recognition has been made—as a social fact, not only as a political factor—modern management can be designed to fit the spirit of the times. When it is made, co-operative management can become a reality, and discussion as a method can play its part. Unless it is made, the introduction of discussion groups piecemeal will not at any rate conform to the outline of the comprehensive war-time experiment which attempted to fuse training for integration, training for identification, training for supervisors and "talking success" in one composite pattern.

Some Objections. One objection raised against any suggestion for adapting to industry any of the war-time Service innovations is based on the old argument that "time doesn't cost money in the Services, and anyway they have no production problem". But a more profitable approach is to examine the situation in which experiments became necessary, advisable or inevitable, and to compare results with the demands of the present situation. Parallels are not always possible, and translations of terminology are often unreliable; at least, however, it can be claimed that mobilisation of labour resources in peace or in war presents similar problems, not least in the field of human relationships. Hence any schemes for inculcating individual awareness of general problems and a sense of responsibility deserve a fair trial.

A second objection to any new-fangled schemes for consultation is made from both sides of industry from motives of suspicion or distrust. The workers' representatives are inclined to fear that indoctrination from above may be hidden behind any so-called discussion devices. Managements, at the same time, express anxiety on the score that control is already slipping and any more provision for workers' participation will let loose the floodgates. To both it can only be urged that the very existence of these suspicions and anxieties is blocking progress and justifies any reasonable attempts for their removal. As to weakening of control, it must be plainly understood that control and management are quite separate; control by discussion is impossible, but management by discussion is essential.

A third objection—that discussions can be more frustrating than their absence, unless conditions are favourable—can be answered only by agreement and the suggestion that the effort to overcome difficulties will be found absolutely justified by later results.

Lastly, "we have no suitable leader" and "we don't know enough to get started ourselves" calls for the kind of advice about training and other forms of assistance which should be readily available nowadays from a variety of sources in every locality.

Making a Start. Given the minimum requirements of official sponsorship, reasonable facilities for meeting in quiet and comfort,

and some training in group methods, discussion groups in industry are already proving themselves to have a distinctive contribution to make. Certain dangers, however, attend their introduction which can be avoided if recognised in advance.

In the first place, the initiative in starting a discussion group in a works or shop must be taken only after the proposal to do so has been subject to preliminary negotiation between management and workers' representatives. Secondly, the group must be made to feel from the outset that it is their show and that their participation is called for, and can be expected, only if interest is maintained.

Thirdly, the field of discussion should be clearly defined and understood, and the group must be encouraged to go slowly and always at first to plan only on a short-term basis. Lastly, and above all, it should be realised that group discussion is one of a number of methods available for use in the whole educational process. "Discussion is by no means the last word in Adult Education, but it is certainly the first."

YOUNG PEOPLE IN TROUBLE

BY

JOHN L. WELDON

Warden of the Philanthropic Society's School, Redhill

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THIS chapter concerns boys and girls who, for various reasons, show signs of drifting towards a life of crime and conflict with the State. It is not easy to commit a crime without injury to others. The degree of damage inflicted is largely a matter of chance, and certainly of indifference to the offender, but it is almost certain that whether the offence is one of a small theft from the counter of a multiple store or one of prolonged and heartless blackmail, loss and possibly anxiety and suffering are imposed on the victims. In short, crime is essentially selfish. If you are bent upon a successful career of crime, you must first throw out from your nature all regard for your fellow-men and their feelings : you must put yourself first at all times, and be sure you do not hesitate.

This urge to feather their own nests may not be immediately apparent when one is dealing with offenders against the Law. Whether they be young or old, there is frequently a superficial charm of manner which hides the egoism beneath. In many cases, among adults, this veneer is part of the equipment of crime. It disarms the victim. It is frequently to be found also among the younger offenders, for they can be hard and calculating beyond their years. It is the task of the special schools of this country, which are planned to achieve the re-building of such young offenders, to eliminate the overwhelming selfishness before it is too late, and to substitute instead a desire to take a full and honourable part in the life of the community.

These special schools, of which there are about 150, are generally called Approved Schools, being establishments which hold certificates of approval from the Home Secretary as being well equipped to deal with problems of juvenile delinquency. Such schools deal in general with boys or girls up to the age of nineteen. The State does not own such establishments, but pays towards their upkeep, and they must be kept clearly distinguished from Borstal Institutions, which are entirely State-controlled. The latter handle the more mature types of young men and women up to the age of twenty-four.[1]

Throughout this chapter we are concerned only with Approved Schools, for there can be little doubt that the educational methods to be

[1] An excellent booklet on Approved Schools, giving all details, is entitled "Making Citizens" (H.M. Stationery Office, 1s.).

advocated can be far more profitably applied to children at the impressionable ages of adolescence, than to the tougher and more sophisticated types to be found in Borstal. In fact, the older the offender the less chance there is of re-training him.

Before proceeding farther it is essential to get quite clear in our minds what are the background and outlook of the average boy or girl who is ordered by a Juvenile Court to be detained and, if possible, trained in an Approved School. The offences for which they have been arrested by the police vary considerably, but generally involve some form of theft. How much has been stolen is purely a matter of chance. In some cases the whole affair has been easy. In others there has been a chase by the police, perhaps in cars and ending in a smash. The offenders concerned have probably already been before a Court on previous occasions, and have already been tried out on probation. They have failed to take advantage of this chance offered to them, and the magistrates now decide that the only hope is for these young people to be removed from their usual environment to that of an Approved School. This is generally for a maximum of three years, of which the last year at least is spent on licence from the school. The Clerk to the Court then writes to the Home Office, giving details of the case, and in due course a school is named which is likely to provide the most adequate training.

Naturally each child varies in type and characteristics, but there are certain points of similarity to be noted. The outstanding failing of selfishness has already been emphasised. It is necessary now to go deeper than that. Eight out of every ten children are found to have unhappy home backgrounds. They feel insecure and unwanted in their little worlds, because their parents have been separated or divorced, or because they are illegitimate, their fathers, or in some cases both parents, being unknown. In a few instances also there are children who have never settled down, although adopted at an early age by good foster-parents, but have found their way to an Approved School, in spite of the opportunities they have had. This problem of the "broken home" looms large in the background in juvenile delinquency. It calls for prolonged discussion, but there is no space to dwell on it here. It is ominous that the Registrar-General in his most recent statistics notes that nearly 30 per cent. of all mothers in Britain conceive their first baby before marriage. A large proportion of such children will not be wanted, it may be supposed, when they do arrive.[1]

On coming to an Approved School the boy or girl will find it very similar to any other boarding-school. There are no bolts or bars.

[1] Registrar-General's Statistical Review of England and Wales for 1938–39 (H.M. Stationery Office, 4*s*. 6*d*.). A volume of great importance to those interested in social problems.

It is quite easy to run away. There are classrooms, workshops, dormitories and playing-fields. Ordinary school clothes are worn. Some children adjust themselves quickly to their new surroundings: others get restless at the regular routine, and run away in search of their old crowded streets, with their cinemas, fried fish-shops and fun-fairs. The latter are easily found and brought back. In very few cases is it necessary to punish them, for the persistent absconder is a rarity.

An unusual book was published a few years ago by an Austrian lady, who had sought to help slum-children in London during the War years by founding a club for them in a back street. In many ways she was disappointed. She found the children restless and uncouth, tired and irritable. There was not enough room for them in their homes: not enough room in bed, or at table, or at play; not enough room to keep themselves clean, nor any place where they could wash their bodies or their clothes. "They behave like disappointed, unhappy people", she wrote. "Their background has taught them not to trust and not to hope, but to attack, to grab, to lie, to steal and cheat, all of which are reactions against a world they fear and in whose merciless power they feel themselves to be." [1]

I would not personally agree in full with the authoress. A certain number of children come to an Approved School with this attitude of mind, but a much larger number come who are superficially well-mannered and co-operative. Certainly "they fear the world in whose merciless power they feel themselves to be", but this is due not so much to dirt and overcrowding, as to the feeling that they are not wanted at home and that they lack the guidance of steady parents whose stability can be relied upon. It is obvious that every child needs steady parental guidance from babyhood onwards, and the absence of such protection compels him to be selfish and grasping as soon as he can walk. Only self matters, and if this is thwarted, temper, bad language and even violence soon follow.

This outlook must be subordinated to a respect and, if possible, a love for the community and the nation to which the child belongs. He must be taught to realise that though he has had a hard time and has missed many opportunities, yet he has a part to play in the world around him, and that if he will only examine that world he will find it a far more remarkable and absorbing place than ever he supposed. It is of paramount importance that an Approved School shall set out to teach this clearly to each pupil. Nothing else matters more. It is, for instance, useless to train children as first-class mechanics, or even as agile gymnasts, if they are not to become steady citizens as well. Prisons contain many inmates who are skilled in trades, but they contribute nothing to the common good. It is better for any school to send out honest, plodding dullards who feel they have a part to play in the

1 "Branch Street," by Marie Paneth (Allen and Unwin), p. 38.

world, however small it may be, than to train boys and girls as experts in some occupation, whilst leaving them morally unchanged. In practice, of course, it is the aim of an Approved School to develop both craftmanship and citizenship in every child, but the latter is the more important. It is better to send out an honest road-sweeper than a brilliant mechanic who is a burglar in his spare time.

In planning this scheme of training citizens a difficulty is encountered at once. Few children who find their way to an Approved School have any general knowledge. Their reading, writing and arithmetic are generally fair, though illiterates continue to arrive with disturbing frequency, but there their education seems to end. They rarely read a book, except a " comic ", and they only study the sports pages of a newspaper. Their outlook is bounded by the false values so frequently set by the films. If they are not sitting in a cinema, they are at a fun-fair or a billiard-saloon. If they have not the money for these, they will set about stealing some, which is probably the reason they have been sent away. This ignorance of every-day life merits only the conventional word " abysmal ". It is difficult for those who have not had direct dealings with these youngsters to credit how little they know. They are children of quite normal intelligence and powers of observation, but they are quite incapable on arrival of even drawing a rough outline map of England, or of marking on it the position of the chief towns. They have no knowledge of political parties. Most could not tell you the name of the Prime Minister, nor have they the vaguest ideas as to the functions of the Cabinet or the Houses of Parliament. Similarly a large number do not know that Christmas Day or Easter commemorate any special event. These are just days when the cinemas are not open so long. Such ignorance of what to most people would appear to be commonplace facts does not indicate mental deficiency. It is simply that these particular boys and girls have never needed this information, and have therefore never acquired it. If they ever had the knowledge, it has long since faded away through disuse. Their world has been bounded by the few streets they know around their homes, and their parents are often the same. It is a matter for conjecture as to how many other children who do not get into trouble with the police also live their lives in this state of detachment.

It is necessary, therefore, to begin teaching the idea of citizenship from the very beginning. The children are by no means unwilling to learn. On one occasion the lesson read in an Approved School chapel was the story of St. Paul's arrest in Jerusalem, as told in the Acts of the Apostles. " As Paul was to be led into the castle, he said unto the chief captain, May I speak unto thee ? . . . I am a man which am a Jew of Tarsus, a city in Cilicia, a citizen of no mean city. . . . Is it lawful for you to scourge a man that is a Roman ? " The lads were

much struck by this story, and it stuck in their minds, because St. Paul was set free and the soldiers were afraid at what they had done, since he was "a citizen of no mean city". For some days it was a matter for debate in the school whether the same ruling would apply to an Englishman travelling abroad to-day. A teacher showed the lads a British passport, with its wording on the inside cover: "We . . . request and require in the name of His Majesty all those whom it may concern to allow the bearer to pass freely without let or hindrance and to afford him every assistance and protection of which he may stand in need". They had never seen one before, and it awakened a new interest in their minds to find that they themselves were entitled to passports, if ever needed. No one had ever bothered very much about them before: they did not "belong" particularly anywhere, especially if they were illegitimate. Probably their own towns would be rather glad if they did not return. Now they were discovering that they did belong somewhere. Like St. Paul, they were citizens of no mean city, and the thought was pleasant.

This, of course, was beginning the training in the middle. The need was to plan a course of training which would

1. Be within the compass of their very limited general knowledge.
2. Utilise such every-day commodities as newspapers and magazines.
3. Explain the structure of local and central government, emphasising especially the importance and rights of every voter.
4. Develop an appreciation of the economic and commercial organisation of the country, with special reference to the relationship between workman and employer.
5. Make each lad realise that not only was he a member of a complex community, but that he had a part to play which might one day make him a leader in it, and which certainly involved him in treating his fellows with justice and respect, and not as potential victims of his next robbery.

It was clear from the outset that such a scheme could not be carried out within the limits of a schoolroom. There would indeed have to be class-work, but secondly there would be a need for "direct observation", and this in its turn should be followed by what may be best described as "personal communication".

1. ***The Class-work.*** As will be readily understood, finding the right books for lads of this type is not easy. They are of an age and temperament when they quickly resent it if they think they are being "talked down to". It is safer to aim above their heads, if need be. Furthermore, there is not an ample supply of textbooks in these days of paper shortage. After some experiment two books have proved

outstanding in their continued usefulness, and it is unlikely that better will be found. These are :

(*a*) "Institutions of Britain, Russia and the United States," by F. H. Mackay (Schofield and Sims, Ltd., Huddersfield).

(*b*) "Citizenship Through the Newspaper," by K. Gibberd (J. M. Dent and Sons).

To a certain extent each book covers the same ground, though the former goes farther afield, as its title indicates. The urge to learn about foreign lands is very strong in most lads, and they like to compare our ways with those of folk abroad, once their interest has been aroused. Mr. Mackay's book begins with a sketch of local government, which tells the reader all he needs to know at the moment concerning the organisation of the town in which he lives : of the Town Council, Mayors and Aldermen, Town Clerks and Borough Surveyors, officials of whom Approved School boys and girls have rarely, if ever, heard. The town's financial background is explained in this chapter, and even the opening sentence has a message in it. "In every family", the book begins, "great care should be taken to see that the money earned by the wage earner is spent to the best advantage of the whole family. . . . There is no better way of seeing how a family lives than to know all the details of its budget." Here at once, if the teacher's guidance is skilled and tactful, is considerable food for thought for a youngster who has come from an ill-managed home.

A chapter on Parliamentary Government follows, with a description of the powers of the Commons and the Lords, and here also the reader learns about the vote. Other chapters are devoted to the Defence Services, one of which each child will probably one day join, Education, Public Health, National Insurance, and the kindred departments of public life. The pages on Trade Unions are particularly useful.

The second book is more detailed and demands rather a higher standard of general knowledge in its readers. Its purpose is avowedly to provide a background to the newspaper, and it is written for people who find serious newspaper-reading to be difficult, as so many unfortunately do. The chapters on Industrial Affairs and the Financial Structure of the Country give a clear picture to the beginner in these matters. A particular use that can be made of this book is explained below.

2. "*Direct Observation.*" As already noted, classroom study is not enough. For one reason, the average class is too large to permit of that detailed discussion which is so invaluable, if a lesson is to be driven home. For another reason, there is no purpose in confining a subject to books and desks within four walls when there is so much

to be seen in actuality within reasonable distance of most schools. The pupils should be taken in small parties by their teacher to see the meetings of the local Council, to watch newspapers being printed, and to tour as many industrial plants as can be arranged. The ideal, of course, is for a school to possess its own small motor-coach, which will transport the party with the minimum of delay in transit, but this is scarcely to be hoped for in these days. Teachers will find that such expeditions are made welcome nearly everywhere they wish to go, if the arrangements are made well beforehand. Many of the larger factories, for instance, have special arrangements for such visits and are prepared with guides for the spate of questions which will pour out from the children.

These visits are not quickly forgotten, and the boys and girls will discuss for weeks afterwards what they have seen and learnt. It is, however, important that such tours should be regular and well-planned. They should be an integral part of the syllabus, linking up the text-books with real life, and not just regarded as jaunts for pleasure, like a trip to the Zoo. Once they lose their significance and prestige, their value largely disappears as well. If possible, the teacher should describe beforehand what the party will see. Certainly on returning to the school there should be organised discussions on what has been observed, in order that any false ideas which may have been acquired may be quickly corrected before they spread. It is amazing how quickly inaccurate impressions and sketchy half-truths can become embedded in juvenile minds, unless speedily detected and corrected. This is the danger of the method of "Direct Observation". The teacher can never be quite certain what has impressed each member of the party most during the visit. In a classroom it is fairly easy to gauge the trend of thought, and to guide it accordingly. In an expedition to a factory, on the other hand, there can be no such control. It has been known, for instance, for a sensitive child to be appalled at the monotonous routine he has witnessed in a mass-production factory, and to have resolved never to earn a living that way, come what may. If this is not brought to light and tactfully discussed, more harm than good is being done. This is especially true in an Approved School, where a young offender is liable to hold the view that "only mugs work", and that he himself proposes "to make crime pay". The technique of dealing with such arguments forms a very important part of the specialised equipment of the successful Approved School teacher. It cannot be fully described in print, for each has his or her own methods, according to personality. It is as difficult to answer as is the question of how to keep order.

3. ***"Personal Communication."*** The children of an Approved School, like children everywhere, want to take an active part in their

school life, as well as being taught. This is a healthy sign. Before they got into trouble they were probably members of some street-gang, some of which were harmless and others were not. This gang-spirit will still be alive, and can be utilised with advantage. There are two difficulties to be overcome. First, the scheme designed must include those who are not good at games equally with those who are. Secondly, it must provide an organisation in which all in turn may have a chance to take a leading part, without there being any chance of bullying. Bullies have to be watched for at all times in a school, and for this reason the " Prefect System " has its dangers, if adopted in its conventional entirety.

The solution to the problem has been found to be the starting of a School Club, as an addition to the usual more boisterous school life. This should consist at least of one large, quiet room, equipped with arm-chairs, small tables and a comfortable fire in winter. It should have its Chairman and Committee, elected by all members. There should be regular meetings every Sunday evening to discuss ways and means. It is useful to have the room open most evenings, and besides quiet games like chess and draughts, a regular supply of up-to-date papers and magazines will be appreciated and well looked after. In an adjoining room there can be a library where the books have been carefully chosen as being those which ought to be well known and liked, as well as those which are technical and too expensive to be left lying about. It should be emphasised that the Club is a quiet place, and it is to be hoped that that is one of the reasons why it will be popular. It is surprising how many boys and girls have never known the pleasure of being quiet, for the simple reason that they have never had the chance. The authoress of " Branch Street " soon noted this. There will be no need for a member of the staff to patrol or supervise. Thirty youngsters will be as quiet as one. They have made their own rules, and therefore they keep them. Towards the end of the evening one of a rota will make tea and serve it, without fuss or splash. Some will be playing games; others will be reading. Others, again, will be talking in twos or threes, and it is interesting to discover what they are talking about. At first they will talk chiefly about their games and the school affairs. This is natural and desirable. Then they will talk about the trade each is learning, and will compare notes. Further, they will discuss their expeditions with increasing interest, and quote extracts they have read in the newspapers or a magazine to prove some point at issue. They are slowly becoming conscious that they have a part to play in the world, and that the world wants them, and indeed needs them. It is a glorious feeling to know you are needed, especially when you are young.

Sometimes discussions in a Club can become complex, and then a referee is sought. This is generally the next member of the staff who

passes—a housemaster or the Chaplain. The last chapter of "Citizenship through the Newspaper" is entitled "What Can I Do?" It sets out to stimulate the reader into planning what part he can play in the world he is soon to join. It is a good chapter for any teacher to study, especially if he wishes to be prepared to be called into discussion in a Youth Club. There is no more delightful occasion than when a few gather together around a fireside for a chat, and one of them has something by way of knowledge to give the others. If a school is not too remote from towns and railways, it is invaluable if experts of all kinds can be lured to a clubroom from time to time; men and women who are prepared not only to talk simply and clearly about their particular jobs in life, but are ready also to submit to prolonged and informal questioning. It would be good, for instance, to persuade a Member of Parliament to come under these conditions. Equally welcome should be authors, singers, lawyers, doctors and all other occupations, provided that the guests are prepared to talk simply and well. Apart from the information gained, the lads and girls will learn something else that is not usually taught in books—namely that the greater the expert, the more modest he usually is. It is only the second-rate who feel the need to boast.

This three-fold course of training in an Approved School will take a year or eighteen months. In certain cases it will take longer, if the child concerned resists the overtures of friendship made for more than the first month. Sooner or later, however, the time must come when the school authorities feel that what remains of the three years training ordered by the Court should be spent on licence. This simply means that the lad or girl is found work in the outside world, sometimes living at home, and in other cases in lodgings. The work found is generally a continuation of the trade taught in the school, and tools and all necessary equipment and clothing are provided as well. Each case is watched from a discreet distance throughout this time of "testing-out", and there is also someone living near who can be relied upon to give guidance and help if special emergency arises. If anything does begin to go seriously wrong the licence can be cancelled and a recall to the school follows. There are, of course, disappointments. Failings which never revealed themselves at the school become painfully evident later. A girl, maybe, will get home at all hours of the night, having been in a public-house all the evening. A boy will get into debt because he spends too much on taking girls out and "showing-off". Such failings as these may seem small at first, but they have an overwhelming effect on day-time efficiency if not corrected in time. It is difficult to foresee these pitfalls whilst the pupil is still at the school: only the period on licence will reveal it. Nowadays, of course, conscription plays a large part in the plans of those leaving the senior schools. This is a help to some of those who like a regimentated

life. To others it is an unwelcome interruption to the plans they have made for their futures.

At whatever age these lads and girls leave their schools, records are kept of the progress of each up to the age of twenty-one, and further, if possible. Seven out of every ten succeed in life and do not get into trouble again. They have found security and self-respect, and no longer fear the world nor feel themselves unwanted. The desire to steal and cheat their neighbours does not cross their minds. They are quite capable of earning a good honest living, and can take a pride in doing so. They have become citizens of no mean city. One of the ironies in the lives of those who staff Approved Schools is that it is impossible for them to give details in public of their successes. If it were possible, the lists would make surprising reading. As matters stand, only the comparatively few noisy failures advertise themselves and their schools by appearing again in the Courts, and hence once more in the columns of the newspapers.

One final word should be said about these three failures out of every ten sent out. An attempt has been made to show in this chapter that the majority respond to the carefully inculcated idea that they are the future citizens of a great country, and are indeed (often to their surprise) wanted as such. It would be quite wrong to give the impression that this training in citizenship is a certain panacea for all young delinquents. There is no definite cure known for those with criminal tendencies. There are certain deeply-rooted causes of crime, which are linked with serious mental illness. Mankind has not as yet solved this fascinating problem. We do not know why three out of ten ignore all attempts at their reformation and persist in crimes of increasing magnitude all their lives, a nuisance to themselves and to the community. In turn they find their way to a Borstal Institution, and then to a local prison. Next they go for a long term to a convict establishment. Occasionally they end on the scaffold. They appear as a rule to be similar in skill, manners and mentality to their comrades in the schools who are destined to succeed in life. Beneath the surface, however, they are hard and uncompromising. They covertly despise and reject the training offered them. In a few cases they will seek also to undermine and destroy the work of the teachers among the others. Doubtless in the years to come an answer will be found to this tragic problem, but it is more likely to be discovered by the medical psychologist than by the schoolmaster. The latter must at present be content with his seven successes out of ten.

EDUCATION IN INDUSTRY AND THE RÔLE OF THE INDUSTRIAL ARCHITECT

BY

LORD FORRESTER, M.A.; F.I.I.A.

Managing Director, Enfield Cables, Ltd.

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A SUPREME opportunity lies ahead. Industry, for the first time, has become vaguely conscious of its social and educational responsibilities; education is in the throes of reorganisation. The new Education Act will bring into being reforms of deep significance to industry—some of these are :

Raising of the school leaving age.
Attraction of the more able pupils towards careers in industry.
Compulsory part-time education during working-hours.
County Colleges in place of Day Continuation Schools.
Closer collaboration between industry, commerce and technical education.
National and more ordered systems of training.
Provision by Education Authorities of more adequate facilities for technical training and education.
Responsibility of Counties and County Boroughs for major technical institutions.
Reform of methods of recruitment of teachers.
Broader basis for scholarships to reward ability, regardless of means.

The present educational machine is not capable of sustaining the stresses that this programme will place upon it. Buildings are totally inadequate; staff is lacking. Education should therefore command the highest priority, excluding housing, in the years ahead. The opportunity is there and must be seized, or we lose all.

What A.B.C.A. has done for the Army; what in another sphere T.W.I. is trying to do for industry; and much more, must be done. In the Services it has been proved once again that the widest education and the most effective training are often given close to the job, without special buildings or equipment. A man can be trained, if the incentive is there, for almost any job; if the methods of vocational guidance are applied, the chances are that he will be trained without great waste for the right job. A man's approach to his work, however simple, must be intelligent. Dead-end employment must be banished for ever.

The future needs of education, at work and after work, provide one of the most brilliant opportunities that lies before the architectural profession to-day. The scope is new; the idiom is new; the variety of the demand is infinite. In no country has the job yet been fully done, although the smaller democracies have perhaps progressed farthest towards it. It is no accident of fate or incidence of good fortune that has put Swiss watches on the wrists of the world—the watch industry, like all the key industries of Switzerland and Scandinavia, has been built up on hard imaginative technical education. Britain, often first in the realm of ideas, must again find the imagination to produce them and the courage to carry them into practice. The strongest link in the new set-up will be the link between factory and technical college. Each, for its several purposes, must achieve high standards of constructional design. The satanic mill and the glass-and-concrete college may both be immature interpretations of a functional need; the economics of recent production technique demand that the mill be re-designed almost as part of the machinery it contains; the garish college building is a mockery, a whited sepulchre, if it teaches hydraulics and electricity in an atmosphere rendered soporific by the misapplication of out-dated lighting and antiquated plumbing procedure. The building in itself must be of itself an inspiration and a practical demonstration of the methods of applied science and intelligent design.

Good buildings, without people to use them and make them live, are an anachronism. The scope for an interpretation in architectural terms of the needs of many groups of people at a common focus, the technical college, is nowhere greater. Social functions, Foremen's Discussion Groups, Parents' Days, are all part of the link between the College and the industries it serves, and must be catered for in the design of its buildings.

The pages that follow try to imply an open-minded approach to the broader methods of education. Among these are the many varieties of part-time day release, the day-continuation school, the factory school —all of them laying a growing stress on education for citizenship, and not only on training for technical mastership. There is the restless demand for adult education out of hours. There are the many efforts to build up within industry a sense of personal responsibility half-way between the older Guild system and the tutorial system of the Universities. There are the newer short-term schools, like Aberdovey, which lay stress on a vocational training far removed from the everyday work of the individual, a training that forms character and gives poise.

Industry, in short, must combine with the more formal educational authorities and the schools, to build that University without walls whose graduates will be the ordinary citizens of our industrial civilisa-

tion. Many must grasp the opportunity that presents itself, but the architect's rôle could well be the one that in the end makes possible and influences their work. The quality of the job to be done must be paramount in its simplicity and its excellence; there must be open-minded experiment without early standardisation; it was Edmund Burke who said that " example is the school of mankind and they will learn at no other ".

Industry to-day must face its wider social responsibilities; neglect of them can only add further strife and unrest to a long history of unhappy achievement. The early pioneers of industrial development in Britain devoted their major energies to the solution of mighty technical problems. The more famous of them—men like David Davies, the Robinsons of Chesterfield and the Cadburys of Birmingham—perceived long ago, sometimes only through a glass darkly, that the power they were amassing must be used rightly, that the place of work could not be divorced from the other activities that made up the life of towns and cities.

What lies ahead to-day, a hundred years later, must be tackled with all the freshness of mind and willingness to experiment that made Britain the home of the Industrial Revolution. What lies ahead is the new industrial revolution, when from every angle and in every place of work the relationship of the man to his work must be considered and respected. Whether we can achieve this depends on our intelligence rather than our ingenuity.

Work is as much a part of a man's full life as are his home and family, his food, his health, his recreation and his other main interests. Long years of unemployment have taught us, at last, that a man cannot be compensated for idleness by cash alone—by being paid for doing nothing; a man who feels that he is not wanted becomes a burden on the fabric of Society and—because of the progressive atrophy of the mind—sooner or later an economic loss. A man whose mind is allowed to atrophy at work is in little better case than a man inhibited from working by economic circumstances, whose mind, therefore, atrophies.

The factory is not a box into which the employee disappears to work seven, eight, nine or ten hours per day, forty, forty-five, forty-eight or fifty hours per week; it is a highly complex organisation within itself, and it is abundantly linked by personal and other links with the environment in which it finds itself. An industry may offend against its environment by casting out its waste products—solid, liquid or gas—indiscriminately and haphazard. An industry may offend no less by undoing within itself the constructive work that educational and health services outside have tried to build up for the good of the individual and the community. It is a fearful fact that it should have needed the stimulus of total war, with full employment, to bring

home finally to industry the need for the intelligent handling of men and women, no less than of machines.

If a job of work, however skilled or humble, is necessary to every citizen of working age, to give him or her a stake in a virile human society, then the attitude of industry must change basically. That this can happen, without economic loss to industry, is likely; that it must happen for the good of all is certain.

At the present time some 500,000 adolescents pass annually from schools under Local Education Authorities into industry. Much money has been spent to educate them, up to a standard. Their educational background is made up thus :

	%
From Senior Technical Schools	0·59
From Junior Technical Schools	2·34
From Secondary Schools	9·36
From Elementary Schools (Primary)	38·59
From Senior and Central Schools (Modern) . . .	49·12
	100·00

The burning problem that awaits solution is the problem of how these young people shall be absorbed, so that the process begun at school, at the expense of the community, shall not stop abruptly with the transition from the student life to the working life—a moment of great significance. Whatever be the age of leaving school, the place of work—be it industry, agriculture, shipping, mining or commerce—must be ready to receive the growing mind (which is often also the creative mind). The age of leaving school is not so important as the urgent demand that education should not stop just at the crossing of the threshold. Education must continue at work, and those responsible for the organisation of work must be aware of their responsibilities; all too often their actions are conditioned by the fact that they themselves in their time had little opportunity, therefore—they aver—they should not seek to provide opportunities for others; there must be a " struggle ".

Industry must take the wider view. The process of education must not stop. The dead-end and the blind-alley must disappear—they are economically unjustifiable and socially corrosive. The adolescent and the adult, at all ages, must feel the urge to learn and must be fired with the enthusiasm that passes knowledge on—only so will the sparks begin to run to and fro among the stubble. Industry must be both a fertile field for experiment and a province for wider development arising therefrom. The great experiments of Mather & Platt in Manchester, G. & J. Weir in Glasgow, Cadburys in Birmingham, Sigmund Pumps on Tyneside, Avoncroft for Agriculture, Aberdovey for the Sea,

T.W.I.—these must be studied, learned from and developed. And how must it be done?

First, the management of factory or mine or shop or farm must be conscious of what is at stake—it is nothing less than the whole of our economic future. Management, conscious of the importance of these things, in large or small concern, must be firm but understanding, encouraging and yet detached; the exercise of good management itself can be an object-lesson of profound importance to both the young mind and the adult mind. Capital must be prepared to encourage part-time day release and various schemes of training and education within and without industry, as a duty and as a service; the new Act demands co-operation at every level within industry and within the educational field.

Secondly, both capital and labour must understand that even bold ventures into the field of education need not be costly, and that every venture means hard individual effort, not mass pursuit of a common object. There can be no standardisation, no universal prescription for better industrial relationships or educational facilities. At one works responsibility will be invested in an Education Officer or an Education Committee, at another in the Works Council. At one establishment there will be an elaborate school within the works, at another a white line on the shop floor will be the only barrier between works and school, at another again every student or apprentice will work alongside an older man of experience, in the traditional manner. These things are not costly, but the results can be abundantly worth while. It costs little to assume that a man is an intelligent being and that he can learn anything at any age, so long as his mind is not allowed to become set and embittered. T.W.I., like the various forms of training developed in the Services, has assumed no more than that. Many of the possibilities of Training Within Industry will be missed if from now on employer and employee do not accept the fact that change from one trade to another is not only possible, but socially desirable, and economically often necessary; furthermore, training within industry must become a part of the job, part of a new approach to Work.

Thirdly, the co-operation with the local Technical School or College must be of the closest. The Technical College alone cannot be the People's University, but the Technical College in its local setting, integrated with the needs and resources of its local industries, can be of tremendous significance. Visits from one works to another, from school to works and vice versa, and between works and College, must become a part of education; production plant, be it machine or furnace or building, must be used for teaching purposes in the factory possessing it, if, as often happens, the College could not afford to mount the same process in the laboratory. The possibilities are in-

finite; many have been explored for the first time during the war, others can open out only under more settled conditions. Of overwhelming urgency is it that every Technical College should provide adequate facilities for part-time education for boys and girls; adequate facilities for adult evening instruction in foremanship and industrial administration; instruction in and opportunities for physical education; appreciation of the English language; a new social and cultural centre for the life of the area, for those who wish to use it, in which barriers of class or outlook or job do not matter. These things are more important to industry even than the teaching of engineering draughtsmanship or mechanics.

Fourthly, industry itself must set its own standards, of conduct and in things material, so high that the job in hand, however repetitive, becomes a lesson in itself to the active mind; the methods of joint consultation within the factory must become miniature lessons in the democratic system of work; the factory, its buildings, and its products, their construction and their design, must become examples of the thing studied at school working out in practice, and vice versa. Of such is the approach to a knowledge of real things, of such is citizenship going to be built or by neglect of them it will perish.

At one London Company, where co-operation between Technical College and factory has been close, a general statement of the procedure and the objectives of an educational scheme has been published. All male employees under twenty-one years of age may take part in it; the opportunities before the individual student, the ordinary young person in the works (as opposed to the apprentice tied by a long-term agreement), are here set out for reference; the collaboration with the Works Council and the introduction of the grown-up mentor or "Works Uncle" are worthy of especial note:

1. ***Age:*** The opportunity of studentship is offered to all male employees between the ages of fourteen and twenty years inclusive. Students may, if they wish, apply for a transfer to the Works Apprenticeship Scheme at a suitable age.

2. ***Selection:*** Preliminary selection of students is carried out by the Works Education Officer. There is no written examination, but tests for aptitude and an interview are included; school reports are taken into consideration.

3. ***Pay:*** Students are paid at the rates current for their jobs, according to age. Flat rate only is paid for time spent at the College.

4. ***Responsibility:*** The Company appoints a part-time Education Officer, who is responsible for the working of the studentship

scheme within the works and who, after consultation with the Principal of the College and representatives of the Works Council, decides whether an applicant may join the scheme or not and, periodically, whether he may continue with it; in the administration of the scheme within the Works the Education Officer is advised by the Works Council, on which management and employees of the Company are equally represented.

5. ***Curriculum :*** (a) *College.* Students spend not more than the equivalent of two half-days each week at the College, where they may take any of the courses of instruction available there, subject to the approval of the Principal of the College and of the Company's Education Officer. Physical recreation or gymnastics are included. The Company encourages suitable students to take higher courses at the University or elsewhere, in any subjects; the Principal of the College is free to give each student such instruction as may appear best suited to him.

(b) *Works.* The remainder of the working week is spent at the factory, where each student continues with his normal employment; his progress at College and at the Works is carefully observed and, where possible, transfer into a more suitable trade or group is encouraged. On not more than one evening each week a one-hour talk or lecture is given at the factory, by different speakers, on a wide range of subjects, not necessarily directly connected with the main curriculum. As far as possible each of these talks is informal and self-contained; attendance is voluntary, and duplicated notes are provided after the lecture. Full and free discussion is encouraged.

(c) *Visits.* Periodical visits are arranged to undertakings of interest in the district, or to special sections of the Works, where the process or organisation is explained to the student by the man on the job, and not by a professional teacher. Each visit becomes the subject of a business précis to be written by the student during his free time; such précis are deliberately limited in length, and should state facts and make suggestions; a concise style of self-expression is encouraged.

6. ***Counsel :*** For each student the Works Council selects from the Company's staff or workpeople a Counsellor, or " Works Uncle ". To this Counsellor the student can turn at any time for help and advice on both general and practical matters. A student should have a talk with his " Works Uncle " each week; this talk must be arranged outside working hours, to suit the convenience of the persons concerned.

7. ***Parents :*** Throughout the scheme the closest possible contact is maintained with parents, and at least once a year a Parents' Evening and Social is held, either at the Works or at the Technical College.

8. ***Trade Union Co-operation :*** The scheme is organised with the full co-operation and approval of the Trade Unions concerned, who are kept in close touch with developments through the Works Council.

9. ***Works Council :*** The Works Council is kept fully informed at its monthly meeting of the progress and development of the scheme and assists in the following manner :—

The student, after a preliminary interview by the Education Officer, is interviewed by a small panel, consisting of one member of the Management side of the Works Council and one member of the Works side, with the Education Officer in the chair. The panel makes recommendations, which are conveyed to the College by the Education Officer.

After hearing the opinion of the Technical College, the panel interviews the student again and explains the full working of the scheme, together with the recommendations of the College, and—in consultation with him—appoints his " Works Uncle ".

Similarly, after each term, when reports of his progress at the College are available, the student, together with his " Works Uncle ", is again interviewed by the panel, and further guidance or selection is decided upon.

In any one year there are eight separate panels organised in this way, each consisting of two members of the Works Council of sixteen.

In the event of dispute, the decision of the Works Council is final.

10. ***Fees :*** The College fees are paid by the Company, so long as a high standard of endeavour is achieved.

11. ***Reports :*** It is important that the link between the Technical College and the Company and the parents should be as close as possible, and a carefully devised system of reports is prepared in order to achieve this. At the same time, for the student the most important contacts are personal, and a real interest in the life of a student is therefore one of the first duties of a counsellor or " Works Uncle ".

12. ***Board of Studies :*** All reports are subject to review by an informal Board of Studies or Consultative Group Council, on

which serve the Principal of the College and the Director responsible on behalf of the Companies, or their deputies, two Counsellors and, if possible, two parents and one student from each year's group. This Council meets not less than once each year, to consider the general progress of the scheme.

13. ***Health :*** Each student is encouraged to undergo a health examination every six months by the Works Medical Officer. He is expected to belong to the Works Welfare Fund, and to follow the recommendations of the ophthalmologist and dental surgeon.

Neither the factory nor the school is a box, in which certain processes are performed out of sight of the world outside. Both have hitherto been regarded almost wholly in that light, the factory because its processes were largely secret or to be kept from prying eyes, the school because within the school the ordinary child went through the ordinary mill before going forth into ordinary life, which began afresh at 14+. Both are changing, and must change. Both are dealing fundamentally with healthy human beings; both must collaborate or else mutually contrive to continue to render each other's work partly void. The buildings of both factory and college present a challenge to the architect to express himself in the new idiom of our age; but buildings alone are not enough—the factory linked with the college and the school, the school and the college linked with the factory, must together become the University without Walls. And at the entrance to that University, and within it, there are no breaks or barriers; it must not be a microcosm shut off within itself, because the twin processes of education for life and training for work should be one and unbroken.

THE PRINCIPLES OF GOOD INSTRUCTION

BY

LIEUT.-COL. J. M. HAYCRAFT

At the time of writing, Chief Instructor and Adviser on Instructional Technique to the Director of Military Training.

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TEACHING is an art, not an exact science. Its success depends on a large number of factors, including the right human relationship between teacher and pupil. The methods to be employed will, moreover, not be the same for every kind of class. Account must be taken of the age, experience and intelligence of the class.

A method which works well in a University lecture-hall may not be successful in a works training-hut or vice versa. The instructor must suit his presentation to the group of minds in front of him. It is, however, possible to suggest some general principles which, if applied with common sense and regard to the particular set of circumstances, may be followed with advantage.

1. *The Object Must be Kept Clear.*

(*a*) The long-term object may be improved qualities of citizenship or general education, or may be to raise the standard of technical knowledge, or it may be some other goal. There is a distinction which must be understood between the mere imparting of knowledge of facts and the real purpose of education, which is to train the mind to logical thought and expression.

(*b*) The immediate object is "What am I setting out to teach in the next forty-five minutes?"

This must be kept in mind both in the planning and in the teaching.

2. *Simplicity.* There is no virtue in using long words. Explanations should be as simple as possible. Instructors should translate manuals into their own words, and avoid jargon and "officialese".

The principle of simplicity applies also to diagrams and other visual aids. Simple things can easily be grasped; a diagram covered in detail with difficulty (see Figs. 1 and 2).

3. *Use as Many of the Senses as Possible, but the Right Ones for the Job.* The three main senses by which one learns are HEARING, SEEING and TOUCHING. Most instruction falls broadly into teaching either :—

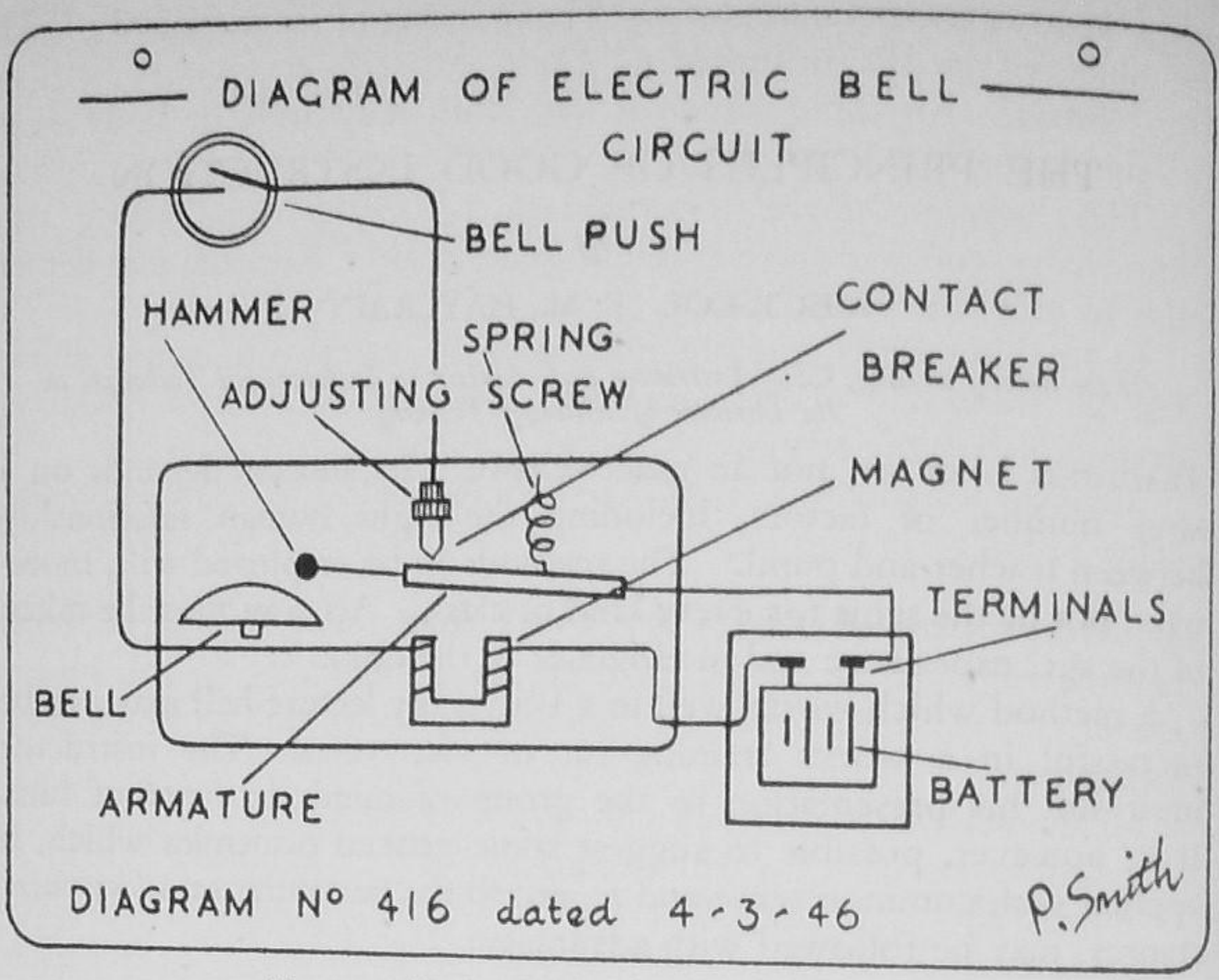


FIG. 1.—AN OVER-ELABORATED DIAGRAM.

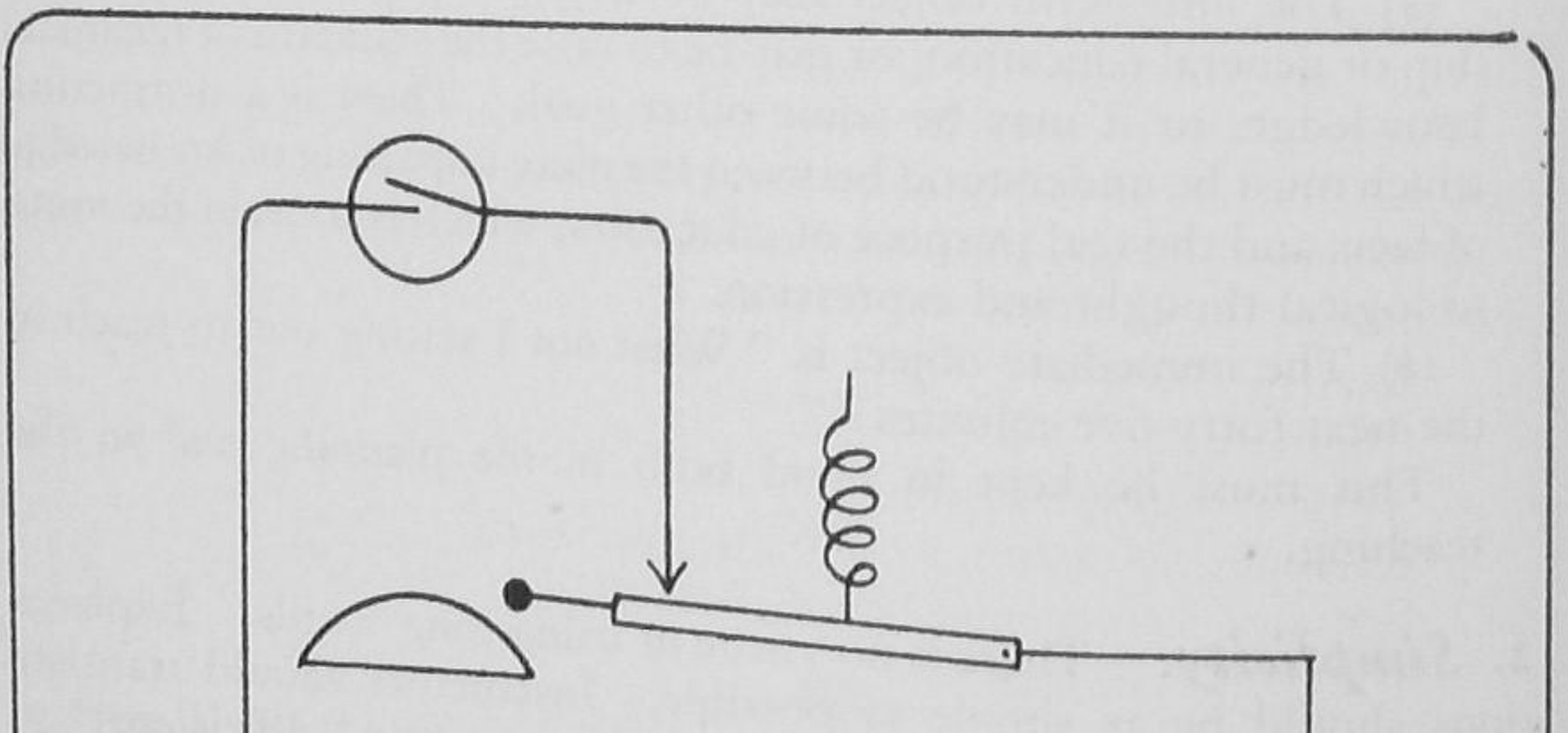


FIG. 2.—THE SAME DIAGRAM SIMPLIFIED.

KNOWLEDGE (Examples : " The meaning of magnetism "; " The object of the JPC in Industry "), *or*

SKILLS (Anything which is *done* with the hands or body—e.g., simple machine operating).

They Require Different Treatment in Teaching.—In imparting pure knowledge you will have to use a good deal of EAR, but supplement this by EYE with visual aids.

In teaching skills, use the maximum of TOUCH (i.e., actual doing). Use the minimum of EYE and EAR. Do not ask a lot of questions; get pupils to *do* the action.

Many lessons include both knowledge and skills, the combination being called a TECHNIQUE.

4. *Maximum Activity by the Class.* (*a*) This activity may be either physical or mental, or both, according to the type of subject-matter. It must, however, be thought out beforehand when the lesson is planned.

Mental activity is secured by :—

Questions.	Reasoning.	Syndicate Work.
Problems.	Test Papers.	Projects.
Quizzes.	Discussions.	
Reading and Private Study.		

A lesson combining physical and mental activity should, if possible, be balanced, so as to spread evenly through the period, rather than having, say, the first half physical and the second half brain-work.

The good instructor will watch the faces of his pupils carefully; they will usually give an indication whether the instruction is having its effect.

(*b*) *Interest Raising Factors Promote Activity.* The instructor must understand the value of :—

Realism.
Competition.
Variety in presentation.
Relating instruction to self advancement.
Sense of Achievement by the class.
His own enthusiasm.

5. *The Value of Instruction is determined by Testing.*
How otherwise can the instructor know that he has in fact taught ?

Testing can be done by :—

Doing, in the case of a " skill ".
Questions.
Problems.
Short answer test papers.
Written test papers.

It should be done at appropriate stages throughout instruction.

6. *The more thorough the Planning the deeper the Instruction will go.*

This is described in pp. 199 to 203.

7. *The Human Factor Must be Right.* All successful instruction depends on the leadership and the right human approach by the teacher. He must attune himself to the mind of the class, and see things from the pupils' point of view. He must be firm, but at the same time sympathetic, approachable, and must talk *with* them, not *down to* them. He must infect them with his evident enthusiasm for the subject; above all, he must avoid sarcasm, and never bluff his way out of a difficult question, nor be impatient with a backward member of the class.

He must develop a class sense, so that he can recognise perplexity or boredom, and deal with each; he must, moreover, adjust his attention to every member of the class, not just to the front row, nor to the blackboard nor the desk. He must address his students by name. He must also remember the value of encouragement for work well done, for that is one of the greatest incentives.

Under this heading of the Human Factor we may well place good administration; this includes :—

Convenient hours of work.
Comfortable seating.
Good lighting and heating.
Convenient break times.
Freedom from distractions, and
All else which affects the comfort and well being of the student.



The Employment of Visual Aids

1. Their purpose is : to aid understanding; to aid MEMORY by using the sense of seeing; to increase INTEREST by introducing VARIETY in presentation.

2. The principles underlying their correct use may be summed up as follows. Visual aids should :—

Concentrate on essentials.
Be LARGE enough to be seen by the whole class.
Be SIMPLE, with all non-essential detail and lettering omitted.
When possible, be COLOURED, boldly and functionally.
Be displayed only when required or they become a distraction.
Be used IN CONJUNCTION WITH, and not instead of, the actual thing whenever possible.

The best visual aid for practical subjects is the thing itself on the scale of one per student.

Types of Visual Aids

3. ***The Blackboard.*** As an alternative to black, dark matt green is recommended : yellow chalk shows up well on this. Coloured chalks have not the same value : they show up best in the following order of priority :—

Yellow, white, pink, light blue.
Red, brown and purple.

The last two are not recommended.

For most purposes the blackboard should be planned in advance. (See Figs. 3 and 4.)

Look at your blackboard from the class's position; ensure that it is readable by all and that there is no shine from lights or windows.

Don't talk to the blackboard, but to the class.

When finished with a subject on the board rub it out or remove the board.

Small Blackboards. These are made up from three-ply, 24 inches by 18 inches, and are useful for small classes working in workshops, etc., round equipment.

4. ***Diagrams.*** These should be simple and revealed to the class by stages. They should not be covered with figures and data.

5. ***Films and Film Strips.*** These exist in great variety, and are frequently misused. They are only an aid to instruction, NOT a means, and they require a lesson to be planned round them, just as every other lesson requires one. See p. 206 for further guidance in their use.

6. ***Drops.*** These are frequently the main headings of the lecture or lesson to keep the instructor on the rails, or may be important data to be remembered. They do not require a skilled draughtsman to make.

Unprinted map paper is ideal, with wooden lath tacked on each end.

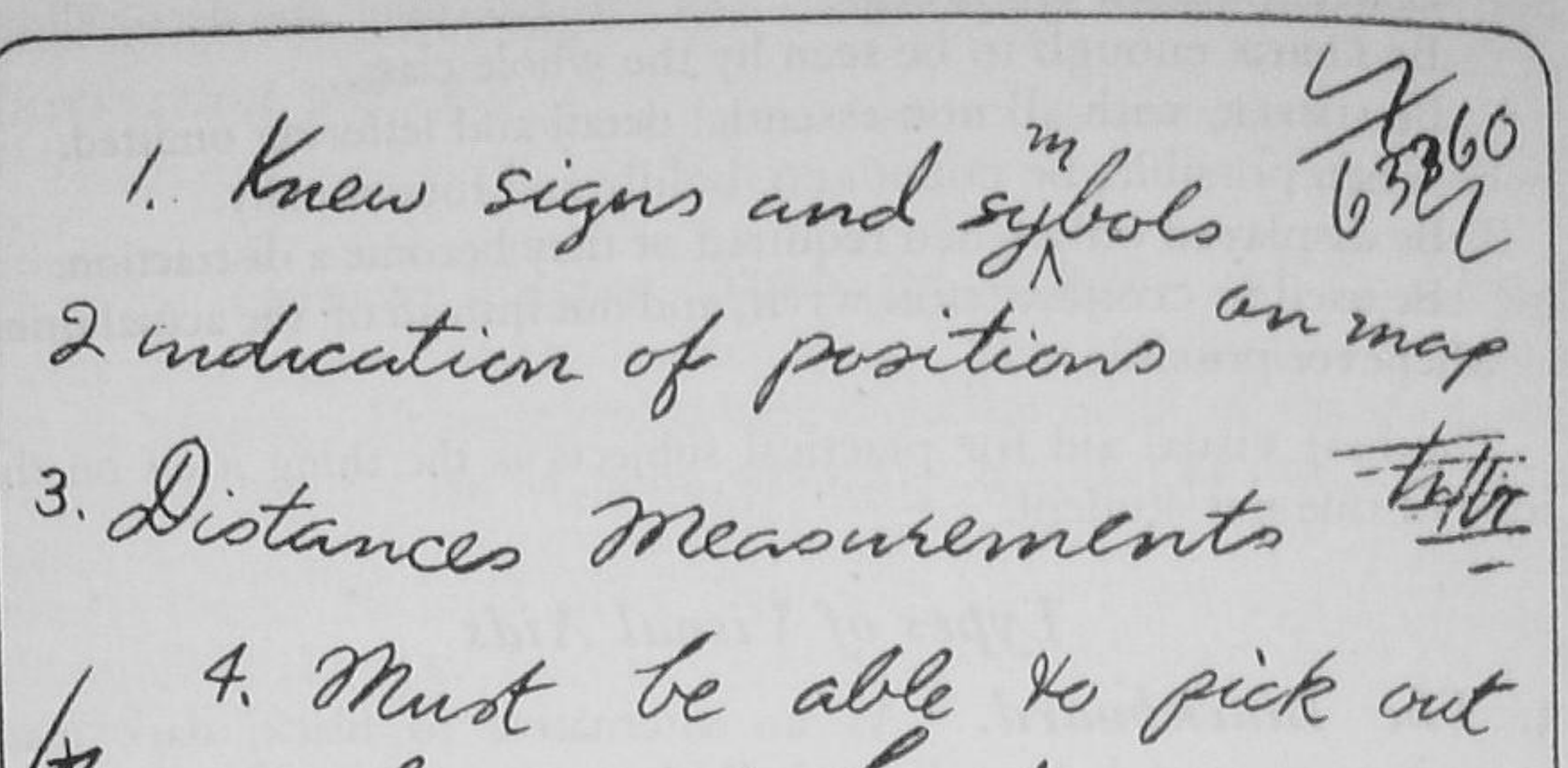


FIG. 3.—AN UNTIDY BLACKBOARD, NOT THOUGHT OUT BEFOREHAND.

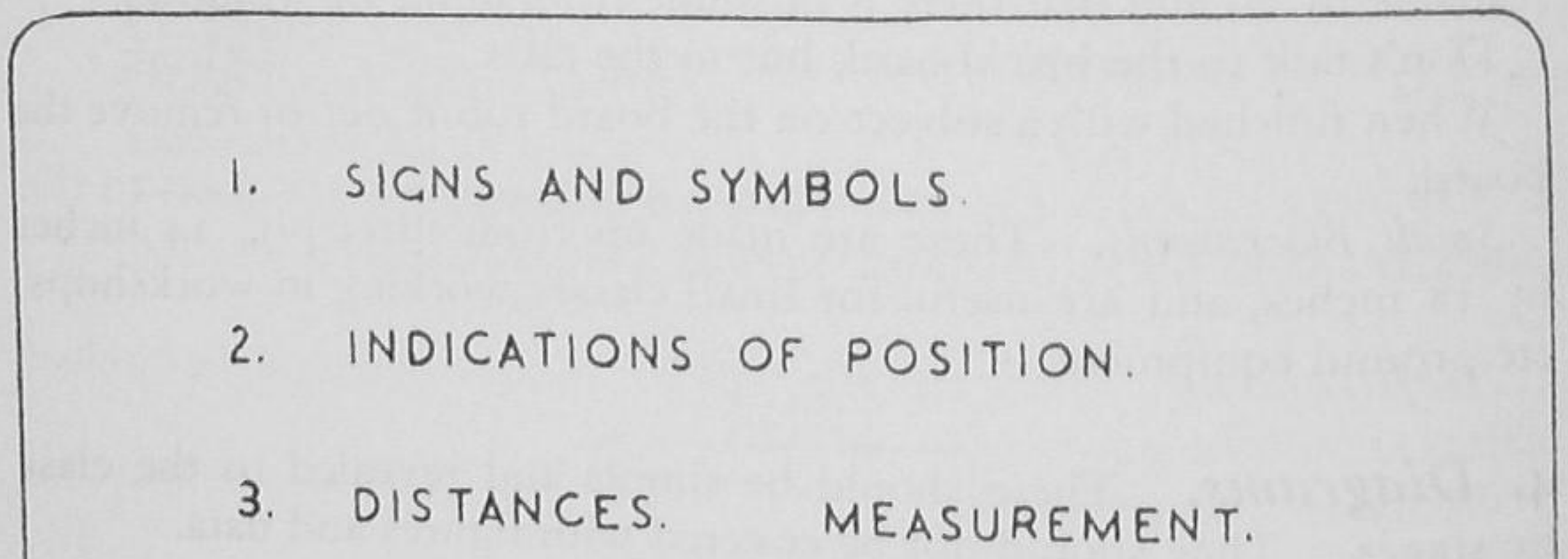


FIG. 4.—A PLANNED BLACKBOARD.

SIMPLE, BOLD, CLEAR and *in colours*. (Black, red, blue, and deep yellow in that order.)

For an audience of two hundred, lettering should be AT LEAST 1¼ inches high.

PENS for poster work. These are obtainable from W. H. Smith and others (the "nail tweezer" type is best). Most large stationers supply poster paints.

7. *Models, Mock-ups and Material.* If not large enough to be seen by the whole class STOP teaching while the model is being passed round or inspected.

Functional colouring of sectionised models helps understanding.

8. *Flap Sequence.* This consists of a series of diagrams, which are displayed in sequence to illustrate the action of a mechanism or to build up a diagram bit by bit. They, too, should conform to the principles given in para. 2 above.

Prepare to Teach: A Plan for Class Lessons

Lessons require a plan. This is the framework which fits most types of lesson.

1. *Type of Subject.* Is it brain-work, or "doing", or both?

2. *Object.* Decide the real PURPOSE of the lesson in relation to the long term object.

3. *Beforehand.* How MUCH to teach? (How much of the subject matter should be put in each period.)

What are the essentials? (The T.W.I. Job Breakdown may be useful here, see p. 210.)

What do they know already?

Teaching time and number of periods allowed for the subject.

Size and position of the class.

Kit, materials, visual aids, etc., necessary.

(If necessary stagger periods so that maximum material can be used.)

Place of work. (Is anyone else using it? If it is a lecture room, how about the key, lighting, seating, etc.?)

4. *The Lesson.* (i) *Testing Foundation* (if applicable to the lesson). By Question or by Doing? (Do, where possible.) Enough to link up with the previous lesson.

(ii) *Approach* or *Preview* of the lesson. INTERESTING, SHORT AND TO THE POINT. (Focus the class's mind on the subject and put them at ease.)

(iii) *Stages of the Lesson.* Sift the subject-matter. Choose your stages of :

Explaining.
Showing.
Asking questions on key points (must be thought out beforehand).
Class doing.
Testing.

The right sequence is the sequence most easily learned by the class. It may vary owing to previous work, or the kind of class.

(iv) *Sum up.* About five minutes before the end :—

(*a*) Any questions from the class.
(*b*) Final PRACTICE, TEST or QUESTIONS on vital points.
(*c*) Summary of the Class's ACHIEVEMENT or the main points of the lesson.
(*d*) Disperse.

Notes :

(i) Don't bore experienced students with elementary matter; be progressive.

(ii) Remember that a little praise and encouragement go a long way.

5. *Afterwards.*

(i) Make notes of how the lesson might have been better given.
(ii) Return all stores and equipment.
(iii) Leave the place of work clean and tidy.

EXAMPLE OF A LESSON PLAN

Map Reading 4. Contours

Object : To show students the uses of CONTOUR lines. To teach them to recognise height, shapes and slopes of an area from a map.

Class : Twenty-five students already having knowledge of conventional signs, reference points and scales.

Time : Forty-five minutes.

Place : Lecture-room, with working tables.

Method : Lesson.

Equipment and Aids :

Notebook and pencils.
Twenty-five maps of local area.

Contour model.

Blackboards with ground formations, convex, concave, uniform slopes, etc., already prepared.

Competitions and problems prepared.

Seating, etc. : Two to each table.

Approx. time, minutes.	*Subject matter.*	*Class work.*	*Aids, models, remarks.*
4	Revision on last lesson.	Problems on— (*a*) Conventional signs. (*b*) Map references. (*c*) Distance between two points and how long it would take to walk it.	Prepared problems.
2	Instructor explains the necessity of knowing what contours show. Explains what contours show— (*a*) Gives a picture of the ground. (*b*) Assists to find way about map, etc.		
10	Instructor explains CONTOUR principles. What contours show— (*a*) Rise and fall of ground. (*b*) Clear evidence of shape of ground. (*c*) Slope of hills. (*d*) Explain the help of lakes and rivers.		Model.
7	Using model describe a few ground formations— (*a*) Saddle. (*b*) Spur. (*c*) Re-entrant.	Class find these formations on maps.	Prepared blackboard. Model.
5	Any questions ? Final Test. Pack up kit.	Class work out questions on slopes and formations, etc.	Prepared problems.
	Final summary.	Class take down main rules in notebooks.	Prepared blackboard of main points.

Total : 40 minutes. (The above is an extract.)

PREPARATION AND DELIVERY OF A LECTURE

1. *Beforehand*

Object : Decide on it and keep it in mind throughout.

Material : Collect, sift and pick out main points round which the lecture will be formed.

Visual Aids : Decide on what prepared blackboards, drops, charts, films, film strips, models, material, etc., are required.

Sequence : Write up the plan of the whole lecture with approximate timings, and run through it as you propose to give it. One method of planning a lecture is to base the plan on a series of definite questions to which the lecturer gives the reasoned answers.

A useful layout for the lecturer's notes is this :—

Serial No. and/or rough timings.	Matter (HEADINGS and SUB-HEADINGS).	Visual Aids.

Setting the Stage : Arrange seating, lighting, heating, fresh air, etc., and inspect all visual aids from the back row of chairs.

Notes : (i) Allow time for problems, questions during the lecture if you need them, and also for any likely discussion at the end.

(ii) It is good practice to issue a students' precis either before or after the lecture. If you do not desire the students to refer to it during your lecture, then issue it afterwards.

2. *During*

Voice : Face your class and focus your eyes on them.

Keep your head up, and address your remarks to the back of the audience as well as to the front.

Pitch your voice to suit the room, and vary the pitch to emphasise words.

Breathe slowly, but deeply, to keep a reserve of breath, so that the voice does not fade away at the end of the sentence. Do not drop your voice at the end of a sentence.

Speak more slowly than you feel to be right, and make use of pauses to let remarks sink in. Pronounce consonants carefully and distinctly. Important statements or headings may well be said twice.

Attitude : Do not talk to the blackboard; stop talking whilst writing, then turn to the class and talk. Do not pace about, throw chalk, juggle with pointers or indulge in any other distracting mannerisms.

Let your gestures be restrained and natural.

General. Simplicity and sincerity. If you want to carry conviction you must yourself have conviction. You must appear to have enthusiasm for what you are putting over.

3. *End*

Give a brief final summary of the main points. (For some types of lecture this may well be done by means of a prepared blackboard or drop.) If there is a discussion at the end of the lecture, the summary should follow it.

4. *Note-taking and Précis*

(i) Note-taking in General.

Advantages :

(i) A means of reference (but the pamphlet, handbook, etc., where such exists should fulfil this rôle).

(ii) A means of revision.

(iii) By expecting a pupil to study his notes in his spare time a larger syllabus can be attempted (the University method).

Disadvantages :

(i) Often the notes are never again looked at.

(ii) The notes are seldom kept amended.

(iii) Note-taking slows down instruction.

(iv) The notes often duplicate the information given in the text book.

(ii) The Type of Student.

The type of note-taking will depend on the standard of intelligence of the student.

(iii) Types of Notes.

Dictated Notes.

Advantage :

Ensure accuracy and uniformity.

Disadvantages :

(i) Extremely monotonous.

(ii) No guarantee that the class are thinking about what they are writing. No brain activity.

Uncontrolled Notes.

Advantage :

Allow the class to take notes according to their personal needs.

Disadvantages :

(i) Difficult for the class without previous practice.

(ii) Divides attention.

Controlled Notes.

Pauses allowed for note taking.
The class think out and write notes.
The accuracy of the notes is checked by the instructor.
No note-taking allowed while instruction is in progress.

Advantages :

(i) Stimulate mental activity.
(ii) Test by stages.
(iii) Ensure individual attention.
(iv) Accuracy can be checked on the spot.

Disadvantage :

Irritation to the individualist.

Printed Précis.

Advantages :

(i) Ensure accuracy and uniformity.
(ii) Avoid waste and time in note-taking.
(iii) A better means of reference and useful for private study.

Issue of Précis.

Students should not be permitted to read a précis while the lecturer is talking. It is, however, often useful to direct them to refer to some particular part of one and to pause for a few moments while they do so. If you do not plan to do this, then it is better to issue the précis at the end.

Recommendations.

(i) Minimum note-taking possible.
(ii) Controlled note-taking.
(iii) The occasional use of a dictated note where accuracy is important (e.g., diagram, proforma or definition) when précis are not desirable.
(iv) On higher level all necessary notes in the form of précis. Very often the only way an instructor can *teach* his subject *during the lesson.*

5. *Class Contact*

Few lecturers are experienced enough to gauge, during their lectures, the exact amount of mental attention which is being given and to achieve a really effective control over it. Lectures frequently become entirely " one-way traffic ", with no real class contact at all, and with a high proportion of the students not really concentrating.

Questioning may also be Useful.—The instructor must know the names

of his class, or else have a list in front of him. He should have a list of prepared questions, and should put questions to individuals by name. It is so much better to get the answer from the class than for the instructor to give it himself.

IMPROVE YOUR QUESTION TECHNIQUE

When to Question.

Questions can be used to :—

REVISE or TEST—Question on KNOWLEDGE, *not* on SKILLS.

TEACH—Particularly where reasoning can be used—e.g., in teaching mechanism or electrical subjects (but use with discretion). Ensure that a class is following the trainer step by step.

Questions should

1. Be to the class, then to the individual.
2. BE CLEAR and to the point.
3. Be concerned with the LESSON.

Questions should not

4. Be "fifty-fifty" questions (i.e., one of two alternatives for an answer).
5. Test only power of EXPRESSION (i.e., *never* question on a SKILL if it is possible to make the individual *do* the action).

Examples :—

How do you load this machine? BAD (see 5).

Is the return cable painted red or orange? BAD (see 4).

Jones, what is the first key point in setting up this jig? BAD (see 1).

Note.—Do not ask questions while the student is busy doing something.

THE GROUP DISCUSSION (INSTRUCTIONAL)

This, like any other form of instruction, requires to be planned.

1. *Beforehand*

Decide OBJECT (Example : "Incentives". Is the discussion to be on incentives in general or "how to produce 10 per cent more in *our* shop", etc.)

Make a list of headings on which the discussion should hang.

Plan to put these on a blackboard, which will become the spine of the discussion.

Have a list of subsidiary questions which may provoke discussion.
Study seating (see Fig. 5).

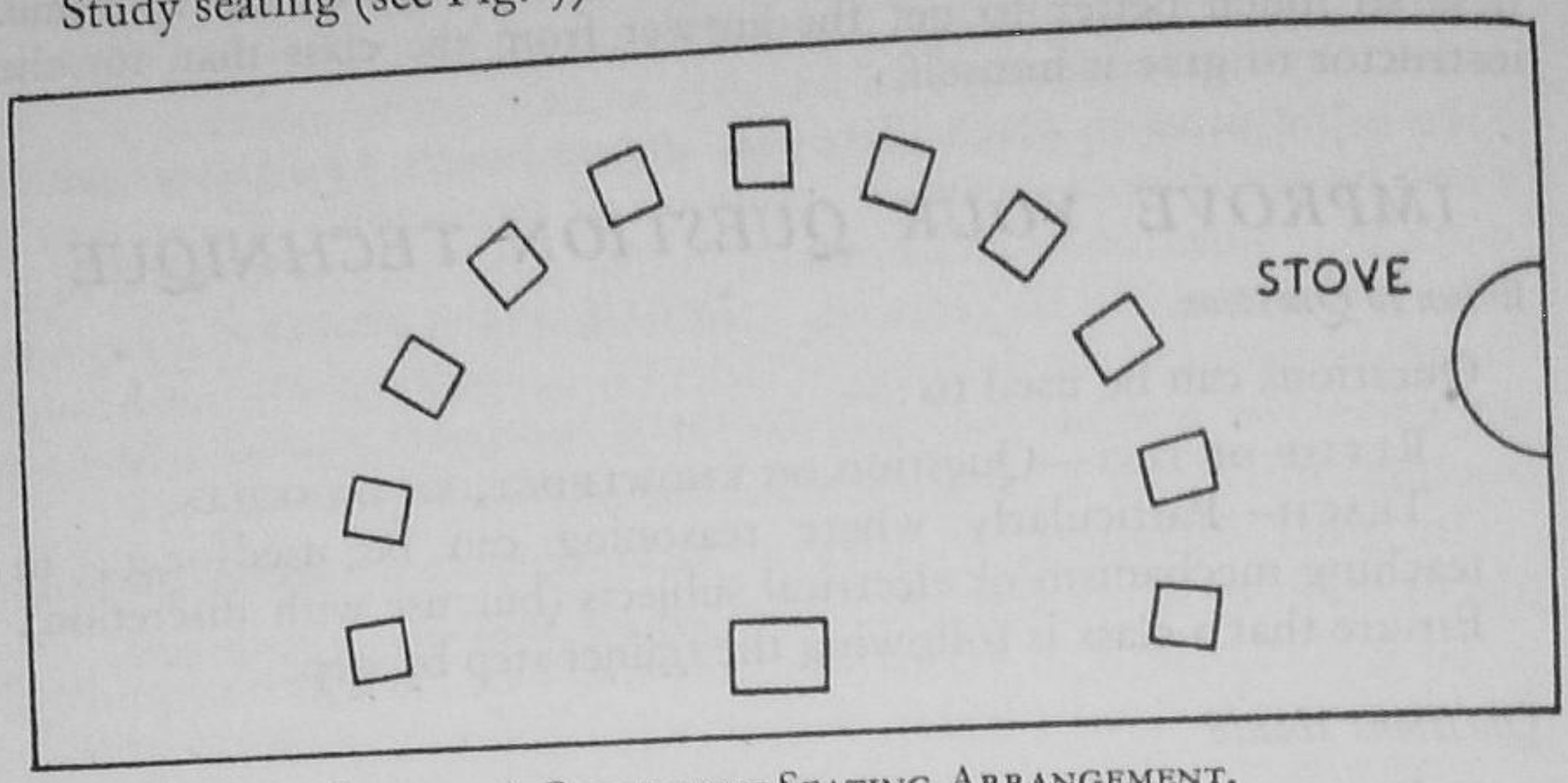


FIG. 5.—A CONVENIENT SEATING ARRANGEMENT.

2. *During*

Distinguish between fact and opinion.

Beware of the careless use of abstract words which may not mean the same thing to different people.

Keep the interest going.

Make everyone speak up, clearly and audibly.

If a question is badly stated, restate it clearly for all to hear.

Toss questions back for the group to answer.

Do not normally express your own views, if at all, until the end of each stage—then sum up at that stage.

Keep the discussion clear, to the point and do not let it become long winded.

3. *Sum Up*

Make a brief and impartial summary of the opinions of the group and (as applicable) the lessons which have come out of it, or the suggestions which should be forwarded, as the case may be.

(See B.C.A. Handbook No. 1, "Discussion Handbook".)

THE USE OF FILMS

Films have been produced concerning almost every human activity and aspect of nature. They vary in type from pure entertainment, propaganda or general interest to the teaching of a piece of mechanism, and it is very difficult to classify them except under subject-matter. From the teaching point of view they vary from those which are a complete exposition of the subject in themselves to those which need

additional approaches to the mind for the assimilation of the knowledge to be complete, this additional approach being supplied by the teacher with his or her explanation, by discussion or by promotion of some activity by the students.

In using films to teach there are, among others, two factors which must be considered—namely interest and saturation. These factors work in opposition to some extent, in that if the interest factor is high, then saturation will be reduced. Saturation of the mind may become complete through the dullness or lack of interest of the film, or through an excessive number of facts or ideas having been presented in succession without a pause for their assimilation.

In order, therefore, to prevent saturation, the method of using detail teaching films described below is advocated.

(It applies mainly to a detail teaching film—i.e., in which some detail or technique has to be learnt, and *not* to a background film.)

Preliminary. The film must be pre-viewed and split up into logical sections of approximately 10–15 minutes each. Kit: blackboard, electric reading-lamp and, where possible, class sitting at tables *with* the equipment to be learnt. Some kind of light-signal to the operator also is useful, to stop and start the film.

Procedure.

1. Explain the object of the film.
2. Give out two or three questions to be answered after the first section. (These must be planned beforehand.) [1]
3. Show the first section.[1]
4. Lights up. Get answers to questions and discuss.
5. Continue as above with remaining sections.
6. If time available show film right through second time silently with the instructor commenting on chief lessons.

Results of a Test. After three days two classes were given a knowledge test. It was found that 86 *per cent of the instruction had been remembered* by this method, as opposed to only 28 per cent by the old method of showing the film right through.

BUT REMEMBER NO TWO TRAINING FILMS ARE THE SAME. USE THE METHOD WITH COMMON SENSE ACCORDING TO THE TYPE AND NATURE OF THE FILM.

Film Projection. Films are normally made in two sizes: 35 mm. and 16 mm. The former require full-sized and expensive projectors, and cannot, owing to fire danger, be stopped at will in the manner described above.

The sound-track can, however, be silenced if it is required to show the film silently. 16-mm. projectors can be stopped and started easily

[1] Or vice versa according to the film.

at will with the sound-track either on or off. 16-mm. films can be shown by direct projection on to a screen or by rear projection through a screen. The former requires almost complete darkness, with the attendant loss of contact with the class; the latter method can be used in a fairly well-lighted room; the instructor thus can see every student. Rear projection is described fully in Appendix B.

Summary

THE FILM IS AN AID, NOT A MEANS OF INSTRUCTION.
PREVIEW FILMS BEFORE SHOWING.
TREAT EACH ON ITS OWN MERITS.
BUILD A LESSON PLAN ROUND EACH.

THE FILM STRIP

1. ***Film Strips***—which are very short lengths of 35-mm. film—consist of a series of special photographs, diagrams, drawings, captions and other aids to memory.

They present a carefully planned, logical sequence of pictures and captions, and are teaching aids of the highest quality.

Some strips are summaries of films, and enable the Instructor to give his class a second look at a number of complicated pictures which went by rather quickly in the film. These afford a basis for discussion of the difficult points of the film afterwards. This slow *résumé* of salient features will fix the instruction in the brain.

Advantages :
It enables a class to be taken step by step through the subject.
A pause can be made at each step for questions.
The Instructor is given guidance and help.
It saves the labour of making large wall diagrams.

2. ***Presentation of Film Strips.*** Film-strips are visual aids to instruction; they do not replace the instructor. They merely provide pictures, drawings and captions to illustrate the lesson, and, like all other visual aids, the film-strip must be properly incorporated into the lesson plan.

No one set plan will suit all film-strip lessons, as the number of subjects differ, each must be treated on its merits, but the following procedure will normally be common to all film-strips.

Lecturer's notes are usually provided with each strip. First read the notes carefully with the strip itself (possibly focused on to the wall of your office). The notes explain briefly the principle lessons of each picture. Do not read them out verbatim, but put them in your own

words. Prepare, in fact, your own lesson on a plan. Decide what material each student should have.

The strip should be run through slowly, and used to supplement a detailed teaching of the subject by providing pictures and diagrams. As the captions are necessarily brief, emphasising only the cardinal points, the Instructor should in nearly every case amplify the sense of the captions, making use of his personal knowledge and experience to do so.

He should keep the class exercised by setting problems, asking questions and inviting questions and comments, and dealing with these before turning to the next picture.

The frames can be shown in any order, once only, more than once, or a selection only may be used. The whole strip need not be shown in one sitting.

Confirmation.—The lesson must be confirmed by tests, both written and oral. When doubtful points arise, some of the frames should be shown again.

Notes should be taken as in a normal lesson. If a summary is not taken from the film-strip, it can be put on a blackboard, for the summing up afterwards.

The success of film-strip instruction depends entirely on the way the instructor uses it in the logical development of his lesson plan.

3. *The Projector.* Focus the projector carefully before starting. Film strip should be shown not in entire darkness, but in a half-darkened room, so that class contact is maintained between instructor and student. If rear projection is used no blanketing of windows is necessary (see Appendix B).

Complete instructions are usually issued with each projector.

4. *Seating.* Arrange seating carefully *before* the students arrive; this is particularly important when using rear projection, owing to the need to get everyone in the beam.

TRAINING WITHIN INDUSTRY

Closely linked with the methods and principles described in the previous pages is T.W.I. (Training Within Industry). This system was extensively used in the U.S.A. during the War of 1939–45, and is now taught by the Ministry of Labour and National Service. That part of T.W.I. which is concerned with instruction is called "Job Instruction". The outline of this is given below.

It will be seen that this method is primarily applicable to the teaching of a skill to one person. The principles, however, are similar to those expressed elsewhere in this chapter, and can equally be applied to class lessons, with the necessary changes.

T.W.I. Job Instruction

1. *How to Get Ready to Instruct.*

Have a Time-Table.

How much skill you expect him to have, by what date.

Break Down the Job.

List important steps.
Pick out the key points. (Safety is always a key point.)

Have Everything Ready.

The right equipment, materials, and supplies.

Have the Workplace Properly Arranged.

Just as the worker will be expected to keep it.

2. *How to Instruct.* (*The 4-Step Plan.*)

Step 1.—*Prepare the Worker.*

Put him at ease.
State the job and find out what he already knows about it.
Get him interested in learning the job.
Place in correct position.

Step 2.—*Present the Operation.*

Tell, show, and illustrate one IMPORTANT STEP at a time.
Stress each KEY POINT.
Instruct clearly, completely, and patiently, but no more than he can master.

Step 3.—*Try Out Peformance.*

Have him do the job—correct errors.
Have him explain each KEY POINT to you as he does the job again.
Make sure he understands.
Continue until YOU know HE knows.

Step 4.—*Follow Up.*

Put him on his own. Designate to whom he goes for help.
Check frequently. Encourage questions.
Taper off extra coaching and ease follow-up.

The T.W.I. Job Breakdown

This analysis of the elements of a working process and job function will be found of great value in planning instruction and in the actual working out or improvement of some operating or office function.

It consists of breaking down the whole into a series of steps, against which are placed the key points which the person learning or operating must bear in mind or perform. They are listed as follows :—

Important Steps in the Operation. (A logical portion of the operation which substantially advances the work.)	*Key Points.* Anything in a step which might :— Make, scrap, or spoil the work. Injure the worker. Make the job easier to do : i.e., any knack, trick, special timing, use of special information, etc.

This breakdown can be applied to almost any form of human activity with a furtherance of efficiency.

[By courtesy of the Ministry of Labour and National Service.]

CRITICISM OF INSTRUCTION

Supervision and criticism is essential to ensure that the object of instruction is achieved, and that instruction is constantly examined for ways and means of improving it.

Vague criticism, however, is useless. Instructors need tangible help in the form of concrete suggestions which will enable them to improve the value of their instruction.

Complete lessons therefore should periodically be assessed when each factor known to affect learning value can be carefully considered. BASE ON FACT rather than on OPINION.

A Plan for Criticism

1. Was the period a success ? How much per cent ? If 100 per cent or near it then there is not much to be said. If not entirely successful then examine it as follows :—

2. *Preparation.* Kit—seating—air—lighting—did he know names of class—visual aids—time of day—distractions—was the lesson in the right place—what has been given before ?

3. *Manner.*—Was he confident—did he hold class's attention ?—enthusiasm—pleasant voice—convincing—tendency to bluff—personality.

4. *Matter.* Had he the requisite knowledge ? Was he correct in detail ?

5. *Method.* Did he get maximum class activity ? Did he make full use of available equipment ? Faults observed and correct in the right way ? Did he confirm by stages ? Question technique ? Visual aid technique ?

For the criticism of lectures and lessons see Appendix A.

TRAINING TAILPIECE

"Keep it Simple"

Recently a plumber wrote to a Technical Institute asking for some advice. He said that a dose of hydrochloric acid quickly cleared a clogged drain-pipe, and asked if it was a good thing to do.

The Institute replied: "The efficiency of hydrochloric acid is indisputable, but the corrosive residue is incompatible with metallic permanence."

The plumber wrote back thanking them for telling him that the use of the acid was a good idea.

Another official at the Institute then decided to clear the matter up, and wrote to the plumber: "We cannot assume responsibility for the production of toxious and noxious residue with hydrochloric acid, and suggest that you use an alternative method."

The plumber replied again gratefully agreeing with the Institute that hydrochloric acid worked fine.

A third member of the Institute was called in to break the deadlock. He wrote: "Don't use hydrochloric acid. It eats hell out of the pipes."

* * * * * *

"A picture is worth a thousand words."—*Confucius.*

* * * * * *

"If the worker hasn't learned, the instructor hasn't taught."—T.W.I.

EXPERIMENTAL WORK AT BILSTON COLLEGE OF FURTHER EDUCATION

BY

H. LAMB, B.A.

Principal of the College

EXPERIMENTAL WORK AT BILSTON COLLEGE OF FURTHER EDUCATION

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Principal of the College

THE Bilston College of Further Education was opened in April 1947. Since that time a serious attempt has been made to evolve a scheme of education and training suitable for young people between the ages of fifteen and eighteen attending during normal working hours. In no instance is obligation to attend a condition of employment. This contribution applies solely to the day-time "County College" classes and the wider implications of a College for Further Education are not touched upon. Neither is it in any complete sense a history of this College since April 1947. It deals mainly with aims and methods.

It is realised that when it is compulsory for all young people between these ages to attend, the aims of the section of the Act of 1944, dealing with this, may be only very partially achieved if all that is offered is just a continuance of the school curriculum and routine. Even if young people who are earning their living were willing and sufficiently docile to endure this, it could not be justified, since it is at this period of rapid physical change and moral adjustment that the educationist has his greatest opportunity; moreover, it is an opportunity never to be repeated in a person's lifetime. The young men and women who attend must therefore be offered an experience which will leave them better equipped to tackle their daily problems, and to give them the confidence which possession of sound, accurate knowledge can impart, and, by training them for life, will enable them to grow up to responsible and happy adulthood. It is to achieve these ends that the work of the College has been directed during the last eighteen months, and the following brief summary will help to indicate the methods adopted, the measure of success achieved, and the valuable data gathered both from success and failure.

Aura. The first concern was to create the subtle influence which, it was considered, should exist in such a College. The difficulty of describing how one creates "tone" is obvious, since so many apparently unimportant factors go to its creation. Primarily however, there should be an air of friendliness, so that the students may feel that one is interested in them as individuals and not merely as they might figure in the examination results. There is not, and of course,

cannot be an entrance examination to a County College; all types will attend and the average ability will tend to be on the lower side, so that a purely academic grading will in any case not be congenial to the greater number. However, in our experience, it became quite obvious that the students were not prepared for a staff who had shed most of the habits traditionally associated with the teaching profession. The presence of the staff in the Common Room at morning and afternoon break, had rather a restraining effect at first, but later it was thought peculiar if they did not appear, and conversation between staff and students became as free and natural as amongst the students themselves. This breaking down of the barrier between staff and students which the students themselves would have built up has been deliberate and immensely successful. Its potential value in the training of these young people is very great indeed in that it creates confidence and friendliness, thereby enabling the tutor to exert his or her influence to the utmost effect.

It is realised, I believe, by all who attend the College that a genuine interest is taken in the students' welfare, and that instead of forcing them into a mould of our devising, we help them to discover themselves and to develop any aptitude or interest they may have, as far as it lies in our power. It is this complete re-orientation of the " school " mentality to a " College " mentality which seems to arouse the interest and anticipation of the student.

Common Room. As was envisaged, the students' Common Room has proved to be the most important link in the College. It is here that those coming from different firms and walks of life rub shoulders (sometimes in a physical sense, I am afraid), and get to know each other. Here discussions take place concerning different conditions prevailing at places of employment and many other topics of importance to those young people. In the beginning it was remarkable to note how those out of the workshop tended to keep themselves apart from the office workers but how, under the democratising influence of the Common Room this sort of undesirable job snobbery soon disappeared, and the lesson that all honest labour has its inherent dignity was, by implication, soon learned; learned, that is, not from a text book, but from their own social experience and almost without being aware of it. In passing, it may be said that non-realisation of this great truth is the cause of much uneven distribution of labour, and much misguided ambition on the part of youth to-day.

Discipline. The other factor in the creation of a congenial atmosphere is intimately bound up with the question of discipline. This must, of course, be achieved, particularly in a completely co-educational College, but it is highly desirable, or so it would appear from

our experience, through a minimum of rules and regulations. At the moment of writing there are no written rules of conduct. With the maximum opportunity to commit offences there have been practically no incidents to chronicle, and now that there is a good body of students who have been in College for more than a year, it is interesting, and sometimes amusing, to see how youngsters fresh from the school playground are influenced by these older students to whom it has now been made clear that College discipline and their conduct is their own affair and not that of the tutors. Students are not formed into lines and the order to move given; all such rigid discipline is avoided. I doubt if it could be successfully imposed. This lack of restraint, and the use of tactful guidance in the decent way they should go, does, I am convinced, help students to feel that they are in a position of trust and that certain things, if done, will earn the disapproval of their colleagues and their tutors. Many other factors go to building up the right atmosphere such as the treatment of the student as a young man or young woman, who is a wage-earner and spends the greater part of his or her life among adults, rather than as a school child. Adolescents appreciate a foretaste of the dignity which age is supposed to bring, and require to be taken seriously.

Student Committees. Committees are an important part of College life. Each "Day" elects a committee which meets regularly and discusses matters affecting their "Day". Meetings are conducted in the formal manner, and it is not one of the least benefits that the students learn that public business, to be efficiently conducted, must be done in a certain orderly fashion. Each committee elects two members to be on the College Council through which students are trained to take a genuine share in College affairs. As the College Council is composed of students from different days, it meets during the evening. Social life is organised by the students, who enlist the the help of the staff if necessary. Whilst on the subject of committees, an amusing incident occurred after the first meeting of one particular day committee shortly after the College opened. The Chairman, a bright keen lad, came to me afterwards with a sheet of foolscap paper. I examined the long list of resolutions, wants and demands carefully, and then handed it back with a word of congratulation on the amount of work done. He was clearly puzzled, for he was under the impression that the Committee's work was done, and that it was for the staff to put into effect the long list of resolutions. I informed him, however, that the committee had to take responsibility and that the staff would be glad to help if called upon. Needless to say, the results of committee meetings have not, since then, needed a sheet of foolscap paper. It was an excellent practical lesson, however, that those who pass resolutions should also give practical effect to them. All this helps

the students to take personal interest in their College. We are thus creating something, which, in a part-time College is most desirable, and at the same time most difficult of achievement, namely, a sense of unity and a desire on the part of all students to " back up " the College.

The Tutorial System. The term " tutor " is used rather than " teacher " mainly because of its associations, and because one feels that it expresses more aptly the relationship between the students and the staff. Teaching is only one aspect of the work of a County College tutor. The student is brought to feel that we are interested in him or her as an individual and that development to healthy well-balanced adult life is the real aim of all our College practice. A tutor is appointed to be in charge of each day, and all matters arising during that day are referred to the tutor. When the College was small in numbers the students coming on each day formed a fairly large tutorial group. In a large College of several hundreds per day this " tutor of the day " system would be ineffective. Each " day " therefore is now broken down into as many groups as there are members on the staff, so that, at the present time tutorial groups number from twelve to fifteen which is about the right size. Tutorial meetings, which are non-academic and informal in character, are held every third week at the end of morning session. The advantages of this arrangement are many. In the first place there is a general " mixing " of students from different courses. For example, the two day nursery students during tutorials meet those who are following the general non-examination courses, and the danger of students becoming completely identified with a particular course is greatly minimised. This is also one of the beneficial results of the elective subjects, which we shall describe more fully below. As the emphasis of the College training lies on developing the personality, tastes and aptitudes of the individual, it follows that the tutor and the student must get to know each other very well, and this is made possible through the small tutorial group.

This seems also to be the only way of creating student records which bear some genuine relation to the student. Each tutor keeps a Tutorial Record Book in which are put the names of the members of the various groups, the topics taken, and also confidential remarks and impressions concerning the various students in their particular group. At the end of the year, a report is sent to those who are entitled to it which gives the usual statistics concerning attendance, grades, test marks, etc., and also a personal estimate of the student by the tutor. The information for this is obtained by personal knowledge of the student, and not merely by estimating his academic ability. In this way the individual is kept to the fore and does not become lost in a larger group. The tutorial group also offers an

opportunity for adding variety and elasticity to the basic programme of work to be got through each day. It is, of course, impossible to give regularly recurring time-table space to many topics which have a very good case for inclusion. The elective subjects do indeed cater for this aspect of our work, but experience has shown that young people desire to know more about many things which they feel are relevant to the business of their development. The tutorial therefore offers scope for discussion, in an informal manner, of a great variety of topics interesting to young people. Students are encouraged to suggest topics which will be of general interest, and, indeed at times, to take charge of the tutorial. The possibilities of the tutorial group, if imaginatively conceived, are really great. One student, having done an excellent piece of research on Birmingham's Water Supply system has, with the aid of the projector, given an illustrated talk on this subject to his tutorial group and, in view of his success in doing this, may, if his nerve allows, give the same talk to the whole College which will be assembled during tutorial time. Such a procedure is not only first-class training in poise and the development of self-confidence, but it gives a true dignity and importance to the work of the student. Moreover, it has a salutory effect upon other students, each of whom is engaged on a similar piece of individual work. It sets the standard of public performance, so that, although possibly the best efforts only are worthy of this treatment, the influence of the high standard is felt throughout the work of the College. There is yet another very important purpose served by the tutorial group. Matters affecting the smooth running of the College, its tone and a host of incidental points arising from day to day can be effectively discussed in a small group and, if need be, a quick remedy of faults can be applied. The significance of this, from the point of view of the training of the individual, lies in the fact that the students are concerned with and have a real share in, the running of their College, and already, despite our being in a nursling state, there are signs that the desired result is being achieved. Given tutors of a sufficiently imaginative and courageous outlook the tutorial can be a great power for good in the College community.

Curriculum. The period since the opening of the College to the present time has been one of experiment with the object of finding out what should be taught, and the methods to be adopted. As a result, a scheme of work has been evolved which not only gives to the student a generous degree of free choice, but also correlates to one central theme the various subjects in the course. The scheme of work operating between September and July 1948 will illustrate this.

It is inevitable since free choice of course is offered, that there should be an uneven distribution of students in the various courses.

As is the custom in part-time evening classes, a topic which attracts an unwieldly number of students is divided. Correspondingly, a weak

FIRST YEAR

The Civilised Community

	Industry		Home and community		Health	
	Communications	Work	Home economics	Living together	Science and health	Cultivation and the garden
First Term	News—the sound-board of the community	Development of industry	Food production and distribution	The business of living together	Development from superstition to knowledge	Living things in field, garden and wilderness
Second Term	Movement of peoples and goods	Scientific foundations of industry	Organising the home with the aid of science	Community economics	Science and health	The garden as a civilised influence
Third Term	Individual research	Individual research	Individual research	Individual research	Individual research	Individual research

course may not be started, and the few students be given their second choice. The tidy division into classes equal in number must, if the above principles are to operate, be replaced by a shaking down process, and it is desirable that this should take place at the end of the previous term so that students can get on with their work during the first week of term, and also so that a time-table based on the numbers in the various courses can be drawn up. The Second and Third years are being worked out similarly under the following suggested general headings.

SECOND YEAR

World Organisation

Trade and commerce	Science and industry	Travel and exploration

THIRD YEAR

The World Citizen

World governments	Modern science and the individual	The shrinking world and the individual

The above courses are for non-vocational students. Those who have a set course leading to an external examination follow the appro-

priate syllabuses, but are, in addition, members of tutorial and elective groups, and derive the full benefit of following their course in this particular type of College. This may be of interest to those who are wondering how such a College can cater for elementary and intermediate vocational examinations. All courses include provision for tuition in English, Calculations, Social Studies and Science, in addition to practical work and elective subjects, and physical training. All topics cover a programme syllabus based on a three years' course, and give not only a valuable factual knowledge over a wide range but provide ample opportunity for training the individual in citizenship in its widest sense. It is not that different subjects are demanded by the students; their educational needs are basically the same, viz., improved power of self-expression, greater facility in day to day calculation, and a wider general knowledge. They have put before them not the choice of subject, but the choice of material with which to work, and it is this element of having a genuine say in their work that is so attractive to the students. In a questionnaire recently issued, every one without exception, answered in the negative to the question "Would you prefer to have no say in the choice of study?"

Assisted Choice. It is realised that to thrust a series of courses of study upon young wage-earners who have had little training in making up their minds about anything, and to expect a clear-cut and well-thought-out decision is asking too much. Their choice is made, therefore, with the assistance of the tutor who meets the group, and by pointing out the purpose of the various courses, and giving general advice, ensures that, as far as possible, the student makes the best choice. It was thought that some knowledge of the students other than that gained by contact with them in College, would help the tutor to guide them. Accordingly, the questionnaire referred to above was issued. It is difficult to assess whether the knowledge gained had much actual influence on the choice of topic, but it was of value in a number of ways. In the first place, it did much to focus the students' attention on the fact that choosing one's work for a whole year is a matter which requires a serious approach; the training value being that, since after-life often resolves itself into a series of positions about which one has to make up his or her mind, what is good in relation to one's studies should be good also in one's occupation and in life generally. That young people require this sense of balance is something few will deny, and, running through all County College procedure, this element of training for life as well as for livelihood persists. The frank replies given to the tutors were sometimes a little disconcerting. A week before the interviews with the tutors, all students were handed a synopsis of the work embraced under every topic, so that they could choose a course of study rather

than a single subject which appealed to them. In this connection, however, it would seem that there is need to stimulate interest by means of, one might say, a realistic presentation, and it is our intention to produce a brochure which will present the topics in the three years' course more attractively. If the student goes conscientiously through the full course and does really benefit by the training received, he will, we hope, not require any further aid from his tutor in making a future choice. That this training of the student in the business of making decisions with a sense of responsibility is good, few who know the irresponsibility of youth will deny. Here again training and learning go together.

Practical and Elective Subjects. Having selected a course, there are other choices the student must make when the question of practical work and elective subjects arises. As regards the former, lack of adequate accommodation and the necessity of keeping practical groups within reasonable bounds limit the choice. As far as possible, however, sooner or later, the student is able to take what interests him most. The practical subjects possible at the moment are Woodwork, Plastics, Embroidery, Dressmaking, Craftwork, Gardening, Metalwork, Art and Pottery, the last three by arrangement with the Art School. The Elective subjects are Discussion groups, Musical Appreciation, French, Biology, Dramatics and Elocution, Recorder Playing, Literature and Religious Instruction. Here the choice is quite unfettered, and one or two points are worthy of note. It is surprising how many students, boys and girls, desire a speaking acquaintance with another language and are prepared to work really hard to acquire the facility during the very limited time at their disposal. The urge to take French, the language offered, is due in some small degree, to a desire to be as good as those who attended schools where foreign languages were taught. No attempt is made to teach formal grammar, and the language is learned by imitation and memorised conversations of a simple nature, with the addition of French songs, old and new. It is interesting to note that students get an opportunity of making music as well as listening to it. This is done by means of the recorder, a flute-like instrument, and genuine ability is often shown by some students who learn to read from music. Activities such as this, and those requiring a gramophone or musical instrument, point to the need for sound-proof rooms in the future County College, since considerable forbearance must be shown by members of other groups within hearing.

Social Studies. The section of our work that has been outstandingly successful is the one dealing with Social Studies, and this,

more than anything else indicates that in any similar College ample library facilities are a necessity not a luxury. The College is fortunate in being situated near to the small but modern Bilston Town Library, whose Librarian has been most sympathetic and co-operative. Under the guidance of their tutor, students may, in the third term do research on approved topics which appeal to them. Teaching in the formal sense is practically absent. The student learns on his own initiative not only to carry through a piece of work to its conclusion, but acquires the " knack of reference," and becomes able to discriminate between what is relevant and what is not. It has been found also that power of expression in writing and diagram is vastly improved under these conditions. Here again it must be emphasised that as a result of the onus placed on them to do a piece of work in a certain time, yet, within these limits, to have the maximum freedom in carrying it out the greater number of students improve rapidly both in their work and in their bearing. The last observation may seem strange, but it has been observed that the increase of self-confidence, and the awakening and encouragement of dormant abilities, does quite often improve the physical appearance of a student. To see a number of working lads and girls pick up their books, cross the road to the Public Library, and get on with their work without supervision is an encouraging sight. The indirect results are an appreciation of the meaning and use of a library, and the awareness that there are other sections than the fiction department. Social Studies also give an opportunity to the student to study some particular topic which is of special interest to him, and it is amazing to note how varied the interests of young people are. One boy was intensely interested in insects and did an excellent piece of work on British Butterflies. Another, a girl, during the summer studied the development of dress through the ages, and went to an enormous amount of trouble to describe her theme, and illustrate it with excellent sketches.

Examinations. There are no examinations attached to this individual work. Indeed we have striven to avoid the examination bugbear, and the tests which are given during the course of the work in all subjects are more allied to the factual tests of the Services rather than to the usual academic written paper. Tests in written English are an exception. These courses are intended for general education, and are not designed to lead to any external examination. They are liberal in the full meaning of the word, and no one who goes through the full period at County College can fail to become a better informed, and a more evenly balanced, individual. It is the earnest desire, one hopes, of all who are interested in this particular branch of our educational system that there shall be no " County College leaving Certificate."

Vocational Training. When County Colleges are established on a compulsory basis, there will be many vocationally minded young people who will wish to take a definite external examination, and this need the County College curriculum must be prepared to meet. At the Bilston College we are already seeing how this may be accomplished, since between seventy and eighty girls attend on two days per week with the object of taking, at the end of two years, the examination for Nursery Assistants. These students are following their course as laid down in the published syllabuses, under the guidance of their Course Tutor, but they are also County College students. Tutors from the general courses share in the work of instruction, and the girls are given a Tutor in addition to the Course Tutor. Through their tutorial and elective subjects they mingle with the rest of the students, and have an equal voice in elections for the Day Committees and College Council. Thus, whilst pursuing faithfully their vocational studies, they are absorbed into the College atmosphere, and derive the full benefit of living in community. By this means, therefore, we hope that when they leave at the end of the two years they will not only have earned their certificate, but also something less tangible but, none the less, valuable, which will help them to live sane, balanced lives, and to avoid many of the mistakes and spiritual disasters which arise from ignorance and moral weakness. A vocational course about to be started takes boys through a preliminary stage to a one year preparation for a City and Guilds examination, but, as in the case of the Nursery Assistants, our methods will ensure that their course is anything but narrowly vocational. There seems to be no reason why County Colleges should not take under eighteens up to the second year senior standard, and eventually fill the senior technical Colleges with higher grade students who have been given not only a sound vocational training, but whose personality has been developed as a result of attendance at a College where the development of personality is a prime consideration. A system such as this would not only relieve Senior Colleges, many of which are cluttered up with Junior courses, but would eventually fill up the Senior, Advanced and Research Courses which are often, speaking from a national point of view, dangerously thin.

What has been said above applies equally to any course which may be taken in a County College and what is being done here at the present moment will be possible in any College whatever its size, and however varied its programme. The test applied to all our activities and experiments is their applicability to a College very much larger than ours is at present. The danger of methods effective enough with small numbers but ineffective with large has been kept in mind, so that it is felt that our present system is flexible enough to allow for either small or large numbers providing that the staffing of the College allows for

tutorial groups not larger than twenty. When groups rise above this number the individual begins to be lost, and one of the fundamental justifications for this type of education disappears.

Staff. An organisation such as that which obtains at the Bilston College requires staff work to a degree not usually found in educational establishments, and to this end there has been continual examination of method by frequent staff meetings and much liason between staff members to secure the greatest amount of correlation between lessons. The question of staff required is beyond the province of this brief exposition, but it is certain that some special training of staff members in addition to the usual qualifications will be of the first importance.

The College and Industry. The College was opened officially on the 1st May 1947, and has been in existence for about sixteen months. During this time a continual effort has been made to build up a clear understanding and firm relationship between the College and local industry by proclaiming the modern interpretation of " Day Release ". The need for time off during work hours for further technical instruction needed no great persuasion, but the suggestion that firms should release young persons for general education with no particular vocational bias required demonstration. The greater number of firms in this area had to be converted to the idea, and the effort to do this was made harder by the difficulty of the times. The idea of Day Release for vocational training only is rapidly changing, however, to the new conception, viz., that every firm which employs young persons under the age of eighteen at the period of life when they are most susceptible to educational influences, has a moral responsibility to see that educational opportunity is open to them. Compulsion to attend will of course render persuasion unnecessary, but if, in the meantime, industrialists can be brought to see matters in this light, and to appreciate the vital importance of continued part-time general education and training, their support of County Colleges will be of great value, even when the question of attendance no longer rests with them. Despite the difficulty of the times, industry in Bilston and district has supported the College generously and indeed, together with the unwavering support of the Education Authority, has made the whole experiment possible.

Old Students. One of the most gratifying results of the spirit pervading the College has been the attitude of many of those students who, by change of occupation, have been compelled to leave their firms. These still consider themselves members of the College, and come whenever they have the opportunity to do so to renew acquaintanceships. We wish to foster this spirit, since it will ensure that the

influence of the College does not cease with attendance. It is increasingly the case, also, for students when they change to a firm that is not yet converted to County College practice, to send us the name and address of the new firm with a request that we shall endeavour to get them released to continue attendance. This indicates, I think, that in the College most of the students find something which supplies a real need during the difficult period of their growing up, and that it is a place where they can learn without gloom, and where they can be advised and guided by older people wise in the ways of the young.

Conclusion. It is not possible in such a brief account to do justice to this absorbing and fascinating educational experiment. That there have been difficulties, and that many remain to be overcome, will be clear to all who are connected with education, but if it contributes, if only in a small way, to a solution of the problem of "What shall we do with them?" it will be more than worth while.

POSTSCRIPT

by

SIR CHARLES TENNYSON, C.M.G.

President of the British Association for Commercial and Industrial Education

RECENT years have strikingly altered the opinions held as to the industrialist's obligations to his employees and to the State. To the pioneers of the Industrial Revolution the utmost extent of these obligations was to pay current rates of wages and to produce goods of reasonable quality at a reasonable price. The younger the child could be got into employment and the lower its wages, the better. It is now recognised that, as the great majority of this population enters industrial or commercial employment during the most impressionable and formative years of human life, it is not possible to produce a reasonably educated and intelligent population, or a population capable of good citizenship, unless the employer co-operates in carrying education on past the school-leaving age. It is also felt that the employer has a duty to the State to make his enterprise as productive as possible, which means that each of his employees must, so far as practicable, be given the job most suitable for him and taught to perform it with the greatest possible skill. This involves the employer in careful policies of recruitment and selection; in schemes of initiation training to ensure that the young employee realises the meaning and purpose of the business in which he is engaged and of his own function in that business; in well-considered schemes of selective apprenticeship supplemented by adequate arrangements for job-training and refresher courses for the adult worker; in part-time day-release for continued education, both general and technical; in the provision of facilities for adult education, and in many other things which to the Gradgrinds of a few generations ago would have seemed sheer lunacy. Modern industrial organisation is very complex and conditions vary enormously in various industries; consequently the requirements and possibilities of industrial education and training also vary greatly, and are as yet very imperfectly explored. Moreover, the great changes introduced into our educational system by the Act of 1944 and the introduction of the one year's National Service have introduced new factors which demand serious study. British industry has not been slow to realise its obligations in this matter, and this has resulted in the creation of a new industrial function—that of the Industrial Education or Training Officer, whose heavy responsibility it is to devise and carry out a suitable educational and training policy for his firm in co-operation

with the local education authorities, the juvenile employment and National Health services, the technical institutions, the Trade Unions and all the other bodies which share responsibility for youth in the modern State. Although this function was practically unknown before the War, to-day industrial training officers can be counted by the score, and more are being appointed daily. But the great majority of firms in this country are not large enough to be able to afford a specialised official entirely devoted to education and training. For such firms it is of great importance to have ready access to the experience of men and women who are specialising in this subject. Compilations like this volume and the conferences and publications of such bodies as the British Association for Commercial and Industrial Education serve an admirable purpose by spreading the lessons of experience among employers of labour, both large and small, and by bringing to the notice of a wider public one of the most important and interesting problems of our industrial civilisation.

C. T.

APPENDICES

APPENDIX A

LECTURE OR LESSON ASSESSMENT FORM

Name of Lecturer..... Date.....194

Assessed by.....

1. OBJECT OF THE PERIOD	2. PREPARATION Seating..... Lighting, etc..... ..... Visual Aids (models, drops, film, slides, etc).

Were problems and questions prepared properly beforehand? .....

3. WAS THE PERIOD SUCCESSFUL? .....
Percentage estimate .....

HOW COULD IT HAVE BEEN IMPROVED?

4. MANNER — Remarks.	5. MATTER — Remarks.
Confidence? Control and "Audience contact?" Voice and delivery? Attitude and mannerisms? Enthusiasm? Students questions well dealt with?	Complete and accurate? Knowledge? Sequence? Emphasis on the essential points? Any irrelevance?

6. METHOD — Remarks	7. GENERAL REMARKS BY CRITIC
Position of lecturer and visual aids? Stages and lay-out of lecture? Amount of student participation? Were students addressed by name? Question technique? Confirming at each stage? Use of precis and/or notes? Best use of visual aids? Did the method used suit the type and mental calibre of the audience? Summary?	

Notes.—This form is only an aide-memoir for the critic. It should *not* be ostentatiously filled in by him in view of the lecturer, and may with advantage be completed *after* the lecture.

APPENDIX B

REAR PROJECTION—FILM STRIP

1. Instruction in darkened rooms is bad for the following reasons :—

(*a*) Absence of light, except that from the screen, usually means a lack of fresh air, since few rooms have any source of ventilation other than windows.

(*b*) Darkness makes class control more difficult.

(*c*) Note-taking is not possible.

2. *Rear Projection Technique.*

All these disadvantages can be overcome by what is known as "rear projection", by which technique the pictures are thrown, by reflection from a mirror, indirectly on to the back of a translucent screen, which should be about the size of an average blackboard. It can, of course, be smaller or larger according to requirements.

With rear projection exclusion of extraneous light from the rear of the screen is essential.

3. *Apparatus.*

The following is a description of a simple portable apparatus suitable for a class of from thirty to forty students. It can be made up from scrap and salvage, with the exception of the mirror and screen. The following are types of screen material.

(i) To give a screen width of 2 feet 6 inches Ivory-white Bexoid in sheets 55 inches by 24 inches from Messrs. B.X. Plastics, Ltd., Hall End, London, S.4. The specification is Ivory-white Bexoid Matt/Matt 20/1000, reference B 1699.

(ii) For small audiences, such as the model here described, a dark-grey Bexoid gives a brighter image, but the audience must be seated closer to the centre of the picture. The specification is Dark-Grey Bexoid Matt/Matt 10/1000, reference B 1875 MM.

4. A frame is required to the following dimensions :—

Length : 40 inches.
Width : 30½ inches.
Depth : 26 inches.
Material : 1¾ inches by ¾ inch strips.
Screen : Width—26 inches.
Depth—20 inches.

This frame requires to have blankets, cloth, etc., draped over it to keep out light. (See Fig. 6.)

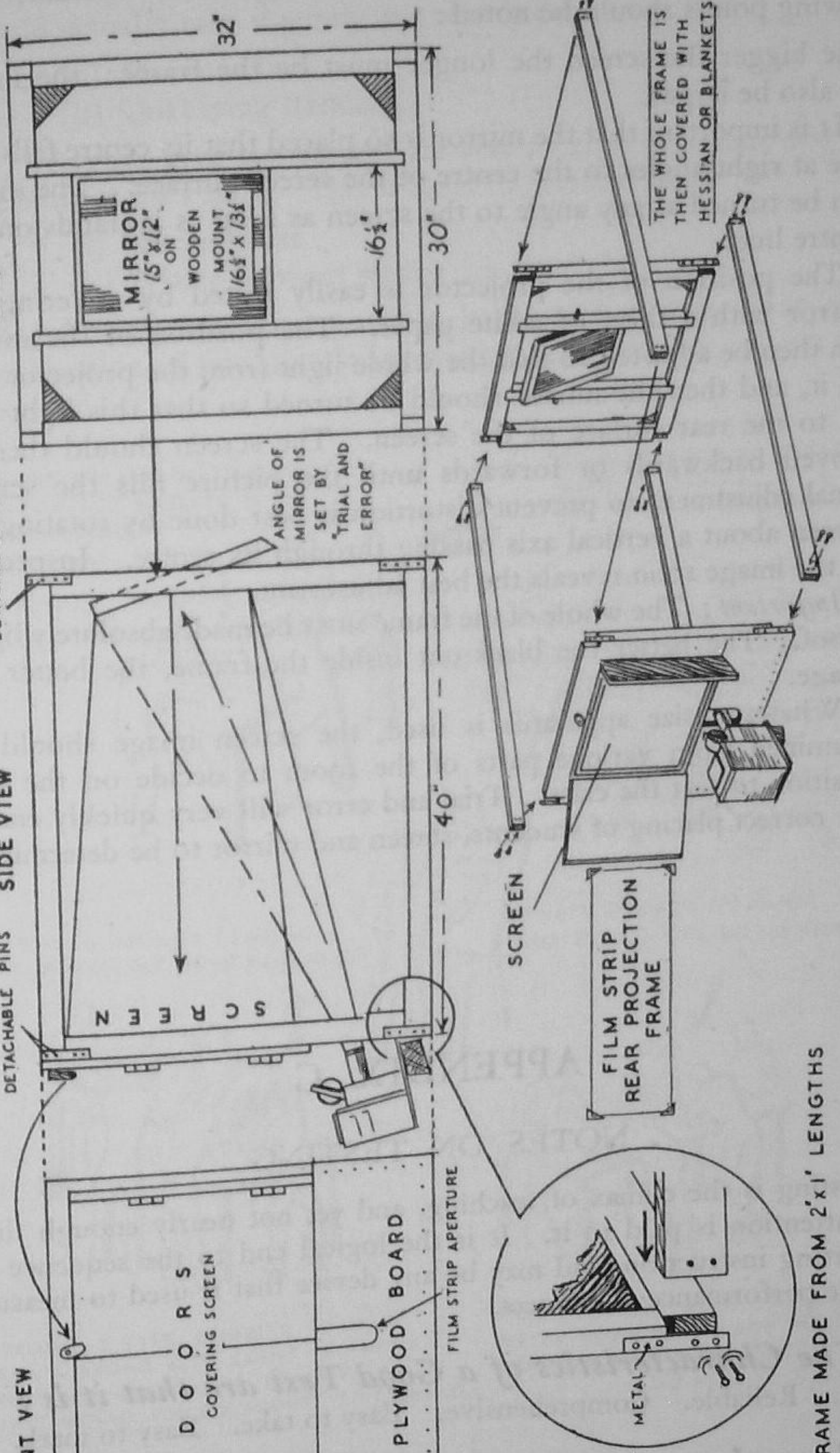


FIG. 6—A PORTABLE FILM STRIP FRAME.

5. Any other size of screen can be made by trial and error. The following points should be noted :

The bigger the screen the longer must be the frame; the mirror must also be larger.

It is important that the mirror is so placed that its centre falls on a line at right angles to the centre of the screen surface. The mirror can be turned at any angle to the screen as long as it stands on this centre line.

The position of the projector is easily tested by covering the mirror with a sheet of white paper. The position of the mirror can then be adjusted so that the whole light from the projector falls on it, and then the mirror should be turned so that this light falls on to the rear surface of the screen. The screen should then be moved backwards or forwards until the picture fills the screen. Final adjustment to prevent distortion is best done by rotating the screen about a vertical axis passing through its centre. Inspection of the image soon reveals the best adjustment.

Important : The whole of the frame MUST be made absolutely light-proof. The better the black-out inside the frame, the better the image.

Whatever size apparatus is used, the screen image should be examined from various parts of the room to decide on the best position to seat the class. Trial and error will very quickly enable the correct placing of students, screen and mirror to be determined.

APPENDIX C

NOTES ON TESTING

Testing is the climax of teaching, and yet not nearly enough time and attention is paid to it. It is the logical end to the sequence of imparting instruction, and may be any device that is used to measure up the performance of trainees.

1. *The Characteristics of a Good Test are that it is :*

Valid. Reliable. Comprehensive. Easy to take. Easy to mark.

2. *General.*

(*a*) All tests should be checked by as many persons who are experts on the subject as is possible.

(*b*) In all tests, especially written ones, a competent instructor should actually take the test, in order to determine :—

(i) The time limit.
(ii) Qualifying standard.

(*c*) Always give the correct answers to all test papers, and give the student his result. This will let the student know :—

(i) His progress.
(ii) Where he went wrong, i.e., teach him.

(*d*) Always, whenever possible, have practical tests, or at least a combination of two, to test knowledge of the subject and the skills involved.

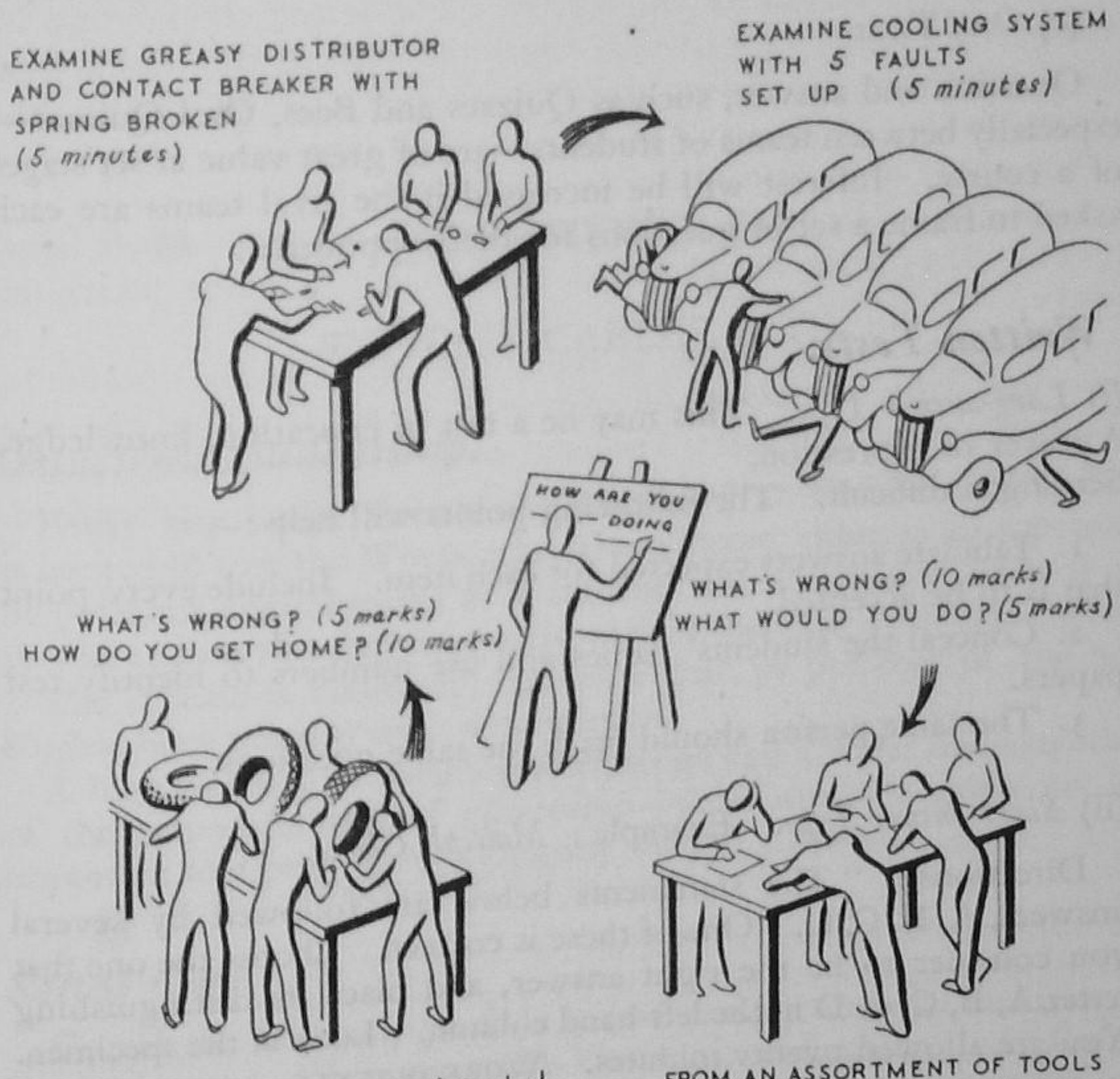


FIG. 7.

3. *Specimen Tests Practical.*

(a) *Performance Tests.* Example :—

In this test the man may be allowed three attempts, and, to pass, two must be carried out correctly within the allotted time limit, or he may be given one chance only, according to the job.

(b) "*County Fair*" *Type* (see Fig. 7).

A series of points at which each individual is given a specific task to perform, and circulates from point to point. About five minutes at each point is a fair average; therefore eight points in a forty-minute period.

(c) *Oral Tests.*

Question and answer, such as Quizzes and Bees, Oral Quizzes—especially between teams of students—are of great value at set stages of a course. Interest will be increased if the rival teams are each asked to frame a set of questions for their opponents.

4. *Written Tests.*

(i) *Long-answer Type.* This may be a test of education, knowledge, and power of expression.

Scoring is difficult. The following points will help :—

1. Tabulate answers expected for each item. Include every point that is to be accepted.
2. Conceal the students' names and use numbers to identify test papers.
3. The same person should mark the same questions.

(ii) *Short-answer Type.* Example : *Multiple Choice.*

Directions : "The statements below are followed by several answers, A, B, C, D. One of these is correct. Choose the one that you consider to be the right answer, and place its distinguishing letter A, B, C, or D in the left-hand column. Look at the specimen. You are allowed twenty minutes. WORK QUICKLY.

Points to Note when Making a Test.

1. Include at least four or five, but not more than six, possible answers to each item. Less than four choices increases the possibility of guessing.
2. Include no answers that are obviously wrong. To have testing and discriminating value, all answers must be worded in such a

manner that the student must know the subject-matter in question in order to select the correct one.

3. Avoid clues to the correct answer. Example of such clues are exact verbal phrases taken from the text and shifts in grammatical construction.

4. Do not make the correct answer consistently longer or consistently shorter than the incorrect answers.

5. Subtract from the total score the guess-work probability—i.e., if a multiple choice of four, subtract a third of the number answered incorrectly.

APPENDIX D

ENFIELD CABLES, LTD.

Industrial Studentship.

Every boy under twenty-one employed at Enfield Cables, Ltd., is invited to join the Works education scheme, either as an apprentice or (without commitment) as a student with instruction both at the Works and on two half days each week at the local Technical College.

The scheme is voluntary, but more than 90 per cent of the boys eligible have grasped their opportunity.

A high standard of technical knowledge and a wider understanding of the responsibilities of citizenship—these are two goals no less important to a progressive Company than to a nation.

Social Club.

Should the Company provide leisure and recreational facilities for its employees? There are many views, for and against. At Enfield they provide certain facilities, but they do not subsidise their use, nor do they take a hand in Social Club organisation. The Club members are encouraged to show their mettle and to run their own show.

They believe that relationships between employer and employee, no less than those between manufacturer and consumer, must be based on mutual confidence.

ENFIELD CABLES, LIMITED

INDUSTRIAL STUDENTSHIP

PRELIMINARY

Age
Studentship is offered to all males between 14 and 20 years. May apply for transfer to Works Apprentice Scheme.

Selection
Carried out by Works Education Officer by means of tests.

Pay
Current rates for job. Flat rate paid when at the College.

EDUCATION

EDUCATION OFFICER
Works very closely with Principal of College and representative of the Works Council, and he is responsible for the working of studentship schemes within the Works.

CURRICULUM

At College
Two half-days each week.

At Works
For the remainder of the week. On not more than one evening per week, a one hour talk or lecture is given in the factory on a wide range of subjects. Attendance is voluntary.

Visits
Periodical visits are arranged to undertakings of interest. The student is expected to write a precis on the visit during his free time.

COUNCILS
Each student selects from staff or workpeople a "Works Uncle".

PARENTS
Closest contact is maintained with parents.

TRADE UNION CO-OPERATION
The scheme is organised with the full co-operation and approval of Trade Unions through Works Councils.

WORKS COUNCILS

The Works Councils are informed at monthly meetings of the progress of the scheme and appoint Panels to assist in the following manner:

- After preliminary interview by Education Officer, student is interviewed by small panel —one from management, one from Factory Floor with Education Officer in Chair. Panels' recommendations are conveyed to the College by the Education Officer.
- After hearing from Technical College, the Panel interviews student again. Appoints "Works Uncle".
- After each term, Panel interviews student and "Works Uncle" to discuss College Report.
- In any one year, there are eight separate panels organised in this way.
- In the case of dispute decision of Works Council is final.

FEES

The College fees are paid by the Company so long as a high standard of endeavour is achieved.

REPORTS

Link between :
(*a*) Technical College.
(*b*) Company.
(*c*) Parents.

BOARD OF STUDIES

All reports are subject to review by an informal Board of Studies comprised of :
(*a*) Principal of College or Deputy.
(*b*) Director responsible on behalf of the Company or Deputy.
(*c*) Two Counsellors.
(*d*) 1 or 2 Senior Students.

This Board meets not less than once per year.

HEALTH

Each student is encouraged to undergo a health examination every six months by Works Medical Officer.

APPENDIX E

THE GLACIER METAL CO., LTD.

TRAINING DEPARTMENT

Training Superintendent : Mr. J. Horne *Training Officers :* Mr. E. C. Goldring, Miss M. Lucas

SPECIALISED TRAINING
SAFETY FIRST
OFFICE MACHINES
(OUTSIDE WORKS)
SPECIFIC JOB
TRAINING

TRAINING WITHIN INDUSTRY (T.W.I.)
JOB INSTRUCTION
JOB RELATIONS
JOB METHODS
FOLLOW-UP

APPRENTICE TRAINING
SELECTION TESTS
PROGRESS AND TRANSFERS
LECTURES
INDUSTRIAL VISITS
TECHNICAL EDUCATION

INTRODUCTORY COURSE
COMPANY HISTORY
AND STRUCTURE
WORKS TOUR
MEDICAL SERVICES
COMPANY REGULATIONS
SAFETY PRECAUTIONS
SOCIAL CLUB
WORKERS REPRESENTATION
TRAINING FACILITIES

VOLUNTARY EVENING CLASSES
MATHEMATICS
ENGLISH
WORKSHOP PRACTICE
OTHER SUBJECTS
AS REQUIRED

CO-OPERATION WITH EDUCATION AUTHORITIES
SCHOOL LEAVERS VISITS
LECTURES TO SCHOOLS
JUVENILE EMPLOYMENT
COMMITTEE

SELECTION TESTS
ENGINEERING APTITUDE
CLERICAL APTITUDE

JUVENILE CLASSES
MATHEMATICS
ENGLISH
CURRENT AFFAIRS
TECHNICAL DRAWING
SPECIAL SPEAKERS

SUPERVISORY TRAINING
POTENTIAL SUPERVISORS
COURSES FOR
PRESENT SUPERVISORS
LECTURES BY
OUTSIDE SPEAKERS
COURSES BY
OUTSIDE COLLEGES

LIBRARY FACILITIES
TECHNICAL
MANAGEMENT LIBRARY
N.I.I.P. LIBRARY

TAKING OF FILMS
FOR GENERAL USE
FOR DEPARTMENTS

FILM SHOWS
TECHNICAL
GENERAL INTEREST
FILMS FOR
JUVENILE CLASSES

ADVISORY SERVICE
TECHNICAL COLLEGES
EVENING CLASSES
PROFESSIONAL
QUALIFICATIONS
SUGGESTIONS

APPENDIX F

DUNLOP DAY CONTINUATION SCHOOL

SCHEMES OF WORK

Prepared by

MRS. I. M. DAVIDSON.[1]

June 1946—*August* 1948.

Aim. The general aim of all the work done in the school will be towards producing a balanced personality. None of the training will be vocational, but directed towards the preparation of the girls for the duties and responsibilities of their adult life. This will be achieved by developing personality and poise, fostering moral qualities, such as integrity, self-reliance and patience, and intellectual qualities, such as imagination, adaptability and habits of industry.

In this way we shall hope to promote the " three great ends of human life and activity ", referred to by the Hadow Committee in their report on Education of the Adolescent, viz. :—

1. " The forming and strengthening of character individual and national.
2. The training of boys and girls to delight in pursuits and rejoice in accomplishments which may become the recreations and the ornaments of hours of leisure in maturer years.
3. The awakening and guiding of the practical intelligence."

ARITHMETIC

Aim. To enable the girls to keep in use the Arithmetic which they have learned at school, and to direct this knowledge towards the arithmetic of citizenship and the home, which will be, for the majority of the girls, their main need.

Arithmetic of Citizenship.

Work and Wages. Hourly rates, weekly rates, piece rates, bonuses : monthly and yearly salaries. Use of ready reckoners and wages tables.

Unemployment Insurance and Pensions. Rates of payment : eligibility.

[1] It must be stressed that these schemes are prepared with the needs of a particular school in mind, and, while they may act as a guide they may be inapplicable in other cases.

Health Insurance. Rates of pay and benefits received. Improvement of benefit under new scheme.

Other Types of Insurance. Life Insurance, Assurance, Endowment and Educational policies. Fire, theft, damage, loss and accident insurance.

Savings. Interest, simple and compound.

Bank Accounts. Working of a Bank, deposit and current accounts, making out a cheque. Borrowing from a bank.

Hire-Purchase. Rates of interest. Laws regarding hire purchase to safeguard the public.

Gas and Electricity. Reading the meter and checking accounts.

Arithmetic of the Home.

Mortgaging a house. Work of a Building Society. Deposit. Repayments—weekly or monthly. Rates of interest. Advantages of buying as opposed to renting.

Decorating a House. Calculating area of surfaces to estimate amount of paint, wall-paper or distemper required. Area of carpet required. Staining floor. Calculating length of stair-carpet. Amount required for curtains, etc.

Buying the Furniture. Amount of "Units" allowed for Utility furniture. Hire purchase or "cash down"? Sizes required and minimum requirements.

Buying the Cutlery, Crockery and Linen. Amount of coupons needed. Number of articles needed for minimum and ordinary requirements.

Feeding the family. Costing of recipes. Apportioning the housekeeping money for food. Most sensible use of points.

Clothing the Family. Use of clothing coupons. Advantages and disadvantages of home-made clothes. Costing home-made clothes.

Apportioning the Family Budget. How much shall we allow for rent, food, clothing, education of children, holidays, luxuries, etc. Balancing typical budgets.

ENGLISH

Aim. To encourage the girls to express their ideas fluently in both written and spoken English and to give them help with this expression by the study of some formal English.

Scheme.

1. Acquisition and expression of ideas.
2. Acquiring a vocabulary.
3. Use of the dictionary.
4. Formal English.
5. Letter writing, commercial and private.

6. Spoken English.
   (i) Correct speech.
   (ii) Pronunciation.
   (iii) Exercises in Speech Training.
   (iv) Impromptu speaking.
   (v) Prepared speaking.
   (vi) Class debates.
   (vii) Discussions.
   (viii) Dramatics.

Subjects for Discussion.

General Themes.

1. Crime and punishment.
2. Social security : how can it be secured ?
3. The woman and the home.

Social and Economic Themes.

1. State control of hospitals and doctors.
2. Abolition of titles.
3. Development of Post-war Britain.
4. Post-war house design.
5. Where has the Church failed ?
6. What form should Youth Organisations take ?

Educational.

1. Boarding or day-schools ?
2. Should all schools be state-controlled ?
3. Are examinations necessary ?
4. Should English spelling be reformed ?
5. Advantages of raising the school leaving age.
6. Advantages of continuation schools.

Political.

1. What is democracy ?
2. Is dictatorship an evil ?
3. How can we reform the electoral system ?
4. Can war be stopped ?

Personal.

1. Does the cinema have a good or bad effect on our lives ?
2. How should we dress ?
3. Parents, ideal or otherwise ?
4. Pocket money.
5. Make-up.
6. Boy-friends.

Dramatics.

Production of one-act plays, entertainments for Open Days, Christmas, etc.

MOTHERCRAFT

1. *Healthy Pregnancy.*

What to do and what not to do when expecting a baby. Sensible behaviour.

2. *Responsibility of Motherhood.*

The need for producing a happy, healthy child. Discipline and training.

3. *Preparation for Baby.*

Making a layette. Patterns for baby's night-gown, day-gown, bib, bootees and matinee jacket. Suitable materials and appropriate decorations.

4. *How to Furnish a Nursery.*

Aim at cleanliness, lightness and durability. Painted furniture, washable curtains, distempered walls, etc. Colour schemes.

5. *The Baby's Cot.*

Types of cot. Karrikot, Treasure Cot, drop-sided cot, cradle, etc. Advantages and disadvantages of each. Improvising a cot, orange-box, drawer, etc. The danger of sleeping with the baby.

6. *The Baby's Pram.*

Types of pram. High, low, adaptable, folding, etc. Which kind is best. Furnishing the pram. Necessity of canopy during summer.

7. *Where shall we have the Baby ?*

Nursing home or hospital.—Municipal home or at home. Which is best and why ?

8. *Routine for Baby.*

From birth to four months, four months to weaning and weaning onwards.

9. *Necessity for Fresh Air and Sunlight.*

Advantages of sunlight. Necessity of sunshine for vitality. Best position for pram. Sun-bathing.

10. *Preparation for Baby's Bath.*

Type of bath. Temperature of water. Method of procedure.

11. *Care of Baby's Bottle.*

Necessity for cleanliness. Sterilising and how to do it. Which type of bottle is best.

12. *Baby's Food.*

Advantages of breast feeding. Artificial feeding. How to prepare the bottle. Correct way to give bottle.

13. *Weaning.*

Preparations for weaning. Types of food to introduce. Necessity of these foods for avoiding anaemia and encouraging healthy growth.

14. *Baby's Clothes.*

Types of clothing. Most suitable materials. Washing hints.

15. *Toddler's Clothing.*

Clothes from one to two years old. Clothes from two to five years old.

16. *Food for Toddlers.*

From twelve months to five years. Specimen menus.

17. *Sleep.*

Amount of sleep needed at various ages.

18. *Play.*

Necessity for play. Toys for various ages.

Activities.

1. The making of a layette and furnishing a cot for a baby.
2. Visits to a Maternity and Child Welfare Centre and to a City Day Nursery and Nursery School.

HISTORY

Aim.

1. To correlate the history which has already been learnt in school by a quick review of history from earliest times.
2. By studying the development of various things, e.g., transport, clothing, to encourage the girls to do individual enquiry.

Scheme.

1. *Prehistoric History.*
    1. Evolution.
    2. The First Man.
    3. The Stone Age.
    4. The Bronze Age.
    5. The Iron Age.
2. *Civilisation.*
    1. Ur and Sumaria.
    2. Babylon.
    3. Egypt.
    4. Assyrians, Chaldeans and Persians.
    5. Cretans.
    6. Greece.
    7. Rome.
3. *English History to the Present Day.*

Topics.

Development of transport. History of costume. History of furniture. History of houses. How the ship evolved. History of entertainment, etc.

GEOGRAPHY

Aim. To endeavour to make the girls conscious of the dependance of Man on the earth for all his needs and the interdependence of Man in supplying these needs.

Scheme.

1. The needs of man—food, clothing, shelter, fuel, tools and luxuries.
2. The way in which these are obtained—barter, trade and commerce.
3. The harvest of the sea.
4. The products of the forests.
5. Rearing animals and dairying.
6. Grain-growing.
7. Fruit-growing.
8. Sugar and spices.
9. Beverages : tea, coffee, cocoa.
10. Minerals.
11. Power, light and heat.
12. Industries.
13. Clothing.
14. Transport.

Social Geography.

Study of different types of Man, showing stages of development.

1. Primitive people at Stone Age level of development. Maoris and Aborigines.
2. Hunting and fishing communities. South Sea Islanders, etc.
3. Nomadic tribes : Arabs, Kurglis, etc.
4. Cultivators of the land : Egyptians and Chinese.
5. Mining and manufacturing countries : England and America.
6. Traders and Carriers : Dutch and English.

Activities.

1. Collection of pictures, photographs, etc., to illustrate note-books.
2. Films loaned by Education Committee dealing with most of these topics.
3. Encourage the girls to have " pen-friends " in other parts of the world.

GENERAL SUBJECTS

Aim. To cultivate " a lively interest in everyday things, giving to the mind the breadth and the fresh vitality of new interests ".— *Hadow Report.*

1. *House Planning.*

Sites of houses : well-planned housing scheme and community. Access to workshops, friends, school, doctor, library, entertainments. Good transport. Plan of house, flat or bungalow. Number of rooms, etc. Parlour and non-parlour type.

2. *Home Furnishing and Fittings.*

Bedrooms. Type of furniture. What shall we buy and what can we make? Bedspreads, cushions, curtains, etc. Heating and lighting.

3. *Stair-case, Landing and Hall.*

How shall we furnish these?

4. *Dining-room and Living-room.*

Ideal size, method of heating. Advantage of gas, coal and electric fires and central heating. Types of furniture—period modern or " functional ". Colour schemes : to suit aspect of room—good wearing colours. Pictures, etc.

5. *Bathroom.*

Fittings : ease of cleaning. Colour scheme.

6. *Kitchen.*

The workroom of the house. Fittings—well-planned arrangement to save unnecessary walking. Labour-saving devices. Lighting. Cooking and heating apparatus.

Garden, Garage and Outhouses.

Notebooks to be compiled with as many illustrations and plans of communities, houses and rooms and pictures of furniture and equipment as possible.

7. *House Management.*

How to run a house. Cleaning. How to turn out a room. Cleaning materials. Routine time-tables. Good shopping. How to cater well. Home laundry. Care of furniture, etc.

8. *Home Nursing.*

Care of an invalid. Bed-making. Sick-room routine. Invalid cookery and recipes. Recognition of simple diseases. First aid for burns and minor injuries.

9. *Citizenship.*

Visits to Council Meeting, Police Court, Child Welfare Centre, Day Nursery and Nursery School.

10. *Cultural Training*

Visits to Repertory Theatre, City of Birmingham Orchestra concerts and Ballets. Visit to Stratford Memorial Theatre. Visits to Exhibitions, Museums, Art Gallery and Domestic History Exhibition.

Comments.

The Dunlop Day Continuation School began in May 1946, and is held in the Crush Hall of the Dunlop Hall. Here an average of ninety girls attend weekly, approximately thirty girls attending on each of the school days. They have a whole day at school from 9 a.m. until 5 p.m., with one-and-a-half hours for lunch.

The school is well-situated, opening on to a veranda overlooking the playing-fields, enabling us to work out of doors whenever the weather permits. We have the use of a well-equipped stage for dramatics, and of the hall, which has an excellent floor for physical training and dancing. There are also shower-baths, with ample hot water for the use of the girls after a physical training or games lesson. In the summer we have the use of the playing-fields for games.

The appended syllabus has now been in use for nine months and has, so far, worked satisfactorily. But the girls attending the school are mainly from Secondary Modern Schools, where projects and individual research have been an integral part of their work, and this probably accounts for the ease with which they have settled down to these schemes.

With general subjects I find that the interest of the girls will be keenly centred around one subject or one aspect of a subject for several weeks. Then I devote as much of my time as possible to that subject. By doing this I find I can make much greater use of their enthusiasm and interest.

In most subjects the girls are encouraged to keep individual notebooks and to bring whatever illustrations and newspaper-cuttings they may obtain which have any bearing upon their work. This encourages a lively interest, and also helps to dispel the feeling that school work is divorced from everyday life. Each class has thirty minutes at the end of the morning which is allotted to "individual work", and which is intended to train the girls to work diligently when not under supervision. It is during this time that these notebooks take shape.

As you will see, the syllabus falls into four parts, all devoted to Citizenship.

1. ***The Citizen as a Member of the Larger Community—the World, with its two aspects.***

1. The interdependence of Man for food, clothing, etc.—i.e., economic geography and

2. The development of the individual and the community-social geography with its study of different peoples and how they live.

2. ***The Citizen in Relation to the Past.***

History. How things have developed and may develop.

3. ***The Citizen in Relation to the Present.***

Current Events. How do they affect us?
Discussion Groups.

4. ***The Citizen as a Member of the State.***

With a knowledge of Local Government.
Development of Party Government.
Mothercraft. Home-making.
Physical training, health and hygiene.

APPENDIX G

Details of the well-known Newton Chambers' Pre-Entry Course are given below :—

NEWTON CHAMBERS' WORKS COLLEGE

Pre-Entry Programme (1946)

First Week—"Company Week"

Day.	*Subject.*	*Programme.*
Monday	Welcome	Registration, Testing, Group Photograph. Managing Director's Welcome. " Lie of the Land." " Our Canteens." DINNER (Free). " Team Work." Team Selection. Issue of Team Tools, Stores and Colours. " On the Tick." Visit Time Recorders and Time Office. DISMISS.
Tuesday	Tidiness	Inspection. Physical Work. " Why be Tidy." " Tidiness Pays." Physical Training. Shower. DINNER (Free). " Tools and Tidiness." Exercise—Team Work. " Coming to Work." Exercise—Proper Method of Cleaning Tools. DISMISS.
Wednesday	The Company	Inspection. Physical Work. " Our Company." Exercise—Recognition of Thorncliffe Places. " Helping our Visitors." Visit Film Studio, General Canteen, Works College. DINNER (Free). N.C.'s Works Rules. Visit Headquarters Office, Ironworks Offices, Printing Dept., and Central Kitchen. " Who's Who." DISMISS.
Thursday	Welfare	Inspection. Barrowing and Shovelling. " Our Welfare Organisation." Tug-of-War. " Trusty, Loyal and Helpful." Physical Training. Shower.

Day.	*Subject.*	*Programme.*
Thursday	Welfare	DINNER (Free). " Time and Tide." Visit other Training Centres. " Our Murals." " How to Get On." Clean Tools. DISMISS.
Friday	Observation, Saving and Memory	Inspection. Collect Timber for Splitting. " Seeing and Working." Smelling Test. Physical Training. Shower. DINNER (Free). " Bonuses for Nights at Night School." Memory Test. Exercise—Observation Test. " How much have You Remembered ?" Clean Tools. DISMISS.
Saturday	First-Aid	Inspection and Physical Training. " Health and Strength." Visit Central First-Aid Station. " Why First-Aid." " Corny Feet." Foot Exercises. DISMISS.

Second Week—" Collieries and Chemical Works"

Day.	*Subject.*	*Programme.*
Monday	Coal	Inspection. Shovelling and Riddling. " Our Coal." " Our Pits." Physical Training. Showers. DINNER (6*d.*). " Coal and Ironstone." Visit Thorncliffe Drift. Visit Coal Sampling Laboratories. Test—Observation. Exercise—Knotting and Lashing. DISMISS.
Tuesday	Rocks and Stones	Inspection. Stone Wall Building. " Rocks and Stones at Thorncliffe." Stone Recognition. Physical Training. Shower. DINNER (6*d.*). " Our Rockingham Colliery." Visit Rockingham Colliery. DISMISS.

Day.	*Subject.*	*Programme.*
Wednesday	Bad Risks	Inspection. Stone Wall Building. " Stand from under Crane." Exercise—Level Crossing and Yard Dangers. Physical Training. Shower. DINNER (6*d.*). " Calamity Bill on Yard Dangers." " The Fly has 8,000 Eyes." Visit to Surface Plant for Dangers. " Axes and Axemanship." Logging. DISMISS.
Thursday	Chemical Works	Inspection. Case or Drum Stacking. " Smell and Taste." " Our Chemical Works." Physical Training. Shower. DINNER (6*d.*). " Around the World with Izal." Visit Chemical and Norfolk Works. Exercise—Recognition of our Chemical Products. Clean Tools. DISMISS.
Friday	First-Aid	Inspection. General Clean-up of School. " Stretchers." " Fractures." " Squander Bug." Spelling Bee. Shower. DINNER (6*d.*). " Bleeding and Broken Bones." Visit to Izal Factory. Fire Rescues. Exercise—Fireman's Lift and Smoke Rescues. DISMISS.
Saturday	Tests	Inspection. Physical Training. Observation Test. Tests and How to do Things. " Looking Back over Two Weeks." Test—Memory. DISMISS.

Third Week—" Ironworks and Engineering"

Day.	*Subject.*	*Programme.*
Monday	Ironworks	Inspection. Scrap Collection. " Engineers' Tools—Hammers, Chisels." Filing and Chipping. " Our Ironworks." Physical Training.

Day.	*Subject.*	*Programme.*
Monday	Ironworks	Shower. DINNER (6*d.*). Talk—" Iron and Steel." Visit—Ironworks, Foundry, Pattern Shop and Stove Shop. Memory Test—Engineering Details. Filing and Chipping. DISMISS.
Tuesday	Steam	Inspection. Barrowing and Shovelling. Visit Boilers. Laboratory Demonstration—" Getting up Steam." Physical Training. Shower. DINNER (6*d.*). " Lubrication." Visit—Boiler Shop and Tackle Store. Film—" Filing ", " Use of Chisel and Hacksaw ". Filing, Sawing and Chiselling. DISMISS.
Wednesday	Tools and Products	Inspection. Knotting and Lifting. Correct Weight Lifting—Hand and Lifting Appliances. " Our Ironworks' Products." Physical Training. Shower. DINNER (6*d.*). " Blueprints and Thumbprints." Visit—Machine and Fitting Shops, Welding, Lithcote. Talk or Film—" Accurate Measurement." Memory Test. DISMISS.
Thursday	Maintenance	Inspection. Work. " Care and Maintenance of Tools." Memory Test. " Our Maintenance Service." Physical Training. Shower. DINNER (6*d.*). " Any Old Iron." Visit—Maintenance Department, Furnace Hill. Filing and Chipping. DISMISS.
Friday	Betting and Cussing	Inspection. General Clean-Up. " The Bookmaker Always Wins " and " Cussing is Wussening ". " Our Coke-ovens." Physical Training. Shower. DINNER (6*d.*). Memory Test. Visit our Coke-ovens. DISMISS.

Day.	*Subject.*	*Programme.*
Saturday	Splints	Inspection. Physical Training. Talk—" Fractures." Work—Splints. Memory Test—Review of Work Remembered. Week's Team Marks. DISMISS.

Fourth Week—General Services.

Day.	*Subject.*	*Programme.*
Monday	Works Protection	Inspection. Collect Wood for Bonfire. " Our Works Protection Organisation." Film. Physical Training. Shower. DINNER (6*d.*). " Bumping off Extinguishers." Visit—Central Control, Central Fire Station, High Pressure Pump, etc. Demonstration—Fire-fighting. Exercise—Fireman's Lift. Team Exercises—Evaporation. DISMISS.
Tuesday	Electrical Power	Inspection. Work—Insulating Tape, etc. " Electric Shock, Rescues and Restoration." Memory Test. Physical Training. Shower. DINNER (6*d.*). " Light and Darkness." Visit—Electrical Dept. Power-station, and Iron-works Sub-station. Memory Test. Cleaning Electric Shades, etc. DISMISS.
Wednesday	Transport and Telephones	Inspection. Barrowing and Shovelling. " Telephoning and Messages." Exercise—Telephoning to other Centres. Physical Training. Shower. DINNER (6*d.*). " Our Transport Services." " Engineers of Enterprise." " Estimation of Speeds." Memory Test. Shovelling from Railway Truck. DISMISS.
Thursday	Materials and Stores	Inspection. Work—Wood Stacking and Logging. " Simple Machine Tools, Drill and Lathe." Demonstration of Drill and Lathe.

Day.	*Subject.*	*Programme.*
Thursday	Materials and Stores	" Raw Deals for Materials." Physical Training. Shower. DINNER (6*d.*). " The Timber we Use." Visit to Stores and Stockyards. Memory Test—Recognition of Timber. DISMISS.
Friday	Accidents and The Factory Inspector	Inspection. General Clean-up. " Our Accident Prevention Organisation." " Inspecting the Factory Inspector." Physical Training. Shower. DINNER (6*d.*). Group Photograph. Tug-of-War—Final Pulls. Visit points where Accident Prevention is used. Revision of Work. DISMISS.
Saturday	Examination	Inspection. Physical Training. Team Stores, etc. Oral Examination. Team Marks, Examination Marks and Final Talk by Managing Director. DISMISS.

INTRODUCTION TO FOREMANSHIP

Edited by

H. McFARLAND DAVIS, F.I.I.A., F.C.W.A., A.C.A.

For the Institute of Industrial Administration

$8\frac{3}{4}'' \times 5\frac{5}{8}''$ 200 pp. Price 8s. 6d. (Post Free 8s. 10d.)

High production is not brought about by mere undirected push and drive. It depends on intelligent forethought and planning, translated into action through the medium of the foremen whose duty it is to see that production programmes are put into execution. This will not be effected by their craftsmanship and mechanical skill alone, but also by the exercise of competent managerial ability, and by an understanding of all the factors at work—including planning, progressing, organisation, labour management, and cost control. Understanding and effective use of these factors do not come by goodwill and hope, but rather by well-directed instruction on the basis of a suitable syllabus. With this object in view competent and experienced members of the Institute of Industrial Administration designed this volume to fill the need for a text book on the subject of foremanship.

Machinery says: "It may be forecast that this book, which is clearly written and adequately illustrated, will prove of great value to foremen and foremen students in view of its lucid and informative marshalling of the factors essential to successful foremanship."

The Psychologist says: "A book that should be read by all who hope to become foremen, forewomen or supervisors."

The Electrical Review says: "Foremen should derive a great deal of valuable assistance from this book."

Industrial Welfare and Personnel Management says: "This book should prove invaluable not only to the individual foreman, but more particularly to the management responsible for their training.