

Reform of Vocational Training in Switzerland

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The multiplicity of trades today and the continual appearance of new industries based on technical innovations mean that the skilled manual worker in modern industry must, if he is to advance in his career, be capable of transferring easily from his basic occupation to an allied one or mastering quickly the skills demanded of him by new industrial techniques. Traditional forms of apprenticeship are no longer entirely suitable for this ; what is required is a broader-based type of apprenticeship combining the strictly practical training of the workshop with the fundamental theoretical education of the technical trade school. It is for these reasons, among others, that Swiss federal legislation on vocational training is in the process of being revised.

In the following pages Mr. Erwin Jeangros analyses the above-mentioned situation and summarises the main conclusions of the Committee of Experts, set up to prepare proposals for this new legislation.

VOCATIONAL TRAINING—A VITAL MATTER FOR SWITZERLAND

SWITZERLAND is a small country in the Alpine centre of Europe. Half its surface consists of mountains, protective forests, rivers and lakes ; only half remains for use as productive land. Nowadays not more than one-fifth of the population works in agriculture, and the output of this branch of the Swiss economy is just sufficient to keep the 5 million inhabitants for a quarter of the year ; in other words only one person in four could live on home production alone. Consequently for most of the population (or, if you prefer, for the major part of the year) industry, handicrafts, trade and services must provide a livelihood. Yet Switzerland has no raw materials of its own, unless this term may be taken to include water-power for electricity. Coal, iron, oil and many

other commodities have to be imported. To give one typical illustration, a foreign-made steel bar must be processed here with such thorough skill that the value added is sufficient, not only to pay for all costs but also to bridge the wide gap between what the territory can produce and what the people need. Switzerland is therefore a country of international trade—of import and export : it has the highest exports per head of any country in the world, and at the same time it is more dependent on exports than any other country. So, inevitably, the Swiss economy is distinguished by the quality of its work ; and quality work can only be done by well trained and highly skilled manpower. Nearly 70 per cent. of the lads and about 50 per cent. of the girls entering the world of work after their nine years of compulsory education at the age of 15 become apprentices in a manual or commercial trade. Vocational training is of vital importance in Swiss economic life.

VOCATIONAL TRAINING UNDER THE ACT OF 1930

In Switzerland, as elsewhere, the rigid class and guild system collapsed under the influence of the French Revolution, and a democratic society in which the citizens could freely engage in agriculture, industry, handicrafts and commerce took its place. Out of the traditional and exclusive attachment of the apprentice to his master, there grew up in the nineteenth century the dual form of apprenticeship which still prevails—a combination of practical training in the private establishment and theoretical training in trade schools subsidised by local authorities, cantons and Confederation. This system extends to commerce as well as to the manual crafts. Today training in the establishment takes up, according to the trade, from four-fifths to five-sixths of the trainee's total time ; supplementary class work accounts for the remainder. More than nine-tenths of all skilled workers are trained in private undertakings in this way ; less than one-tenth go through a complete course of training in one of the public full-time vocational schools (manual or commercial) set up during the nineteenth and twentieth centuries, in most cases by urban authorities. Around 1900 the majority of the cantons issued their " Apprenticeship Acts ", containing provisions on apprentice trades, periods of apprenticeship, training programmes, articles of apprenticeship, compulsory supplementary attendance at trade schools, compulsory trade tests for apprentices, official supervision and the provision of public financial assistance. The Confederation first subsidised vocational schools and trade tests in the cantons under a federal order of 1884 " to Promote Vocational Training in Industry and Handicrafts ".

The similarity of the occupational standards set by the various cantons and the increasing mobility of tradesmen all over the country, together with progressive economic development, led the way towards comprehensive national regulation in a Federal Vocational Training Act. Here again a typical Swiss trend may be observed: successful action by local authorities is imitated at the cantonal level, and successful action by the cantons leads in the end to approval and regulation at the centre. So it was that a new Article 34 *ter* of the Federal Constitution, adopted in 1908, empowered the Confederation to issue "uniform provisions on industrial matters". The intention above all was to help the handicrafts in adjusting themselves to the changed economic and social conditions of the early twentieth century, and to hold their ground better in the struggle for existence. The first Federal Vocational Training Act was issued in 1930¹ as a part of this national industrial legislation; it brought together the experience of the cantons with their Apprenticeship Acts and framed a comprehensive scheme for the whole of Switzerland.

This Act of 1930 owes much to the various conceptions which had inspired and shaped vocational training during its long history. The medieval guild idea survives in the far-reaching right of the occupational associations to be consulted on the elaboration and application of vocational training schemes; the state economic controls of the "mercantile" seventeenth and eighteenth centuries have their counterpart in the government supervision for which the Act provides; and the spirit of nineteenth-century liberalism is reflected in the extensive scope for private initiative and responsibility on the part of undertakings and members of the trades concerned, which actually operate vocational training. Yet the Act avoids any of the old restrictive trade practices; it leaves no room for direction by a bureaucracy; and it sets up a socially valuable structure, limiting arbitrary action by individuals. Since the issue of the federal Act, vocational training in Switzerland has expanded in a very satisfactory manner.

THE NEED FOR REFORM

The figure towards which the Federal Act of 1930 was mainly directed is that of the craftsman, trained through practical apprenticeship but also by attendance at the trade school, where he acquires a knowledge of materials and methods, of the business side of his occupation (special mathematics, book-keeping, correspondence) and of economics and politics as a basis for his life in

¹ Cf. *I.L.O. Legislative Series*, 1930 (Switz. 5).

the community. This training was designed to enable the skilled craftsman to be a competent member of an appropriate undertaking, to work his way up to leading hand or foreman, even to be an independent master with a workshop of his own; and also to play his part as a good citizen.

Between the First World War and the end of the Second the economic and social structure of Switzerland changed considerably, losing its traditional peasant and handicraft character and taking on the forms of industrial production and an industrial way of life. Statistics of the gainfully occupied population show, between 1880 and 1950, a decrease from 42 to 17 per cent. in agriculture, an increase from 42 to 47 per cent. in industry and handicrafts (with the former now outnumbering the latter) and an increase from 16 to 36 per cent. in tertiary occupations (commerce, communications, administration, the professions, education). In 1888 the self-employed (including members of the family helping in the business) still amounted to 44 per cent. of all gainfully occupied persons, the remaining 56 per cent. being wage and salary earners ("employees"). By 1941 the percentage of self-employed had fallen to 28, while that of employees had risen to 72. In 1910 for every ten self-employed there were 24 employees; in 1941 there were 33 and now there are still more.

Technical innovation, rationalisation, mechanisation, and now even automation, are playing a more and more decisive part in all branches of the economy and in all walks of life. The handicraftsman (journeyman or master) has been displaced by the industrial tradesman—the skilled worker who has learned a basic trade by practical apprenticeship, understands his job, can adjust himself to new industrial processes, and fits into the organisation of an industrial undertaking and the pattern of an industrial society. The traditional craftsmen—the shoemaker, the tailor, the hand bookbinder, the locksmith—are tending to disappear, while the new technical tradesmen—the mechanics, the skilled metal workers, the various kinds of fitters and the electricians—are on the increase. There is also a growing demand for non-manual technical employees, the men who plan and specify—draughtsmen of all kinds, technicians, engineers (whereas formerly there was only one technician for every 100 to 200 manual workers according to the trade and establishment, the ratio is now one for every 20 to 100); and the same applies to commercial and administrative employees in industry, business, communications and government. Statistics of employed persons show that between 1900 and 1950 the proportion of manual workers in Switzerland fell from 86 to 70 per cent. and the proportion of technical, commercial and administrative employees rose from 14 to 30 per cent.

Again, the nameless factory worker typical of the nineteenth century, briefly introduced to some simple operation, easily transferred or replaced, is becoming more and more rare. Instead we see a new type of industrial worker with a specialised job, a man who needs—in his own narrow field—more skill and knowledge, technical understanding, a high degree of concentration, reliability and responsibility in dealing with expensive and complicated machines and apparatus. The Vocational Training Act of 1930 does not provide at all for the special education of such workers, who have had no real apprenticeship and indeed little or no training of any kind. Yet this occupational group poses a special problem—social and political as well as vocational—today.

Experience, particularly during the present century, has clearly shown that in the long run technical and industrial development creates a demand for more manpower than it releases, and that the need for well trained workers steadily mounts. Switzerland, so dependent on the export trade, was faced with an additional problem by the emergence of the developing countries in Asia, Africa and South America. Thanks to their own raw materials and their lower labour costs, these countries now place cheaper industrial goods on world markets; Switzerland can only compete by specialising and by providing better-quality goods—tasks which require up-to-date and progressively improved vocational training as a path towards higher and better output.

The aims of Swiss policy in this field must therefore be to widen vocational training so as to include every possible talent and thus to ensure a sufficient output of qualified manpower for the country's economic development. For these high objectives, dictated by both social and general political reasons, the Federal Act of 1930, intended mainly for the traditional apprentice crafts, is no longer adequate and needs bringing up to date.

Accordingly in 1957 the Federal Department of National Economy decided on a reform of the Vocational Training Act. On its instructions the Federal Office of Industry, Arts and Crafts and Labour invited the cantons and occupational organisations to report on their experience and probable needs and to send in proposals for amendment of the Act. The Department also appointed a large non-parliamentary Committee of Experts, including some 40 representatives of the cantons, employers' and workers' organisations, and the world of science. Under the skilled and spirited leadership of Professor M. Holzer, Director of the Federal Office of Industry, Arts and Crafts and Labour, and Mr. H. Dellsperger, chief of that Office's vocational training section, subcommittees were established to determine basic requirements in various fields—vocational guidance, apprenticeship, vocational

schools, further education for employed persons, higher trade tests, study grants, etc. The subcommittees began their work in the summer of 1958 and concluded it in the early part of 1959, so that the drafting committee will be able to place proposals for an amending Bill in the hands of the full Committee of Experts before the end of 1959. The proposals will be transmitted to the cantons and occupational organisations and redrafted after this consultation. The Bill must then be introduced for discussion in the National Assembly, which will finally decide on the new Act unless application is made for a referendum.

We will now examine the principles worked out by the Committee of Experts for reform of the Federal Act.

THE MAIN FEATURES OF THE PROPOSED REFORM

An Act Establishing Principles, Providing a Framework and Leaving Scope for Development

The Constitution (in article 34^{ter}, paragraph (g)—text of 1947) empowers the Confederation to legislate "on vocational training in industry, handicrafts, commerce, agriculture and domestic service". Agriculture can be left out of account as regards reform of the Vocational Training Act, since training in this domain has been sufficiently regulated in the comprehensive Agriculture Act of 3 October 1951. The same applies to artistic, scientific, education and health occupations, for which there are special statutory provisions.

The formula "vocational training in industry, handicrafts, commerce and domestic service" provides a very wide framework for the training in economic activities which the Act is intended to promote. However, it proved impossible to find a more precise long-term definition for the scope of the proposed Act, for occupations, vocational training and the various economic sectors are living realities which are constantly changing; it became evident, as the discussions proceeded, that the general constitutional definition would have to suffice but that the Confederation should be empowered to define the appropriate occupations and industries more precisely in administrative regulations.

In so deciding the Committee of Experts also committed itself to preparing the new Bill as "framework legislation", which would leave sufficient scope for development and allow vocational training to be adjusted as necessary to the changing conditions of economic and national life. The amended Act is therefore to contain nothing but principles or directives; it will not be loaded down

with provisions of detail. The federal authorities will have the power—as is already the case, in many instances, under the present Act—to issue regulations in fields where national action is required ; these could be easily amended and would, for instance, prescribe programmes for the various types of vocational schools or standards for training and testing in the various occupations.

Though the principles it lays down will apply to the whole of Switzerland, this framework legislation will—like the present Act—respect the constitutional division of powers between Confederation and cantons. Education and training, from the kindergarten to the university, figure in Switzerland among the essential functions of the canton. Consequently there is no national Ministry of Education and—apart from the Federal Technical High School at Zürich and the military schools—the Confederation has no educational or training institutions of its own ; it merely contributes to the free, compulsory public education which the cantons are required to provide under the Federal Constitution. The present Act also requires the cantons to build up vocational education in accordance with national principles, to set up the necessary agencies (vocational training offices, apprenticeship offices, and apprenticeship or vocational training boards) and to provide the various services (vocational guidance, trade schools, apprentices' trade tests, etc.) for which federal contributions are paid. The Confederation merely regulates those matters (specification of apprentice trades, duration and programmes of apprenticeship or training, legal aspects of articles of apprenticeship, standard programmes for trade schools, programmes of examination, etc.) which require provisions of national scope. Apart from this it will continue, in agreement with the cantons, to make such practical arrangements as can be better introduced at the national level because of differences between conditions in the various cantons (training of vocational guidance counsellors, vocational instructors and examination experts, etc.). The result is a broad, adjustable co-operation and division of labour between the Confederation and the cantons, the former being responsible for principles and framework, the latter for detailed administration and enforcement of the Act. In this spirit the Committee of Experts declared itself unanimously in favour of the political and juridical policy which has been described as "unification without centralisation"—i.e. it wished to co-ordinate the work of all the groups and agencies concerned with vocational training, but not to establish a single set of institutions.

The principle, which is again affirmed, that the cantons and the employers' and workers' organisations must be consulted on any important federal decision gives further force to the above

maxim. The right of the organisations to be consulted applies also to cantonal action under the federal Act.

For similar reasons, and in accordance with previous practice, the Committee of Experts unanimously considered that as a rule vocational training should be provided by industry, and by the associations, undertakings and persons directly concerned. The functions of the Confederation and the cantons are to issue framework legislation, to co-ordinate all services and to provide support by public initiative and contribution.

In the new legislation the concept of training is not to be restricted essentially to traditional apprenticeship, but is to be broadly defined, leaving scope for development. The existing Act deals mainly with traditional apprenticeship, supplementary trade schools, apprentices' final tests, and higher trade tests. However, in the chapter on federal contributions it exceeds the limits of this narrow concept: such activities as vocational guidance, full-time vocational schools for manual crafts or commerce, further training, higher technical schools, training of teachers, courses for examination experts, the provision of training material, grants of various kinds, etc., are recognised as proper matters for contribution and thus brought within the definition of vocational training and within the scope of the Act. All the above fields, which belong to vocational training in the wide sense of the term, are to be specified in separate divisions of the new Act.

Lastly, it should be pointed out here that the Act will apply equally to both sexes and that all trades will be open to female apprentices.

Vocational Guidance

Vocational guidance, mentioned in the existing Act only among the activities for which federal contributions may be paid, has developed since the First World War to a necessary element in the choice of an occupation, in the placing of young workers as trainees or apprentices, and in the provision of grants. Various circumstances have played their part in this process. Whereas previously it was possible for the individual concerned to review the occupations open to him, the range of employment has become so complicated (Swiss industrial statistics now show over 6,000 trades) that the parents—still less the school-leaver himself—cannot grasp them all. Choice of an occupation and engagement in it no longer depend on the individual's family or social class; with the gradual elimination of class barriers and prejudices, and particularly since the sweeping social changes of the present century and the spread of all kinds of communication, free choice of a job or occupation has become established. Given the more

exacting demands of a technical economy, choice of an occupation also takes on more public importance as one means of ensuring a manpower supply of sufficiently high quality. Mistaken choices, fruitless investment of energy, time and money or disappointed expectations of a successful career and a happy life have harmful repercussions not only on the individual but on society as a whole. In addition, whereas an occupation used once to be chosen for a lifetime, it is now a common practice to change from one related trade to another. The task of vocational guidance hence consists less and less in providing help once and for all when the young worker is looking for a permanent occupation ; more and more it will include advice on the first occupation, follow-ups during the subsequent career, and further advice when a change is contemplated. Industrial life has become dynamic ; vocational guidance must follow suit.

In accordance with present practice vocational guidance is to feature as a specific cantonal function in the new Act, which will simply refer to its dual role of providing general information on the state of the employment market and of furnishing individual advice. In this way free rein will be given to the cantons to develop their own methods (exploring tastes and aptitudes, guidance at the school, information for parents, courses in vocational selection, pre-apprenticeship classes, training of counsellors, etc.).

Furthermore, the principles of free voluntary vocational guidance and free choice of an occupation on the individual's own responsibility are to be expressly stated in the Act, and all official direction of workers into particular trades is to be excluded. No government office will be able to deprive an applicant of the right to make its own decision and bear his own responsibility, for in the final analysis it is only after experience in the occupation that the rightness of any particular choice can be reliably assessed.

Apprenticeship—the Basic Form of Training

In Switzerland, as in Germany and Austria, the medieval guild system of apprenticeship to a master has survived the introduction of freedom of commerce and freedom to choose a trade. The system was merely broadened in the nineteenth century by also requiring part-time attendance at a special craft or commercial school. Full-time trade schools providing a complete apprenticeship were established in only a few trades and areas. An industrial apprentice attached to a master craftsman and attending a supplementary trade school costs the public between 300 and 800 francs a year, according to the occupation ; whereas training

at a full-time school is about five times as expensive, even without the cost of the school buildings and equipment.

The Committee of Experts was unanimously in favour of practical apprenticeship as the basic form of preparation for a trade because to train sufficiently large numbers in full-time schools is neither materially nor financially feasible, but also because practical apprenticeship brings the trainee closer to occupational and social life than school training can ever do. On the other hand, the full-time trade school provides a much more systematic and methodical training than the workshop, because at school the trainee and his training are the main objective, whereas in a workshop they come second to production. While it must be admitted that these two main forms of training are of equal value, both need to be better organised. In particular, the Committee of Experts recognised the need to base improvement and expansion on the traditional system of practical apprenticeship.

Means of achieving this include courses in vocational training methods for master craftsmen, and the elaboration of training courses for various occupations as aids to methodical training in the establishment ; in addition, apprentices in full-time attendance at vocational schools should be attached to private undertakings during part of their training period (as has been done for years by the commercial schools or training workshops for craft apprentices) ; and it should now be possible to make such arrangements reciprocal by also taking apprentices from private undertakings into full-time schools for short periods.

This will be a step towards combining practical apprenticeship and full-time school apprenticeship in order to produce a third type of industrial training which may well retain the advantages of both the others and avoid their drawbacks. Industry has already taken the initiative here ; some big undertakings, particularly in the metal trades, have long since set up their own training workshops, which provide apprentices with a basic preparatory course ; they are then transferred to the various departments of the factory for further training. Analogous arrangements should be made in the future for combining in-plant basic apprenticeship with attendance at schools serving a group of undertakings ; but only to the extent justified by the particular needs of each occupation. In Switzerland several firms have already efficiently trained their own bricklayers, painters and plasterers in this way ; during each year of training the young workers take a four to eight week basic course at a trade school. The undertaking pays most of the cost and by doing so discharges part of its obligation to provide training.

The breakdown of the traditional crafts into thousands of narrower occupations might give the erroneous impression that there are now only specialists to be trained. But needs and experience have shown that, both because of technical development and because workers tend to change their occupation (even in Switzerland up to 50 per cent. of skilled workers do this in some branches), the apprentice trade has to provide the trainee with a basic occupation from which he may move outward to a wide circle of more specialised occupations. The Swiss economy depends on personnel whose training has kept up with technical development. The Committee of Experts therefore expressed the unanimous view that apprenticeship should be organised to provide a basic or central training including broad essential procedures which open the way into related occupations. However, in order to eliminate any restrictive tendency towards specialisation, not only must the fundamentals of the basic trade be capable of development, but there must also be stimulating and broadening possibilities of further training, retraining and promotion in the shape of short complementary, supplementary or additional courses according to the individual's age and previous education. The Act is to provide, in principle, for facilities of these kinds.

As regards the training of young disabled persons the present statutory provisions are to be extended, and part-time or particular training, with special certificates, is to be arranged for them in accordance with their capacities.

In line with the general policy of improving and extending vocational training arrangements, the Committee came to the conclusion that apprenticeship cannot be restricted to preparation for the mere performance of practical tasks. Reliable experience and research have made it clear that the bare ability of a trainee or worker to perform the operations he has learnt is no guarantee that his long-term performance will be satisfactory, still less that his behaviour will be responsible, that he will live a satisfying life or that his occupational and personal development will be positive. The new Act is therefore to express the basic idea that vocational training should include the education of the whole man for his occupational and social life.

The question of protecting the young worker was also raised during the discussions. The experts considered that, in view of the greatly reduced hours of work stipulated in collective agreements in various occupations, there was no need to put a special limit on the hours that may be worked by apprentices. The amended Act will embody the principle that an apprentice's total working time, including that spent on vocational instruction, cannot be longer than the statutory or customary hours of wage

earners and salaried employees in the respective occupation and undertaking. Compulsory accident insurance (in the factories not already obliged to insure) and general sickness insurance were also considered unnecessary, the general view being that almost all apprentices are insured through their articles of apprenticeship, even in cantons which have no compulsory insurance. On the other hand, apprentices' annual holidays will be increased from one week a year (the present statutory minimum) to three weeks, since most of the cantons have already exceeded the minimum and introduced two or three weeks' annual holiday for apprentices. Other existing cantonal provisions for the protection of young workers which are in excess of national requirements will be retained—particularly those respecting medical examination on entry into apprenticeship and supervision of apprentices by the trade-school medical officers (the individual having free choice of practitioner for purposes of treatment).

The present Act already obliges the cantons to supervise apprenticeship arrangements, and thus helps to keep up the standard of apprenticeship and to protect the apprentice. In the future also the cantons will be required to exercise efficient supervision; this will involve exclusion of undertakings where apprenticeship arrangements are unsatisfactory and will also enable the progress of the apprenticeship to be kept up to standard by skilled inspection of the undertaking or by periodical tests; and it will ensure the necessary corrective action in the interests of the training and the trainee in case of defect or doubt. In this connection the co-operation of employers and workers on apprenticeship boards or supervisory committees and as expert members of the cantonal supervisory agencies has proved very valuable; it keeps alive the idea that the undertakings and the workers share the responsibility, so that apprenticeship is not stifled by bureaucratic control.

Comprehensive Facilities for Further Training

Formerly the skilled craftsman could manage for the rest of his life on what he had learned in his youth. In the changing conditions of present-day progress, no one has "learned everything" or is ever "completely trained". On the contrary, the craftsman must constantly adapt himself to new requirements. Modern vocational training can therefore no longer be based only on an apprenticeship whose content and duration are fixed once and for all in advance. Training must now be thought of in terms of movement outward from a centre, so that the worker is or should be led from his basic or initial apprenticeship to appropriate further training. This idea is to be clearly expressed in the new

Act, and accordingly the many different facilities for further training—vocational schools, periodical or permanent courses run by trade associations, etc.—will be encouraged. Nor should courses be restricted to the skills and knowledge required in a particular trade; they should include instruction on related occupations and on the undertaking, as well as other constructive or formative subjects. Even the education of the personality for industrial life should be included, for it is not only the technical performance but also character training and consequent behaviour that count in an occupation. Against such a background the traditional methods of recruitment and training are no longer sufficient. New forms of adult education—voluntarily accepted, and encouraged by the undertaking—must be worked out which will awaken spontaneous effort and initiative, develop existing talent, facilitate the advancement of the meritorious and so contribute to an optimum manpower policy and a fruitful arrangement of personal and social life. Advanced training is to be geared to progressively higher trade tests for foremen, master craftsmen in industry and self-employed craftsmen—another step in the same direction.

Help for Workers Who Have Had No Apprenticeship

Essentially, the present Act applies only to apprentices. It does not cover those who, on leaving school at 15 years of age, go straight out into the world of adult employment either as unskilled workers or as semi-skilled operatives with no more than a brief introduction to their job. But this group also needs further educational assistance for, although physical maturity is now reached one or two years earlier than was formerly the case, the mind and spirit seem to mature more slowly. A short period of induction, aids based on psychological testing and work analysis, the discipline of the factory—these provide young workers with some practical training in diligence, endurance and reliability; but there is not enough of the all-round assistance which a juvenile needs if he is to settle down in an industrial society. Even the general continuation schools, which many cantons require young persons to attend for a few hours a week until the age of 18, are usually felt to be a boring extension of ordinary schooling and not a vital introduction to adult life—although attempts to bring these schools into line with modern needs are being made. There are both legal and ideological objections to removing the general continuation school from the comprehensive educational system of the cantons and transferring it to a vocational training system organised under federal law. In addition there are the practical difficulties of defining and handling, as a new occupational or

educational unit, groups of persons engaged in unskilled or part-skilled operations which vary widely as regards duration and character from one industry and undertaking to another. The Committee of Experts came to the conclusion that the initiation of these untrained young workers into their employment should be left to the undertaking for contractual and practical regulation. The question whether, how and when the continuation school can be taken out of the general education system and integrated into the vocational school system as a new type will be determined in the light of development at a later stage. However, the Committee of Experts did not wish unskilled or semi-skilled workers to be left entirely to their own devices, as under the present Act. It felt that they should at least be given the possibility of further training and advancement. Ambitious workers who could not have an apprenticeship in their youth should be given a chance—and encouraged by their employers—to go through an accelerated form of apprenticeship reduced in length according to the individual's age or previous education. There is also the possibility, which already exists, of taking an apprentice's final test after a period of informal training on the job (twice as long as a normal apprenticeship) and attendance at a trade school; if he passes the test the worker may then enter an apprentice trade. However, untrained workers are a dwindling minority and the problem they present is therefore losing some of its importance. At present, as stated above, 70 per cent. of the boys and 50 per cent. of the girls leaving school go into an apprenticeship; others continue their education in other ways (secondary school, higher education, teachers' or nurses' training institutions, etc.). This seems to show that the general factory worker, once characteristic of industry, is giving place to a new type of industrial worker who styles himself according to his job, enjoys some occupational pride and standing, and uses the facilities for further training provided by many undertakings to improve his situation. Lastly, even the existing Act is not restricted to trades with a three-year apprenticeship or a two-year period of training: on the contrary, it permits recognition of training which lasts, according to the trade, for not less than one full year. This enables a greater number of activities to be classified as "trainee trades", broadens the basis of recruitment for vocational training and consequently reduces the number of unskilled workers.

Trade Schools as Agencies for Vocational Education

As already stated, the present Act deals mainly with apprenticeship and, in a special chapter, with complementary trade schools (industrial and commercial). Other kinds of vocational training,

such as full-time commercial and technical schools, professional schools and training workshops are mentioned only incidentally among the institutions to be encouraged and subsidised. Although this has not hampered their development, the new Act will provide for more systematic encouragement of vocational education.

First among the institutions in question are the part-time trade schools which supplement practical apprenticeship. These have developed out of the general continuation schools of the nineteenth century, and in the present century they have become independent craft or commercial schools with their own educational objectives, their own buildings and equipment, their own teachers and curricula.

Industrial occupations today are based on the natural sciences and their technical applications and the workers need some theoretical teaching in order to understand a modern occupation and perform it well. They must also be taught to understand the needs of an undertaking, to take part in cultural life and to become responsible citizens of the nation and the world. The part of the supplementary trade school in the training process is thus just as important as that of the undertaking.

This partnership between school and undertaking in the apprenticeship is to be more clearly expressed by the new Act. As the roles of the two parties vary from one occupation to another, the Act will lay down principles only, such as the definition of compulsory attendance at school—one full day or two half days a week with appropriate distribution over the year or, as in the case of seasonal trades, concentration in a shorter period. Compulsory school attendance is to be restricted to week-days before 7 p.m., so that the evening hours remain available for voluntary classes (the present Act permits compulsory classes until 8, or even until 9 p.m. in exceptional cases). In future voluntary occupational or inter-occupational classes will be provided (and subsidised) for talented apprentices and young skilled workers, so that able individuals may be encouraged.

The organisation of part-time schools will remain a matter for the cantons, which, in agreement with employers and workers, will provide courses for each occupation on a local, regional or inter-cantonal basis depending on the number of pupils available. On the other hand the Confederation—in agreement with the cantons and the occupational associations—will be responsible for the establishment of standard programmes and for training teachers of trade subjects. The methods of teacher training will remain flexible and varied, so that primary, secondary and high-school teachers, or technicians, engineers and other graduates, may be recruited and trained according to requirements.

The second group of institutions to be encouraged are the full-time trade schools (training workshops) and commercial schools. These provide a complete vocational training and perform, in their own way, the functions of both the undertaking and the school under the dual apprenticeship system. In the new Act the provisions regarding practical apprenticeship and the supplementary trade schools may possibly be extended to full-time trade schools also—but with the necessary adjustment, since they must remain a distinct form of training institution whose programme can and should go somewhat further, as regards general education, than those of the complementary trade schools. Both the industrial and the commercial schools of this type will continue to be able to apply special final tests to their students instead of the ordinary trade test and to issue to them special certificates, equivalent to the certificate of competence issued on passing the official test.

Apart from the public commercial schools there are also in Switzerland some well-conducted private commercial schools, which have hitherto not been linked up with other training arrangements. These private schools perform several functions: they provide special training for commercial occupations not covered by the legislation on vocational training; they provide preliminary courses and courses of further training; in some cases they also offer a complete commercial training, particularly for “late-comers” and other persons who, for personal reasons, have had no apprenticeship and do not attend an official commercial school. Under the new Act it will still be impossible—mainly for legal reasons—to place these private institutions on an equal footing with the public commercial schools, since they are not of public utility but are usually operated for profit. However, their students will in future be able to sit for the official trade tests if they fulfil the general conditions and if their training corresponds to that given at the official schools.

The full-time and part-time schools, both industrial and commercial, are two distinct types of vocational schools, both of which provide instruction at the apprenticeship stage. While retaining their individual character, these two types must be considered, in principle, as equivalent. The new Act will also expressly state that the full-time and part-time trade schools have a role to play in further vocational training, in particular for higher trade tests and master craftsmen’s tests. This will bring them closer to the third type of vocational training institution—the “higher technical school”.

Switzerland has nine public higher technical schools, plus three private evening technical schools. The establishment of others is under discussion. As the demand for technicians of this type is con-

stantly increasing and the provision of such schools, in excess of cantonal requirements, is a matter of national importance, they are to be dealt with in a special division of the new Act, with an outline description of their functions. Enterprise by the cantons and by industry is to be supported by federal action in such a way that public funds will be satisfactorily used and so that training facilities adequate for the whole of Switzerland, and suitable in respect of location and areas served, may be provided in the shape of a sufficient number of efficient higher technical schools.

Study Grants and Other Financial Matters

In the many sittings of its subcommittees the Committee of Experts discussed other questions also, such as trade tests (on conclusion of apprenticeship), higher trade tests and the problem of study grants. Out of every 100 Swiss apprentices about two-thirds come from the lower-paid classes of office and manual workers, and one-seventh cannot go through their training without a grant. The question was whether allowances from public funds should be paid to the poorer trainees.

Economy and society are increasingly dependent on every talented person, and more grants—allotted in accordance with personal aptitudes—are required in order to help such persons upward in the scale. Furthermore, the work of private and public agencies making study grants at the local, cantonal and federal levels should be better co-ordinated. Greater resources are also required in order to promote the training of craftsmen-instructors, teachers and examiners, to provide training material and other basic or auxiliary requirements, as well as vocational school buildings of every kind.

Communes and cantons have long ceased to be economically self-sufficient. Vocational training has become a national function, which can only be performed by co-operation between industry, the commune, the canton and the Confederation. The Committee of Experts considered that the method of allocating the federal subsidies should be revised. This will lead to procedural simplification, but it will also involve increased federal contribution and some redistribution of the burden between the financially more and less powerful cantons, and special assistance will also have to be provided for institutions that are important to several cantons or to the whole country.

FURTHER PROCEDURE AND SUMMING-UP

On the basis of the conclusions reached by the Committee of Experts and its subcommittees, the drafting committee—together

with the Federal Office for Industry, Arts and Crafts and Labour—is now working out the first draft for a new Act which will be submitted to the cantons and the occupational organisations, modified where necessary in the light of their views, and finally introduced in Parliament for discussion and decision.

The proceedings hitherto have been distinguished by the frank and constructive attitude of all those concerned. Narrow party or occupational interests have been set aside, and considerations of detail which can better be handled at the administrative stage have also been left out of account.

The most striking result, however, is the clear triumph of two basic ideas. First of all, vocational training today means the production of an individually and socially valuable person. To call the training “vocational” in no way signifies a restriction in the sense that it must produce vocational skills alone: the adjective is merely an indication of the particular circumstances in which the education and training are to be provided. Vocational training will always apply to the whole person and it will aim at promoting an attitude, on the part of this person, which will enable him to strive and to give of his best in life and labour. Vocational training is full-value education for the job, the community and a better life.

The experts' second basic idea stems from the fact that our industrial world makes educational demands such as no economy or society has ever made before, and that our future depends precisely on vocational training, human and technical. The industrial age is also the age of vocational training. If we are to keep in step with development and to meet the needs of the future, we must have up-to-date training for our manpower in the widest sense of this term, from the factory worker, the skilled tradesman or commercial employee, to the supervisor, the foreman, the technician and engineer, the physicist, the economist, the lawyer, the medical officer, the technical or commercial manager, the director of personnel. It is to be hoped that, by means of its amended Act, Switzerland will bring into existence a great vocational training system through which its workers will make the best of themselves and of their society in a changing world, and will develop further in co-operation with the people of other countries.
