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ABSTRACT

A comprehensive view of educational development in Europe considers the long-term policy implications of integrating post-secondary education into the emerging systems of education, the diversification and decentralization of post-secondary education, and mobility of students, teachers, and research workers. Major sections examine: (1) policy objectives and constraints, (2) educational system objectives and social goals, (3) structural and institutional changes in post-secondary development, (4) financial and economic aspects of post-secondary development, (5) organization for learning, (6) administration of post-secondary education, and (7) educational objectives, promise, and performance. Various tables on enrollment in higher education in Europe are included. (RL)

SEVENTH CONFERENCE OF EUROPEAN MINISTERS OF EDUCATION

Brussels, 8th - 10th June 1971

POLICY AND PLANNING FOR POST-SECONDARY EDUCATION - A EUROPEAN OVERVIEW

by William TAYLOR

Post-secondary education was selected at the Sixth Conference of European Ministers of Education to be the main theme of the next Conference. It will be discussed under its various aspects, for instance the long-term policy implications of integrating post-secondary education into the emerging system of permanent education; the diversification and decentralisation of post-secondary education; and mobility of students, teachers and research workers. In accordance with previous Conference practice, the Conference Secretariat, in consultation with the Committee of Senior Officials, has commissioned a background report on the main theme of the Seventh Conference from an expert, Professor William Taylor, Director, University of Bristol School of Education. The report, which represents the personal views of its author, aims at facilitating the discussion of this vast, rapidly developing and complex theme at the Conference.

Excerpts are reprinted below. The complete version, which may be obtained from the Secretariat on request, comprises :

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Chapter one : Policy objectives and constraints

The purpose of this chapter is to describe and comment upon some of the major policy objectives that European governments see as characterising their activities in the development of post-secondary education. The next chapter will deal with some of the less well documented objectives that are beginning to be formulated as criteria for the evaluation of systems of post-secondary education, some specific, some more speculative. The three objectives to be examined in this chapter are

— the satisfaction of social demand for post secondary education,

— enhancing equality of educational opportunity and mobilising talent,

— meeting the manpower needs of society.

The justification for selecting these three objectives for extended discussion is twofold. They feature prominently in many of the statements that have been made by member countries to the Council of Europe, to OECD and to UNESCO, and which have subsequently been incorporated in discussion papers and reports from these bodies. They also emerged very clearly from a content analysis of many hundreds of published statements of educational goals that the author undertook in 1968 in connection with an international study on the effectiveness of educational systems, sponsored by the US Office of Education. As we shall see, a lot has been written and said about these three objectives ; their implications for action have been much discussed, and the performance of individual countries in implementing them has begun to be systematically evaluated.

1. SOCIAL DEMAND

(i) *Social demand as a basis for policy*

One of the most striking features of governmental statements on post-secondary education in recent years has been the extent to which what has been called the *principle of social demand* has been accepted as a basis for policy. This principle has been stated in various forms. The United Kingdom Committee on Higher Education (Robbins Committee) based their proposals for the supply of places firmly on the recommendation that "courses of higher education should be available for all those who are qualified by ability and attainment to pursue them and who wish to do so". The Norwegian Ottosen Committee went rather further in stating that "... all who seek (post-secondary education) should be able to find a fully acceptable opportunity at the academic level for which they are qualified". But whatever the variation between countries — and the differences in the two statements quoted repay consideration — it appears that all countries have accepted the virtual inevitability of having to supply some kind of post-secondary education for those who desire it and who possess the appropriate qualifications for entry.

(ii) *Factors contributing to social demand*

The social demand for post-secondary education may be seen as contingent upon seven inter-related factors.

First, there is the *size of the relevant age group*. Here we are faced with a problem of definition. Increasingly, universities, polytechnics, technical colleges and so on are providing for adult students, who are either entering such institutions for the first time, or returning to undertake graduate work, to re-train or to update their qualifications and skills. Insofar as these students become an important numerical element in the demand for post-secondary education, the 'relevant age group' becomes much larger than the immediately post-school generation. But in any case, although demographic factors have played their part in the expansion of demand for post-secondary education in recent years, they have not been the main factor in this expansion.

Second, there is the *level of provision made in secondary education* — a point to which we shall have occasion to return — and particularly the number of pupils who stay on into the Upper forms (VIth form, second cycle, *Oberstufe des Gymnasium*) of the secondary school.

Third, there are the *standards for admission* to institutions of post-secondary education, both *de jure* and *de facto*.

Fourth, there are the *costs* of upper-secondary and post-secondary education that must be borne directly by the individual and/or his family ; we know very little about how changes in these direct costs might affect demand.

Fifth, there is the *amount of information* that potential students and their families possess concerning opportunities for post-secondary study.

Sixth, there is the *supply of places* available in universities and elsewhere ; there is evidence that when entry to post-secondary institutions is seen to be readily possible, the demand for places is stimulated. Contrariwise, demand is inhibited by a perception of admission being difficult. Failure to take into account the complex interactions of the demand for and the supply of places has been held to account for the consistent underestimates of enrolments that has characterised forecasting in most member countries in recent years (Williams, 1970).

Seventh, there are the *levels of earnings* of those who have experienced post-secondary education ; if at a given time post-secondary education appears to yield less by way of vocational advantage and improved earnings prospects than in the past, this might influence its attractiveness (Blaug, 1967). But we have little data on which to make a judgement on this point. If post-secondary education becomes more general, and if there is no sharp change in the pattern of income differentials, then the *relative* advantages accruing to the individual will be reduced. This may very well, under certain conditions, affect demand for those kinds of post-secondary education that provide a course that is monotechnical and leads only to a single occupation, the income levels of which are relatively depressed ; something of this kind may in some countries already be affecting recruitment to institutions preparing for elementary and lower-secondary teaching. But the students who no longer wish to enter such institutions will not drop the idea of continuing their education ; they will simply shift their interest to some other area where the rewards seem greater or the vocational consequences are less clearcut and predictable. This may intensify the demand for certain kinds of provision and encourage a more selective policy and the imposition of a stricter *numerus clausus*.

None of this suggests that changes in the individual rate of return will have any *necessary* consequences for overall demand within the educational system as a whole ; the demand for post-secondary education as a good in itself, supported by the influence of better educated parents and school expectations, seems capable of balancing any decline in the relative advantage that such education confers in terms of income, occupation and social status (Anderson, 1967).

(iii) *Weaknesses in the concept of social demand*

It is clear that the principle of social demand involves many complexities, and cannot be treated autonomously. The number and type of courses available at the post-secondary stage, information about these courses and the structure of secondary education all help to shape social demand, which seldom reflects any real freedom of choice for the majority of school leavers. In a secondary school system with parallel streams, either in separate institutions or within the same school, the type and level of post-secondary course that the pupil will subsequently 'demand' are often determined at a comparatively early stage of adolescence. Recent years have seen attempts in a number of countries to provide a less differentiated secondary course, and thus to create and to maintain a real freedom of choice for a larger number of pupils.

Perhaps more importantly, the objective of satisfying social demand is in certain respects in conflict with the attainment of the objective that we shall discuss next in this chapter — that of creating greater equality of opportu' ity and mobilising talent. Social demand is essentially a *passive* objective. Many of those who invoke it have in mind not so much what it includes, but the kinds of decision making that it excludes. What they are saying is that the government concerned does not propose to ration the overall number of places in post-secondary education according to the alleged needs of the economy for qualified manpower (although it may limit entry to particular forms of professional training, such as teaching and medicine), nor does it wish financial limitations to deprive those who are qualified to enter, and capable of benefiting from post-secondary education, from securing a place. But in practice it is known that the better off and better educated strata of society give rise to more 'social demand' than the less privileged. Thus to base policies on the satisfaction of social demand can be seen as a failure to use the full potentialities of the educational system for the democratisation of society.

2. EQUALITY OF OPPORTUNITY AND THE MOBILISATION OF TALENT

(i) *General considerations*

A generally accepted reading of this objective is that it implies that all those who are capable of benefiting from post-secondary education must have the opportunity to qualify themselves for

entry to appropriate courses, and that access shall not be denied on the basis of irrelevant criteria such as race, colour, poverty, social class, regional origin or religion. The pursuit of this objective gives rise to a number of practical and theoretical difficulties. How do we define those who are 'capable of benefiting' from post-secondary education? Estimates have varied greatly over time, according to the educational opportunities available, the type of demands made by the economy and the prevailing political and social climate. During the thirties it was frequently asserted that only a very small minority of the population — estimates varied from five per cent to twenty per cent — were capable of benefiting from academic secondary education or from any form of then known post-secondary education. In some parts of the United States today up to eighty per cent of the appropriate age group are receiving post-secondary education in universities, community colleges or elsewhere. Both in the United States and in Europe it is being confidently predicted that *universal post-secondary education* is the model for the future, and the picture is enormously complicated by the extension of opportunities for adult study and for refreshment and retraining in mid career.

If we define post-secondary education broadly enough, to take in all the forms of post-school general and vocational education and training that, given adequate finance and facilities, educational institutions are capable of providing, it seems clear that the whole population can be regarded as capable of benefiting. If we adopt a much narrower definition, including only those kinds of study that have traditionally been associated with courses provided in universities or institutions of comparable standing, the proportion capable of benefiting is probably much smaller, although undoubtedly in excess of the numbers currently receiving education at this level in most member countries.

Any systematic discussion of questions of this kind requires careful consideration to be given to the interaction of variables such as measured intelligence, home environment and school experience, each of which has to be broken down into further clusters of related factors. Whilst the attention psychologists and sociologists have given to such questions in recent years has provided some useful clarification and has shown the inadequacy of many common assertions, it has also indicated how far we are from a really satisfactory understanding of the nature of educability, how it is distributed among populations and how it changes over time in response to environmental and educational influences.

In some countries pessimistic statements have been made recently concerning the intellectual qualities of the larger numbers now coming forward for university education (Leavis, 1970). Whatever differences there may be in attitude and motivation between students of today and those of previous generations — and these differences may be both considerable and important — it seems rather doubtful if their intellectual capacity is substantially diminished. In saying this one does not have to agree with the historian Macaulay who, early in the nineteenth century, suggested that "genius is subject to the same laws which regulate the production of cotton and molasses. The supply adjusts itself to the demand. The quantity may be diminished by restrictions and multiplied by bounties." But it is probably safe to agree with C. Arnold Anderson (1967, p. 42) when he says

> "There seems to be no Western country — excepting possibly Canada and the United States — in which expansion of university enrolments needs to be accompanied by lower standards of performance. This wager would not be extended to indefinite expansion of enrolments. The unutilised reserves of talent are even larger in most countries at the secondary level."

For the purposes of this discussion then let us agree that the numbers capable of qualifying themselves for and benefiting from existing kinds of post-secondary education are likely to be *larger* than the existing provision and that the reform of secondary education and the availability of new forms of post-secondary course are likely to *increase* these numbers still further.

What happens at the secondary stage of education is of essential importance to issues such as these. There are three kinds of statistics that need to be considered. The first is the proportion of a given age group admitted to the type of schooling that prepares for post-secondary education ("*secondary admission rate*"); the second is the proportion of these admissions that subsequently obtain the certificate that qualifies them for post-secondary education ("*secondary survival rate*"); the third is the proportion of those who obtain the certificate and who actively enter institutions of post-secondary education ("*transition rate*").

Where the secondary survival rate and transition rate are not already high a substantial expansion

of student numbers in post-secondary education can be achieved by increasing them, as has happened in Austria and in England and Wales. In other countries such as Sweden, Norway and France, the increased demand has been more a consequence of increasing the proportion of the age group admitted to courses which lead to post-secondary education. In several countries reforms are at present taking place in the structure of secondary education which seem likely further to increase admission rates and possibly both survival and transition rates.

(ii) *The extent of regional and social disparities in participation*

In relation to the objective at present under discussion, the question that has to be asked is the extent to which existing or planned post-secondary provision will minimise the effects of "irrelevant criteria", such as sex, race, colour, poverty and social class. The data to provide a comprehensive answer to this question are not available. Such information as there is suggests that in spite of all the efforts that have been made to democratise secondary education in member countries over the past twenty-five years, substantial disparities remain in the participation in secondary education of pupils of different sex, from different regions, and from different occupational groups. Males obtaining the secondary school leaving certificate outnumber females by two to one in Germany, Italy and England and Wales ; the proportions are more nearly equal in France, Sweden and Norway (*). (OECD 1969 [i] Table 41). Regional inequalities also exist, with rural and industrial low income areas at a marked disadvantage in comparison with larger towns and the more prosperous regions. In a study comparing two educational regions in France which had the same level of participation in the first cycle of secondary education, Isambert-Jamati found that pupils in the more prosperous urban region (Paris) felt themselves to be better informed about the educational opportunities open to them and had more information about the educational system than their counterparts in the South (Nice, Aix, Montpellier, Toulouse). It appears that many of the adolescents who remained in school in the high unemployment area in the South did so in order to have something to do, rather than to achieve some tangible educational goal. Isambert-Jamati concludes that the regional employment situation is of vital importance in understanding differences in the level of school participation (Isambert-Jamati, 1970).

Nam *et al.* (1970) have recently reviewed the evidence on regional disparities in educational participation, which they found to be common to all of the Western European countries in varying degrees, and with little sign of any narrowing of disparities during the rapid post-war expansion of education. To some extent, of course, regional disparities are a proxy variable for other factors such as rural and urban differences in occupational distribution, but Nam and his associates found that there are also historical, social, economic and political factors which exert some degree of independent influence.

In all countries the children of fathers in the better paid and more highly esteemed occupational categories are at a considerable advantage over their less well to do fellows, even when measured intelligence and school achievement are held constant. The collection of data on these social disparities has been a prominent feature of private and public surveys and research reports in member countries over the past twenty years. Differences in the occupational categories used and in the date of the surveys make a straight comparison between countries impossible. The most recent attempt to review the available evidence from all European sources is the report by Nam *et al.* already referred to, which fails to find any tendency for the socially selective factors at the level of secondary education to decrease in importance, save in a few countries which have exceptionally high participation rates in primary and secondary education. Suggestive examples of the kinds of study that have been made of these issues can be provided from the United Kingdom, France and Denmark.

In the United Kingdom a series of surveys over a period of nearly twenty years have shown the extent of the advantages possessed by the child from the middle class home, advantages which continue to apply even when differences of measured intelligence are taken into account.

J. W. B. Douglas found that among the pupils of high ability in his sample cohort, the proportion of those from upper middle class backgrounds achieving good results in the sixteen year old secondary school certificate (O level) was twice as high as that of the lower manual working class, and discrepancies in achievement are even greater at lower levels of ability.

(*) Figures showing the proportion of girls in higher education (university and non-university) are given in Table Five at the end of this paper.

> "Upper middle class children are three times as likely as the lower manual working class to achieve a good certificate if their ability is at the border line for grammar school admission, and thirteen times as likely to achieve a certificate of some sort if they are of just below average ability" (Douglas, 1968, p. 26/27).

The Committee on Higher Education (Robbins Committee) found that only about a quarter of the students entering universities early in the 1960s came from manual working class homes, and that this proportion had not changed substantially over the preceding 40 years. All in all, children from professional and managerial families had seventeen times as great a chance of entering university as children of skilled workers, and thirty times as great a chance as children of semi and unskilled workers. It is likely that the widening of opportunities for post-secondary study in the United Kingdom during the 1960s will have narrowed the differentials between the social classes to a limited extent, but these still remain large.

A similar pattern, and further suggestions that the sixties have seen some limited improvement in the "class chances" of children from working class backgrounds, can be obtained from statistics provided by the French Ministry of Education. These show that the proportion of students whose fathers are manual workers (a group that comprises some thirty per cent of the male population aged 45 - 54) rose from 3.4 % in 1959/60 to 8.3 % in 1964/65. But in the latter year the professional and executive group (heads of firms, professionals, senior executives, junior executives) were still providing two thirds of all the students in higher education (OECD 1969 [ii]). As in the United Kingdom, these figures reflect the substantial drop out rate of working class pupils during the period of secondary education. Between the first year and the fifth year of the secondary cycle (6^{eme} and 2^{eme}) there is a doubling of the proportion of pupils who are the sons and daughters of professionals and senior executives, whilst during the same period the proportion of children from homes of manual workers declined by 30 %. (*ibid.*, Table 19 and p. 33)

Figures for Denmark repeat these trends. Of those pupils successful in the first *Gymnasium* examination in the early sixties, 37.0 % were from higher non-manual occupational groups, 25 % were sons and daughters of tradesmen, 19.0 % came from families where the father was a clerical worker, and only 8.0 % were from manual working class families. (*ibid.*)

Most of the available data concerning the participation of different occupational categories in higher secondary and post-secondary education come from the early sixties, prior to the introduction of reforms in secondary school organisation and the considerable expansion in opportunities for study in universities and other institutions of advanced education. A higher *overall* rate of participation in post-secondary education may have some democratising effect, although it is interesting to note in this connection that in the United States, where a very high proportion of the age group continue their education beyond the secondary level, socio-economic differentials persist. Calculations made in connection with Project Talent studies show that

> "a male high school graduate in the highest achievement and highest socio-economic status quartile has a probability of .92 of entering college. The son of parents in the lowest socio-economic status quartile with the same level of achievement has a chance of .61 of enrolling in college. In the case of females the probabilities are .87 and .42 respectively for each of these groups. A male from the highest socio-economic status quartile and the lowest achievement quartile has a .38 chance of enrolling in college compared to .10 for a male in the lowest achievement and the lowest socio-economic status quartile. Thus, depending on the achievement level, a male child of poor parents has only from one quarter to two thirds the chance of enrolling in college as a child with the same achievement level and rich parents". (US Office of Education 1968, p. 12)

(iii) *Causes of unequal participation*

Despite all the work that has been done by sociologists, psychologists and others on these questions over the past two decades, the *causes* of unequal participation by different social classes in secondary and post-secondary education are still imperfectly understood and few firm suggestions can yet be made concerning how these inequalities might be reduced. As we have seen, it is emphatically *not* a simple matter of the limited intellectual capacity of the children who drop out or who fail to make the transition from one stage of education to another. Genetic factors undoubtedly play a part in educational achievement, but their precise contribution is unknown, and likely to remain so. Controversy about the relative influence of heredity and environment in school performance, which was

active in the nineteen fifties, has recently been reactivated by the statements of psychologists such as Jensen (1968) concerning racial factors in measured intelligence. But, as Sohlman (1970) has recently suggested, even if we assume that genetic factors account for as much as 80 per cent of variation in IQ, that IQ has a simple correlation with tests of school achievement of 0.7 to 0.8, and that genetic factors influence achievement only through IQ, we are left with genetic factors accounting for only some 40 to 52 per cent of the variation in achievement scores, leaving between 48 and 60 per cent for all other factors. Differing rates of participation in and response to education arise from complex combinations of genetic, sociocultural, linguistic, conventional and economic factors. The processes of selection and differentiation that go on in secondary schools, and the high wastage and repetition rates that characterise some countries, compound these underlying factors. Studies in France and in the United Kingdom have shown, for example, how teachers' estimates of children's capacity to profit from extended education are influenced by social class factors. In the United Kingdom, Douglas found that 91 % of high ability pupils from the upper middle class were regarded by their teachers as capable of benefiting from higher education, against 69 % of the same high ability group who had working class fathers (Douglas, 1968, p. 27). In France Girard and Bastide (1963) showed that out of 100 children of agricultural wage earners rated as average pupils only 14 were held to be suitable for extended education, compared with 86 % of the children of senior executives of the same scholastic standard. The way in which pupils are grouped for instructional purposes in schools clearly plays a part in developing expectations both on the part of teachers and pupils, and suggestive experiments in the United States have indicated how significant such expectations may be for determining the levels of performance and attainment achieved (Rosenthal and Jacobsen, 1968; see also Yates, 1966 and Pidgeon, 1970).

The efforts that have been made in European countries since 1945 to increase the representation of working class and underprivileged youth in secondary and post-secondary education have only been *marginally* successful. 'Social class' and 'occupational level' are manageable concepts which have been employed in a large number of surveys to document the distribution of educational opportunity, but they overlay many inter- and intragroup differences that will need much fuller and more detailed study before we are in a position to fix upon the kinds of educational and social action likely to be successful in creating such equality. Governments interested in policies that will enable the objective of equality of educational opportunity to be pursued more actively, and in the interventionist strategies that these policies imply, have recently given attention to research studies such as those included in the Coleman Report (1966) in the United States and in the Plowden Report (1967) in the United Kingdom. Such evidence as we have concerning the influence on educational opportunity of factors that can be manipulated as part of an interventionist strategy is neither helpful nor encouraging. In general, the research on the influence of school factors, such as expenditure on buildings and equipment, class size and pupil/teacher ratios, on educational achievement shows few positive relationships, although there are suggestions that some aspects of *school organisation*, such as pre-school provision, streaming and tracking, the setting of homework and greater parent/teacher cooperation, may be more influential (Sohlman, 1970). It must be added that the methodology of some of these studies has been criticised (Bowles and Levin, 1968, Cain and Watts, 1970). The absence of clear evidence on the influence of school factors does not mean that these are unimportant, but simply that we do not yet have the kind of research base for the investigation of these matters that can deal with the subtlety of the underlying variables. In the meantime, a variety of interventionist programmes are being launched in the United States, the United Kingdom and elsewhere, and attempts are being made to evaluate their effects on a short-run 'action-research' basis.

Strategies of this kind are ameliorative rather than structural, and the lack of major efforts to apply principles of positive discrimination to the modification of life chances, both through the educational system and by means of wider measures of social reform, inevitably reflects upon the priority that European governments are willing to accord to equality of opportunity as an objective of educational and social policy. This has led some authorities, and many radicals, to doubt the sincerity of governmental intentions in this respect. But, as Bressler and Tumin (1969) have emphasised, the complexities involved in such implementation are very great.

> "The achievement of the goal of equal educational opportunity... depends on more than philosophical conviction. It probably also requires a prosperous economy that can support education conceived of as both an investment and consumer good; a structure of incentives

that includes a demonstrable linkage between educational achievement and the system of social rewards; a normative system that emphasises the value of secularism, change achievements and universalistic standards; a sufficiently stable political structure to encourage institutional and personal investments that have a deferred pay-off; a power structure that can effectively reach and enforce decisions; and a set of mechanisms that reduce actual or potential strains between education and other elements in the institutional complex, especially the kinship and religious system. Since the establishment of some of these conditions is beyond the control of those who profess an allegiance to the goal of equal educational opportunity, we are never justified in assuming out-of-hand that the imperfect realisation of a goal is a satisfactory indicator of weak intent."

In practice, the pursuit of this objective has to be balanced against other competing and sometimes conflicting claims, amongst which those of the family are of considerable political significance. As Schelsky (1957) noted, owing to its selective function, "school confronts parents early with the threat of downward social mobility and thus thwarts one of the strongest of family drives — the urge to secure social continuity through the generations".

In recent years most countries have accepted policies leading to an increase in admission, survival and transition rates in secondary education; it is changes in these rates, rather than demographic factors, that enhance the demand for post-secondary education. Even in countries with a declining proportion of secondary school age children in the population, reforms in secondary education which lead to increased participation, especially at the upper levels, will result in a continuing expansion in demand for post-secondary provision. In most countries these policies have involved a decrease in differentiation within the secondary school system, and a trend towards the establishment of comprehensive secondary schools. But this does not mean that there will not continue to be differentiation within the secondary school itself. If pupils from diverse social backgrounds are to have genuine opportunities for the kinds of choice that will lead them towards appropriate and satisfying courses of post-secondary education, then careful attention will have to be given to the impact upon choices and self-concepts of the schools' internal organisation for learning. In Little's (1970) words

"The question facing current and future educational policy is at what age will what type of differentiation be introduced into educational institutions, and to what extent can any decisions taken by an individual later be reversed by him? Further, on what type of information will these decisions be based, and who will make them?"

In the past, a pupil's occupational and social future, and the kind of post-secondary course that he could reasonably hope to enter, was largely determined by the type of school he attended — secondary modern, *realskola*, Grammar school, *Gymnasium*. To an increasing extent in the future it will be determined by the course that he follows — by direction, through counselling, after advice or by free choice — in a single or end-on structure of secondary education (Taylor, 1967). The processes of directing, counselling, advice giving and choosing that characterise the differentiating function of the school will be undertaken largely in relation to the range of educational and occupational opportunities that exist after school. A wider and more variegated range of opportunities at the post-secondary level, with diverse admission requirements, is bound to have effects upon the courses provided and chosen in the secondary school. Will these effects be in the direction of enhancing equality of educational opportunity at the secondary and post-secondary stages?

(iv) *The implications of democratisation*

If a longer time scale than that so far considered in this section is adopted, it can be seen that during the present century, mechanisms of educational and social selection, both explicit and implicit, have enabled an increasing proportion of underprivileged groups, such as women, pupils from rural areas, and the sons and daughters of manual workers, to benefit from higher secondary and university or university equivalent education. During the same period educational, social and occupational status have marched in step; the upper levels of education have been competitive and highly selective; those who have completed extended periods of education have expected and, by and large, obtained, types of work characterised by high income and high occupational status. If policies for the improvement of access to and success in post-secondary education achieve their objectives, and such education is provided on a broad basis and serves a higher proportion of the population than at present, the relative advantages of a longer period of education as such will *decline*.

As we have seen when discussing the concept of social demand, the advantages of particular lines of study (such as those for the higher professions) may be maintained, as entry to these will still be competitive and selective. Whilst the complex, and yet little understood, relationship between the supply of and demand for educated manpower may have the effect of upgrading many occupations, and, by its effect on productivity, increasing the overall level of reward and standard of living, it will still be necessary for many of those who have completed extended periods of secondary and post-secondary education to recognise that this does not automatically entitle them to the same relative social and economic advantages enjoyed by the smaller proportion of their fellows who completed such education in the past. If large scale post-secondary education fosters the expectation that all or even a majority of those who experience it will obtain the same relative advantages in terms of income, occupation and status as the narrow élite whose natural or social endowments formerly enabled them to attend and to graduate from university, it will produce frustration and unrest. This has the implication that the new situation of the larger numbers of the highly educated will only be tolerable for the individual and for the stability of society, if income and status gradients are less steep than in the past. Success in democratising access to post-secondary education, and in providing a wider and more varied range of study lines, will have economic, social and political consequences of a far reaching nature.

One final point needs to be made before we leave the discussion of the policy objective that we have entitled "equality of opportunity and the mobilisation of talent". So far in this discussion the focus has been upon providing access to post-secondary education for those who have recently completed periods of full-time secondary schooling. To deal with the problem only at this level would fail to satisfy the requirements of the objective. There are large numbers of adults who for a variety of reasons were unable to take advantage of such facilities for continued education as existed at the time they left school ; there are many who successfully completed university or equivalent studies, but who now need to refresh their knowledge or to change their specialism, or simply to take a further period of general education ; there will continue to be — and perhaps, as we shall see later, it is desirable that there should continue to be — many school leavers who choose not to enter post-secondary education at once but provision for whom will need to be made at a later stage. To satisfy the needs of these groups involves the introduction of new kinds of institutions and new patterns of courses, and the development of sophisticated schemes for student support. All these matters will need to be discussed in later sections of the paper.

3. SATISFYING MANPOWER NEEDS

(i) *General considerations*

Anxiety concerning the supply of men and women with the kinds of knowledge and skills required by a modern economy have been at the centre of politicians, economists, industrialists and trade unionists' interest in education during the period since the Second World War. Manpower planning has generated a huge literature — a recent "selective" review of mainly United Kingdom publications contains over 700 references (Lewis, 1969) — and a formidable methodology. The more advanced the level of education concerned, the more relevant have manpower approaches been seen to be. In many countries there has been an attempt to remove the explicit or implicit direction of pupils into specific vocational and occupational lines during the course of lower-secondary education. The Under Secretary of State for Education in Sweden has stated his country's position as follows :

> "... as far as the nine year compulsory school — the comprehensive school — is concerned, estimates of manpower needs have had no influence at all on the pupil's choice of his branch of study. This school is based on the principle of the right of pupils and parents to a free choice of education" (Sandgren, 1966).

But at the upper-secondary and post-secondary levels vocational and occupational considerations begin to weigh more heavily both with pupils and their parents and with politicians and administrators concerned with educational provision.

In no Western European country can it be said that the structure and organisation of the system of post-secondary education has been, or in the foreseeable future is likely to be, determined principally in accordance with manpower requirements. But that these *influence* the structure and organisation of the system there can be no doubt. As Erder (1965) has stated the matter :

> "The trend in the organisation of the higher levels of education is towards some kind of

specialisation which assumes knowledge of the future employment roles of the output of the educational system. This means that, whether we want it or not, manpower forecasting is built into the decisions about institutions".

(ii) *Methodological weaknesses in manpower forecasting*

The extent to which manpower considerations can be taken into account is in part a function of the degree of specialisation in the various lines of study that make up post-secondary education. Such specialisation can be either intrinsic, in that the knowledge, skills and attitudes acquired during a particular course are those which are highly relevant to the performance of a particular vocation, or *de facto*, in that although there is no necessary connection between a particular curriculum and the requirements of a particular occupation, large numbers of the graduates in certain clusters of study lines do in fact find employment in certain occupational categories. Teaching, electronic engineering, medicine and computer programming are examples of occupations where there is a high degree of intrinsic specialisation in the education and training required. The Civil Service and management (the latter to a lesser degree than heretofore) are examples of occupations where, although there are few formal requirements as to specialisation, there do exist *de facto* tendencies in this direction among applicants and/or entrants. The technological basis for the rapid rate of economic growth experienced in member countries in the two decades after World War II gave rise to serious shortages of scientists, engineers and teachers, and manpower planning has therefore been applied most systematically in respect of the educational requirements for these occupational categories, and to some others where there is a high degree of intrinsic specialisation and where need and demand are capable of being calculated, such as medical doctors. It is sometimes suggested that the result of all the work that has been put into manpower forecasting, and into attempting to match educational provision with such forecasts, has not been particularly impressive. But the difficulties that governments have experienced in matching supply, demand and need might have been even greater if some attempts had not been made to provide forecasts, and it seems clear that efforts to improve their accuracy and relevance will continue.

The reasons why manpower forecasting has had a rather smaller influence on educational planning than might have been anticipated are not difficult to ascertain. First, there are difficulties of methodology and the availability of data. The methodology of manpower forecasting tends to exclude several factors, such as the costs of producing additional members of a particular occupational category or the effect of changes in their prospective earnings, which are vital both to policy decisions and to the evaluation of the accuracy of the forecast (*). It is also claimed that manpower forecasting tends to assume near-zero levels of skill substitutability, an assumption which has a number of facets, including a failure to recognise the possibilities of individuals altering the type and level of their skill by retraining and the tendency to regard a given level of output in particular sectors as demanding a fixed number of workers with particular types of skills. (Andersen and Bowman, 1967 ; see also Hollister, 1966). This last point is clearly of great importance for policy, raising such questions as the extent to which any shortage of workers with particular skills can be compensated by various forms of capital investment and the introduction of new automated processes. International comparisons of the different "mix" of factors of production that are used in various countries would clearly be of value here, but systematic data is lacking.

A recent OECD survey, *Occupational and Educational Structure of the Labour Force and Levels of Economic Development*, (OECD 1969 [iv]) suggests that there are differences in the manpower structure of different countries which are not accounted for in terms of the pattern or level of output. Layard and Saigal have developed an interesting model which relates output per worker to the educational level of population in a number of countries ; on the basis of an analysis using this model they conclude that at the level of the economy as a whole "... and to a lesser extent within the more important economic sectors (there exist) clear relationships between output per worker and the occupational and educational structure of the labour force. The relationship may be explained by the assumption that output per worker measures techniques of production which in

(*) As Blaug (1967) has noted, if for any reason "... the supply target stipulated in the manpower forecast is not met, so that relative earnings change, the educational planner will have no way of knowing whether the error was due to an inaccurate forecast or the shape of the demand curve... or simply to the mistaken assumption that students choose to study particular subjects with no regard for earnings prospects".

turn determine the skill structure of the labour force" (Layard and Saigal, 1966, p. 243).

Another methodological difficulty is that of relating the educational composition of the labour force as a whole to the individual requirements of particular sectors and industries, known to economists as the *aggregation* problem. Reliable forecasting is thought to require some degree of disaggregation, with separate estimates being made at the level of industries and even individual firms, and with the labour force itself broken down into a large number of specialised categories. (Although in relation to the Mediterranean regional project Hollister [1969, p. 72] concluded that "the question of the desirable degree of aggregation to be used in manpower requirements estimation remains open. The analysis of the MRP Reports suggested that disaggregation of GNP to economic sectors did not contribute significantly to the estimates of occupational distribution ... there is no guarantee that the effort to disaggregate data will yield better estimates than could be obtained with aggregate information".) The difficulties of detailed disaggregation hardly require to be stated. There is very little data available as to how particular industries actually use employees with given types of skills and levels of education, and there is a need for more studies to be undertaken such as those of Peston, Zidermann and Blaug (1967), which examine this problem in a single group of firms. To estimate at the level of the individual firm the contribution that highly qualified manpower of particular kinds can make to the level of output and commercial success presents further problems. The series of OECD Reports on technological gaps (OECD, 1968) includes some discussion of these questions, but there is little data that goes further than, for example, the following statement about firms in the field of electronic components

> "The rise and for that matter the decline of any company depends very largely on its scientific capability; a company cannot develop without this capability, and the loss thereof through emigration to a competitor can be the origins of serious setbacks". (See also the similarly tentative statements on Capital and Labour substitutabilites in the report in the same series on Pharmaceuticals p. 59).

(iii) *Manpower forecasts and technical change*

In addition to methodological difficulties and the shortage of relevant data, the influence of manpower considerations on educational planning is also affected by the problem of forecasting technological innovation and change. This is at once to touch upon issues that are at the heart of our present concerns regarding the planning of post-secondary education. Our educational arrangements serve not only to satisfy the requirements of technologies already known and in use, but also to stimulate the processes of scientific endeavour and technological innovation, and thus to alter the manpower requirements with which we have to deal. To forecast the form and effects of this kind of innovation is extremely difficult, given that it is closely related to objectives and constraints of a political and social nature ; interest in the problem is reflected in the existence in Europe at the present time of some 350 centres and projects concerned with various aspects of social forecasting. To link educational provision too closely to manpower forecasts is to run the risk of giving insufficient weight to changes in demand and need consequent upon technological innovation ; it has been suggested that this was a major weakness of the Federal Republic's 1966 estimates for the output of highly qualified manpower (Riese, 1966). It is simpler to calculate the *demand* for qualified manpower of various kinds, which is usually taken as a function of what employers want today, plus some extrapolations based upon growth in GNP, than it is to calculate the *need* for qualified manpower, which involves more complex assumptions concerning the effects of innovation, the relative weight which social policy may attach in the future to the development of some sectors of the economy rather than others, and the costs of providing education of different kinds. (Moser and Layard, 1964). It has been claimed that many manpower forecasts fail to take sufficient account of the complexities involved in the analysis of 'need'. Referring to the United Kingdom Triennial Manpower survey, Gannicott and Blaug have alleged that "... the committee has failed to make its case for a long-term shortage of (scientists and engineers). Its measure of demand not only ignores the realities of the labour market, but relies on dubious surveys and misleading classification techniques. 'Needs', the umbrella term under which the inadequate demand forecasts were supposed to take shelter, turns out on examination to be nothing more than a value judgement that more scientists and technologists would benefit the country" (Gannicott and Blaug, 1969).

But even if we allow for the effects of research and teaching on scientific discovery and technological innovation, there is still a tendency to think that as far as the rest of the economy is concerned,

the relationship is one way, the "requirements" of the labour force being "met", more or less well, by the educational system. It seems rather doubtful if this is true. Not all the upgrading of skill and knowledge requirements that have characterised the employment market in recent years can be accounted for by the increased complexity of the jobs involved. Some part of it may be an artefact of the supply of better qualified manpower. The billboard that allegedly can be found on a US highway "Home of X-electronics — employs more PhD's than any other company in the United States" is sometimes used as an example of how firms take on highly qualified manpower for reasons of status rather than productive efficiency, and there are many anecdotal accounts of how little the skills and knowledge of scientists and engineers have been utilised by the firms that have employed them. On a rather more sophisticated level, Drucker (1969) has argued recently that the direct cause of the upgrading of the educational qualifications for many types of work is the upgrading of the educational level of the entrants available for these jobs, which is in its turn a consequence of a marked lengthening in working-life expectancy in advanced countries. The tendency for the period of full-time education to be prolonged is due, according to this view, to a combination of three factors. First, it is a reflection of the fact that more people in more places are regarding education as one of the highest of human values and have a sufficient surplus of income over immediate need to be willing to spend money on it. Second, a recognition by individuals and their families of the economic advantages of prolonged schooling, especially in view of the longer span of working life to which these advantages apply. Thirdly, a recognition of the fact that a working-life span of fifty years is too long for most people, and can be shortened and made more tolerable by staying in full-time education for as long as possible. If the relationship between manpower requirements and educational provision is indeed a reciprocal one, then the uncertainties associated with the use of manpower considerations in educational planning become even greater.

A further doubt as to the usefulness of conventional manpower considerations has been expressed by Galbraith, who claims that at the aggregate level, due to the ability of qualified manpower to "devise means for the correction of factor disproportionality in factor supply" and to the international mobility of educated men and women, "a surplus of industrially qualified manpower can probably not exist. No country should limit its educational output on this assumption as no country in the last century would have limited its efforts to mobilise savings on the assumption that there might be a surplus of capital". Galbraith (1969) goes on to argue that even at the level of specialised manpower, no serious problem arises if the supply does not fit the demand, and concludes that the planning system of the "new industrial state"

> "...requires that we plan for a very large amount of educated manpower of diverse level and speciality. There is no clear upper limit to the amount required. The specialities are infinite and infinitely refined. The likelihood of error of general excess of educated manpower can be dismissed. The problem of providing the needed specialisms is more difficult. But neither is this error, should it occur, fatal. For it is the nature of this factor of production that it can bring intelligence to the solution of its own problems. In the case of capital or unskilled labour or raw material supply, error in factor proportions or quality is not so corrected".

(iv) *Manpower needs, pupil choices and the curriculum*

A third set of problems concerning the use of manpower objectives in planning post-secondary education have to do with the links that exist between school curricula and subsequent lines of post-secondary study and employment, and the tendency for changes to take place in patterns of pupil choice of study lines that are inconsistent with the wider objectives of educational policy. In most countries studies up to the level of what may be called for present purposes the interemediate secondary certificate (*Mittlere Reife, brevet,* "O" Level) are general in character; beyond this stage some measure of specialisation often occurs, which effectively determines either or both the type of institution in which the student will undertake his post-secondary education and the study line that he will pursue. Pupils who change from one stream to another may suffer disadvantages. C. N. Phillips (1969) found that in the early sixties, pupils in *Collèges d'Enseignement Général,* in the modern stream, who then took the mathematics course in the second part of the *baccalauréat* had, from the age of fourteen, a six times smaller chance of going to university than the child who went into the classical stream of the *lycée* and stayed on the arts side. The difficulty of influencing students' choice of subjects for study at post-secondary level is made greater in some countries by the tendency

for certain children to begin a limited form of subject specialisation as early as the age of thirteen. The proposal for a new pattern of secondary school examinations in England, which would to some extent replace the existing O and A level, was an attempt to widen the range of studies undertaken at the Sixth Form level and to remove some of the existing rigidities. The creation of a technical *baccalauréat* in France is a move in the same direction.

The relationship between the structure, content and methods of what is taught at primary, secondary and post-secondary levels and the occupational structure of society is poorly documented and conceptualised. Williams (1970) has argued that although curricula have changed radically during the past ten years, "such changes appear to have evolved largely from developments of knowledge about a subject, particularly at higher levels, and changes in educational theory, especially at lower levels. Rarely can curriculum developments be related directly to changing social, economic and political needs". But although *direct* relationships may be difficult to specify, such needs clearly influence, not only the structure and content of courses, but the general *orientation* and *emphases* of what is selected for teaching and how it is taught.

In industrial, production-line societies, where each man performs only a very small part of a task, there will be a stress on such organising principles as classification, reinforcement and linearility. Facts will be important, and pupils and students trained in a way that underlines the logical and essentialistic (A must always be taught before B) character of subject matter.

The situation changes as society moves into the post-industrial stage, characterised by a high degree of automation. The curriculum is oriented towards the importance of insight, of play and creative activity, of understanding the structure of a subject, of the need for flexibility and adaptability. These orientations are entirely consistent with the type of skills needed in a society at this level of technological development.

> "... we are still at the very beginning of our knowledge of what is happening to the nature of jobs and skill in the new technological age. The little work that has been done in this field seems to indicate a trend towards the need for such forms of higher job competence as diagnostic skill on the part of persons working with machinery, ability to see one's way through several strategies in finding machine trouble, ability to organise and interpret information, and ability to take on responsibility and participate in decision making processes." (Wolfbein, quoted Taylor 1967).

Curricula orientations of this kind can apply at all levels, from primary school to university.

As far as emphases are concerned, it is not difficult to find examples, even over comparatively short time spans, of changes in the weight and importance of particular kinds of subject matter which reflect the occupational and social environment of the school, college and university, without implying any intrinsic link with a particular job or profession. The very rapid growth of the social sciences in the universities and elsewhere within the past ten years would be one such example. The development of curricula in 'junior science' for the 6 to 13 age group, and the claim that every secondary pupil should follow an elementary course in computer science are also illustrations of the way in which curricula emphases shift in response to economic and technological change.

New structures for the upper stages of secondary education and new patterns of secondary school examinations may not be altogether successful in influencing the pattern of student demand in the direction that manpower requirements seem to indicate. In the United Kingdom, a swing away from science subjects in the secondary schools has meant that some of the extensive facilities for teaching and research in science and technology that have been provided in universities and elsewhere have been under-utilised. It is an interesting commentary upon the relative importance for planning purposes of social demand and manpower considerations that, despite this excess capacity, and forecasts of a shortage of scientists and engineers, the United Kingdom University Grants Committee decided in 1967 to expand the number of places in non-science subjects in response to the student demand for such provision. In France, the Vth Plan took as one of its objectives that by 1972-73, 42 per cent of students should be guided into scientific disciplines in the science faculties and the *Instituts Universitaires de Technologie*, but recent *baccalauréat* figures show that the proportions of students qualifying in both the 'C' (mathematics) and 'D' (experimental sciences) series are declining rather than increasing.

Difficulties can also occur at the end of the course of post-secondary education when graduates come

to choose occupations. Studies in the United Kingdom indicate that too few graduates in science and mathematics have been attracted by work in industry and the schools, whereas large proportions wish to remain at university in order to carry out research. The resulting shortage of well qualified teachers has a negative effect upon the number of secondary school pupils wishing to undertake higher secondary or post-secondary education in scientific and technological subjects, and threatens to perpetuate a 'vicious circle' of shortage.

Yet despite the relative lack of influence of manpower factors on educational decision making, it is inevitable that they will continue to play an important part in educational planning. Manpower factors are necessarily subject to broader considerations of social policy :

> "... the only meaningful sense in which a country can ascertain its educational 'requirements' is to establish certain targets for social and economic development and to see what these necessitate in the way of education. Whether the resulting plan will be implemented is purely a policy decision ; but the policy decision cannot intelligently be made in the absence of such an analysis". (Parnes, 1968).

Every practical decision that is taken, every educational objective that is stated or re-affirmed, is dependent upon an explicit or implicit theory of man and of society and has significance for the broader social goals that we set ourselves. Equally, the implementation of these social goals requires that we take into account the inevitable implications of educational policy for the supply of qualified manpower. It is unhelpful to take the view, as some educationists have done, that manpower considerations are inimical to the discussion of educational issues. Again, in the words of Parnes (1966) "... as long as one acknowledges that manpower considerations are among the criteria relevant to educational decisions then all such decisions, if they purport to be rational, involve manpower forecasts whether or not these are made explicit".

Summary

In this chapter we have examined three of the most familiar and well documented objectives that European governments have sought to pursue in their policies for the development of post-secondary education — the satisfaction of social demand, enhanced equality of educational opportunity, and meeting the manpower needs of society. 'Social demand' was seen to have many complexities, and to have no necessary consistency with the pursuit of the other two objectives. The extent to which changes in post-secondary education as such can directly enhance equality of educational opportunity is problematic. Many of the most important influences in this respect appear to be active either at earlier stages of schooling or outside the school system altogether. Better opportunities for adult students to enter institutions of post-secondary education may be one of the ways in which these institutions can contribute more directly to the creation of greater equality of opportunity ; the notion of the 'second chance and the alternative route' is important in this respect. Some of the weaknesses of recent manpower forecasts were then outlined. It appears that such forecasts are of greater significance in relation to the provision of courses that involve intrinsic specialisation towards particular professions and vocations than they are for overall policy and decision making. Finally, it was made clear that manpower considerations are necessarily subject to broader social goals, some of which will be examined in the next chapter.

Chapter two: System objectives and social goals

The last chapter dealt with three policy objectives that in recent years have become commonplace in discussions about educational planning, and which have generated much research and analysis and a substantial literature. The goals and objectives to be discussed in this chapter are not less important — indeed, consideration of some of them should be logically prior to attempts to deal with problems of social demand, educational opportunity and manpower needs — but they are in most cases much more difficult to conceptualise and to quantify, and they have received less systematic examination. The discussion in this chapter is thus more speculative and wide ranging, and possibly more controversial. It is divided into two main sections. The first introduces some general considerations pertinent to the codification and statement of non-economic objectives for post-secondary education. The second outlines a tentative and incomplete list of social goals and system objectives, and points up some of the problems of definition and evaluation to which these give rise.

1. GENERAL CONSIDERATIONS

In addition to providing enough places to satisfy social demand, enhancing equality of educational opportunity, and meeting the needs of the economy for qualified manpower, what else does society expect of its institutions for post-secondary education? Clearly a great deal. Yet there is very little in the literature of educational planning and policy making that deals with the definition and evaluation of the broad spectrum of non-economic objectives that so often feature in statements of political and educational leaders. If the systematic discussion of these issues is difficult in individual countries, it is even more so in the international context. It is a hazardous undertaking to state the broader objectives of post-secondary education in a way that, whilst not merely rhetorical, is likely to be acceptable to governments of diverse political persuasion, and to peoples amongst whom there exists a wide variety of viewpoints concerning the aims of society and of education. Unfortunately, the sort of statement that secures ready agreement by everyone is unlikely to be of any real practical guidance for anyone. To cloak all this diversity of value and belief in a series of high sounding generalities is unhelpful and can be dangerous. It is unhelpful because it provides no positive criteria as to what kinds of action and decision can be regarded as representing or being opposed to the value in question. It is dangerous in that it implies a degree of consensus that does not in fact exist. The important problem in a democratic society, and in a community of democratic nations, is not that of securing consensus on political, social or educational issues, but in devising and institutionalising the *mechanisms* for debate and decision that enable real differences of interest to be recognised and resolved.

To begin to analyse objectives such as, for example, the preparation of men and women for the performance of leadership and citizenship roles in a democratic society, or the contribution of institutions of post-secondary education to the quality of life and to an orderly process of cultural change, is to raise issues of bewildering complexity, many of which were matters for debate in the ancient civilisations and have been subject to continuous discussion ever since. The politician or administrator, busy with the resolution of the complexities associated with the competing and conflicting demands of the various interest groups with which he has to deal, is unlikely to be sympathetic to the planner's approach to the definition of objectives.

> "A pre-requisite for the analysis of alternative solutions is the existence of choice criteria or objectives which are so explicitly defined that they constitute a basis for judging if one alternative is preferable to another, once the various costs of the alternatives are known". (Schwarz, 1970).

For most decision makers, life is simply not like that. Yet it is being recognised that we can no longer leave the determination of the objectives of our system of post-secondary education to chance. Large scale post-secondary education has no precedents. The education of the élites of the ancient and medieval world provides a series of classic paradigms for the analysis of problems of minority education. There is no such rich background against which the problems and future of post-secondary education in a mass industrial society can be considered. We cannot study its historical antecedents or profit from the experience of peoples of a different era and level of development. Yet we have to be able to say something about the culture, the values, the objectives and the performance of the new system that, sometimes without much consciousness of the fact, we are in process

of creating. We have to be able to say it in a way that recognises the realities of social action in a complex pluralist society. We have to accept that what we call the 'system' of post-secondary education is likely to be a mixture of the traditional and the aggressively new, the carefully planned and the expedient, the elegant and the ramshackle. We have to recognise that whilst neither our objectives, nor the systems to which they relate, will be as tidy or as logical as we might wish, there is some point in trying to introduce some coherence into our planning, and in trying to conceptualise and articulate the relationships between the diverse courses, institutions and programmes with which we deal. This planning and conceptualisation cannot be limited, as it has tended to be in the past, to readily quantifiable issues. The OECD Ministerial Council, in meeting to set growth objectives for the seventies, have stressed that growth is not an end in itself, but an instrument for creating better conditions of life and have "emphasised the need to pay increased attention to the qualitative aspects of growth and to the formulation of policies with respect to broad economic and social choices involved in the allocation of resources". In the light of all this, what are the kinds of social and system objectives that have implications for policy in post-secondary education, and which need to be taken into account when decisions are being taken which affect the structure of our systems and the allocation of resources within them ?

The attention given to both general and specific statements of educational objectives has in recent years shown a marked increase. There are four main factors behind this new concern. First, the effects of accelerated technological and economic growth have done much to call into question the traditional values of the various groups that make up society, and the relationships of these groups to one another. With many of the old values discredited it becomes necessary to work out new ones, to strive for some measure of agreement on the broad directions in which society is heading. Second, the necessity and desirability of planned change has led to the development of new languages and techniques, such as operational research, network analysis, system design and programme budgeting, all of which require explicit attention to be given to the objectives to which the activity in question is to be directed, and the statement of criteria by means of which success may be evaluated. Third, there is the effect of the adoption of systems approaches to learning, the application of instructional technology and attempts to individualise instruction. The preparation of programmed texts, the design of materials for teaching machines and other display devices and the integration of resources for learning into properly balanced educational 'packages', all demand a clear statement of objectives and a determination of criterion performances. Finally, philosophers and social scientists have been showing a greater interest in the analysis of educational concepts and language, with the result that the statement of educational objectives has tended to become more precise and less ambiguous.

But despite the new interest in the determination of objectives for the work of post-secondary institutions to which these developments have given rise there is still a large and unfilled *gap* between, at the one extreme, hortatory ideological statements, and, at the other, detailed curriculum specifications. The former may be of value politically, and the latter may contribute to better curriculum design. Neither are of much real use in relation to the planning of new structures. Many of the objectives that are implied in statements about post-secondary education are operationally meaningless. The terms they employ are subject to a wide variety of interpretation, they are frequently ambiguous and, above all, they suggest no criteria by means of which we may ascertain whether the objective has been attained. Such statements are often not intended to be specific or meaningful in relation to action or to the choice between real alternatives. Their main function is to overlay group and class conflict with a patina of agreement on fundamentals, to emphasise unity of orientation and of general direction, deliberately to play down the real conflicts of interest and intention that divide individuals and groups. Such statements help to create a sense of shared sympathy and group integration ; they are the stuff of the political process by means of which most of the really important educational decisions must be made. For some, education, like politics, is a "creaking, groaning, lumbering, tottering wagon of wretched makeshifts and sad compromises and anxious guesses ; and political maturity consists of knowing this in your bones" (Robinson, 1964). But this is not the idiom of the educational planner. His models require precise specifications, both as to objective and to output.

> "We shall never be able to make rational choices among competing alternatives until educational goals are precisely formulated and the putative relationships between ends and means have been specified and the actual correspondence between avowed purposes and

observable outcomes have been adequately measured", (Bressler and Tumin, 1969).

The important language gaps are not only those between countries. One of the major objectives of our planning for post-secondary education should be to make greater efforts to reconcile the language of the planner and the politician, the researcher and the administrator. The mutual, group-defensive criticisms that current misunderstanding encourages get in the way of dealing with some of the more important problems that face us. One step in overcoming this misunderstanding might be to give more attention to the definition and discussion of 'middle-range' objectives, which recognise political realities but at the same time embody performance criteria that are capable, at least in principle, of systematic appraisal and evaluation.

One of the few attempts to produce a list of educational objectives of this kind has been in connection with the large scale study of Comprehensive secondary education undertaken in the United Kingdom by the National Foundation for Educational Research. Groups of teachers, heads and professional educators met to determine a list of objectives for the comprehensive school (as distinct from particular types of cognitive performance) and psychologists and sociologists advised as to the tests and instruments that already existed or could be designed to measure the extent to which the objectives are being achieved. When the batteries of tests have themselves been validated, they will be made available for individual schools and school systems to undertake their own programmes of evaluation.

Is it possible to produce a list of objectives for post-secondary education which will not be so general that, whatever its ideological and political use, it will have little practical relevance, or so specific that it will be held to apply only to certain parts of the system? The justification for the list that follows is that it may stimulate those who read this paper to challenge what is here suggested and to propose alternative formulations and additions of their own. It can properly be argued that not all the objectives included are of the same order. Some are more obviously the province of governments than others, and variations between countries in the locus of decision making have not been taken into account. Furthermore, the elements of some of the objectives to be mentioned, all of which are multi-faceted, overlap with others in the list and with aspects of the three that were dealt with in the previous chapter.

2. SYSTEM OBJECTIVES FOR POST-SECONDARY EDUCATION

(i) *The system of post-secondary education should provide such facilities and resources for research and the production of new knowledge as are consistent with public and expert evaluations of the requirements of scientific understanding, technological growth, and the improvement of the quality of life.*

The kinds of research that at any given time a society chooses to support inevitably reflect its current problems and preoccupations, the things that matter to power and interest groups within it, the facts that are needed to help shape and to legitimate decisions about policies and programmes. Many studies have been made of the research activities of universities and other institutions, and of how scientific policy is affected by political, strategic, economic and social pressures. The international organisations have undertaken surveys which compare the research efforts of different countries in various fields. There is no absolute criterion against which a country can judge the adequacy of its research effort. In recent years much attention has been given to where this should be *located.* Should some institutions be developed as centres of excellence, and the research (and sometimes the teaching) effort in a particular field be concentrated upon them? What evidence is there to support the frequently heard assertion that high level teaching suffers if it is not closely associated with research in the same institution? Resources are unlikely to permit all post-secondary institutions to develop a formal research function. Should this be limited to universities, whilst other institutions concentrate upon teaching? What are the advantages of establishing national research institutes in particular fields of study? What criteria can we use to determine the proper balance between 'pure' and 'applied' work? The number of questions that can be asked about issues at this level is almost infinite; it would seem to be important that all countries should have the kinds of advisory bodies which can indicate the consensus of (or at least the nature of the conflicts within) the scientific community concerning the priority to be attached to alternative patterns of resource allocation for research.

At another level, there are questions which cannot be answered by the scientific community or by industry, but which are the responsibility of the whole society. Under what conditions does conflict arise between the requirements of improving the

quality of life and the imperatives of technological growth? Is there a case for deliberately slowing down the latter for the sake of the former? What effect would decisions of this kind have upon the structure and content of courses of post-secondary education?

(ii) *The system of post-secondary education should ensure the availability and appropriate distribution of courses of instruction consistent with*

- *— the range of disciplined knowledge that exists in society,*
- *— public and expert evaluation of the present and future needs and interests of economy and polity,*
- *— the availability of suitably qualified teachers and instructional facilities,*
- *— the cognitive and developmental needs of individual students.*

The part of this objective that refers to the needs and interests of economy and polity re-introduces the manpower considerations that have already been discussed, but the context is a broader one. Clearly, we cannot teach what we do not know; hence the reference to the range of available knowledge. But what should we try to teach, at the post-secondary level, of the things that we *do* know? In this respect, European institutions have tended to be much more conservative than those in the United States. Subjects and types of professional training that still have no place in European universities have been commonplace in the United States for some considerable time. The situation is changing in Europe as new institutions and types of course are developed, but there is still difficulty in getting universities to accept the claims of new subjects and branches of study. It would probably be a mistake to assume that every subject and professional specialism should be taught in a university; there is perhaps no need for us to emulate the kind of American practice that has produced credit courses on such subjects as 'mobile homes'. On the other hand, given that not all institutions are likely to have a research function, what will be the effect of concentrating all the preparation for certain professions in such non-research based settings? If the preparation of teachers, social workers, occupational therapists and various types of para-professional becomes mainly the province of non-university institutions, will the status and future development of these professions suffer? And if research in these fields is undertaken independently of the preparation of practitioners, will this research become unreal and ethereal? There are many other questions that need to be asked about the elements of this objective; some of them are discussed in subsequent chapters.

(iii) *The system of post-secondary education should ensure such independence and autonomy to individual institutions as will help to achieve*

- *— an appropriate balance of power between academic, professional, regional and national interests,*
- *— some measure of separation and protection for points of view that are critical of general and particular features of existing social, political, religious, economic and educational arrangements,*
- *— the encouragement of the emergence of new paradigms of knowledge.*

All this raises a great number of difficult and delicate problems. What is an appropriate balance of power between educational and other institutions in society? Should some institutions be treated differently from others? Universities have traditionally possessed a greater measure of autonomy than other post-secondary institutions. Should the kind of independence that universities have enjoyed be made more general (as seems to be happening in a number of European countries — see Chapter Six)? If so, what implications does this have for the responsiveness of post-secondary education to change and the social control that can be exercised over its activities?

Then there are the problems of *how much* separation and protection for dissident points of view institutions of post-secondary education should provide. This issue has come to the forefront in recent years with the growth of student militancy and activist interventions in political debate. What means should there be for protecting the staff of post-secondary institutions from untoward political and other pressures, whether exercised by local communities, interest groups or national authorities? At what point are national authorities justified in intervening in the work of these institutions?

The statement of this objective also implies that autonomy is necessary in order that 'new paradigms of knowledge' can emerge. The concept of *knowledge paradigm* is that of T. S. Kuhn (1962), and we

shall meet it again in a later section of this paper. Briefly, Kuhn argues that paradigms are "universally recognised scientific achievements that for a time provide model problems and solutions to a community of practitioners". As such, they define the kinds of problems and research topics with which most scientists will at any one time concern themselves (what Kuhn calls 'normal science') until the paradigm is broken and, as a result of new and unexpected discoveries and reformulations, a new pattern emerges. Scholars who are excessively preoccupied with tasks imposed upon them from outside, tasks which by definition will be consistent with the existing pattern of 'normal science', are unlikely to produce discoveries that will break the mould.

(iv) *The system of post-secondary education should reflect the importance of the concept of life-long education by* inter alia

- *organising teaching in a way that stimulates the student's desire and capacity for the subsequent refreshment and updating of his knowledge and skills,*
- *providing suitable courses and financial support whereby adult students may undertake initial, post-initial and mid-career training and education,*
- *adopting flexible entry requirements,*
- *establishing modes of examination and assessment that are consistent with the other facets of this objective.*

These are not matters that will necessarily be taken care of by the reform of institutional structures. Fortunately, there are already signs that universities, polytechnics and other institutions are recognising the importance of this objective in the design of their courses and the methods of teaching and examining that they employ, but there remains much to be done by way of making courses and qualifications more open-ended in relation to subsequent study and retraining. There is a potential conflict between new demands for vocational relevance in post-secondary courses and the importance of problem-oriented, methods of enquiry based courses that form the best foundation for subsequent study.

(v) *The system of post-secondary education should endeavour to minimise differences of status between institutions by*

- *ensuring that qualifications of equal standing are awarded for courses of the same duration and level, irrespective of the type of institution in which they have been pursued,*
- *examining, in relation to considerations of equity and of market demand and supply, the salary structures of staff in universities, polytechnics, technical colleges and other institutions,*
- *facilitating the transfer of students and course credits between institutions.*

It seems unlikely that any programme of diversification or reform of post-secondary education will remove the status distinctions that have traditionally characterised this area of educational activity. It seems equally unlikely, however, that these distinctions will remain unaffected by the development of new courses and new institutions. As we have seen in the discussion of manpower objectives in the preceding chapter, these status and prestige factors have to be taken seriously if new kinds of post-secondary courses are to attract students, and if new institutions are to offer a genuine 'alternative route'.

(vi) *The systems of secondary and post-secondary education should provide such information and counselling concerning courses and programmes of study as will enable potential students to make choices appropriate to their interests and capacity.*

As we saw when we discussed the 'social demand' objective, there are indications that, apart from the influence on choice exercised by structural features of secondary education and social environment, potential students are often not as well informed or as well advised as they might be concerning the opportunities that are open to them, the demands that particular courses are likely to make upon them, and the occupational possibilities that particular qualifications open up for them. Effective planning requires that the fullest possible information of this kind is made available. In arguing the need to plan for educational systems that have their own self-regulating adaptive control mechanisms, Williams (1970) says

> "The critical points in the establishment of such a system are, first, to generate the right kind of information about the system's operations ; second, to ensure that this information is available to all those, including parents and children, whose decisions significantly affect the operation of the system ; and, third, to ensure that the structure of the system is such

that the individual's response to the information he receives is in accordance with the welfare of society as a whole."

(vii) *The system of post-secondary education should seek to increase its overall productivity, to which end consideration should be given to such problems as*

- *the optimal duration of courses,*
- *the reduction of wastage consequent upon failure or non-completion or repetition of courses,*
- *the more intensive use of buildings and facilities,*
- *more effective methods of instruction.*

Attempts to assess productivity should take into account as wide a range of variables as possible.

In some countries at least, it seems unlikely that the rate of growth in the resources devoted to post-secondary education during the past decade can be continued indefinitely. It seems equally unlikely that the pressure of demand for post-secondary education will diminish in the near future — rather the opposite. In this situation it is merely prudent to explore all the possible ways in which genuine (as distinct from apparent) savings in unit costs can be achieved. These matters are further discussed in Chapter Four.

(viii) *The system of post-secondary education should provide opportunities for staff and students to participate in the determination of institutional policy and in decision making.*

Issues of participation in institutional government have been central to much student protest in recent years, and these have been extensively documented (e.g., Martin, 1969, Straw, 1969, Schelsky, 1969). In many countries steps have been taken to include students on decision making bodies and to provide a broader basis of consultation and discussion. Pressures from students in non-university institutions for such consultation and representation have been much less marked in some countries, but by no means in all. Whilst as Ashby and Anderson (1970) have remarked, students should be free not to participate in institutional government if they are not interested in doing so, it is difficult to maintain any clear distinction between university and non-university institutions and academic, vocationally biased and professional courses in this respect. If student involvement in decision making is a good thing in universities then it should apply generally, and not just in those places where the pressure for it is felt most strongly. Indeed, it could be argued that students following vocational and professional study lines should be encouraged to take full advantage of any opportunities for participation as may be created, not least because if they do not, the voice of other non-committed students may become too dominant and influential.

(ix) *There should be systematic examination of the contribution that institutions of post-secondary education can make to the moral and political education of citizens in a democratic society.*

This objective is stated in very provisional terms. Amidst the confusions and the anxieties of contemporary political and social life there is no simple answer to the questions that it poses. Many of the old guidelines and rules are gone or are in process of dissolution. There is a widespread recognition that moral and political education cannot be left to chance, that students' experiences in educational institutions do help to shape their values and attitudes and behaviour and to colour the political and moral culture. But there is little agreement on the kinds of moral knowledge and values that institutions of post-secondary education should endeavour to communicate to their students and how this should be done. As has been pointed out in many discussions of the functions and purposes of universities, many of the traditional academic virtues, such as accuracy, respect for evidence, tolerance and a spirit of radical scepticism, are also important moral and social values. During the past few years radical critics of the educational system have pressed the case for even these virtues to be regarded as ideological, supportive of a particular socio-political system and of a particular set of relationships between capital and labour, leaders and citizens. Against this, defenders of the university have argued that reason and discipline are intrinsic elements in any process of advanced study.

> "The authority of the university rests on two articles of faith, the supremacy of reason and disciplined imagination for solving intellectual problems, and (as Raymond Aron has called it) the moral code of liberalism... Reason and the moral code of liberalism cannot alone save society. Passion, compassion, wisdom; these are essential but they are acquired by living in society, not by listening to lectures. It is not the duty of universities to provide moral

panaceas for a sick society ; they cannot be all things to all men. Their limited function is to remain dedicated to an activity and an attitude which have already proved to be of incalculable benefit to mankind. To choose reason and the moral code of liberalism as articles of faith is not a matter of making the best choice among several systems ; it is inconceivable that the accumulation, transmission and advancement of knowledge could go on in any other way..." (Ashby and Anderson, 1970).

But however much one may agree that the stress should be upon 'reason and the moral code of liberalism' and that institutions of post-secondary education cannot be 'all things to all men', this still seems a rather narrow interpretation of the educative role that they perform.

Any adequate theory of teaching must reckon with the fact that what the teacher communicates to the student is always more than mere information or technique. In addition to the message, to what is said and what is demonstrated, there is always, in the communication theorist's terms, the background "noise" of the teacher's values and predispositions and style and of the institutional structure and processes within which teaching and learning take place. Educational institutions vary to the extent to which the relationships between message and noise are recognised and articulated, and this variation can usefully be represented as a continuum between what have been called *inducting* and *non-inducting* institutions. At the latter end of this continuum the emphasis is on the technical aspects of socialisation — on the communication of certain facts and information, skills and techniques, the adequacy of the student's grasp of which can be tested and certified. Such other effects as may accrue from these processes are fortuitous, unpredictable and unsupported by any preliminary consensus of social and political goals on the part of the authorities concerned.

Since the primacy of education of all kinds for the maintenance of social structure tends to receive prominence at times of rapid social and moral change, and the organisational needs of educational institutions themselves tend to generate a measure of moral concern, it is difficult to find examples of institutions performing purely technical non-inducting functions. Vocationally oriented adult schools and some technical colleges which usually have a large, itinerant and instrumentally minded clientele, are perhaps the clearest cases at the present time.

At the opposite extreme of the continuum are those institutions that seek to induct the individual into a way of life that amounts to much more than the ability to exercise a technique or to display a grasp of a particular range of information. Such institutions exercise their technical functions within an explicit framework of moral rules and procedures, for which there exists systematic ideological support. Doctrinally committed theological colleges would be an example of this type of institution.

In an expanded system of post-secondary education, catering for a considerably larger proportion of the population than at present, should we argue that all students should receive some form of formal or informal induction into values and ways of life consistent with the performance of citizenship roles in democratic society? Is it possible to do this whilst avoiding charges of indoctrination? Is politicisation the price we pay for lack of any systematic political education? This task, if it is to be tackled, is clearly a major one ; primary and secondary schooling will presumably have already done a good deal of the groundwork, while support will need to be available from other sectors of society and, hopefully, from the moral ambience of the culture as a whole.

(x) *The system of post-secondary education should contribute to the quality of life of its students and of all citizens, and to an orderly process of cultural change.*

In societies where a third or more of all young people will be passing through some form of post-secondary education or another, and where a substantial proportion of the adult population will return to such institutions at some stage of their working life for training, re-training or refreshment, there can be few ivory towers. In the following quotation Hoggart (1969) is referring to universities, but his statement can be generalised to a wide variety of other institutions.

> "Universities are not and cannot be uncommitted, unengaged. They are socially engaged in a thousand ways and at various levels, some complicated, some simple. They are engaged when they decide to take on this research rather than that... We are engaged as individual teachers in the very way we regard degrees and career prospects, in our assumptions about where the university, our subject and our students 'fit' into society. We all have such a picture, no matter how unexamined it may be. We are engaged in the way we live

out a certain relationship to the value-judgements of our culture, and this affects our whole personal and professional styles. Hence we are engaged in the way we treat other members of staff and in our manner towards our students as we pass them in the corridors. It is in the air of departments, in their grain, no matter how little some of us may have thought of it. We are all members of this society, in some sort of dialectical relationship to its assumptions ; and as university teachers we are professionally involved in institutions which are closely and paradoxically related to that society — institutions which underwrite much of its main thrust and also are arenas for criticizing it. There can be no such thing as 'unengaged' university work and teaching. There is no such thing as an 'unengaged' university teacher ; we are all, in a way, promoting styles."

What, then, are some of the styles that institutions of post-secondary education can and should promote ? The students, and the styles, of Oxford, Paris, Berlin and Oslo are no longer in a majority. What will be the styles of the new universities and the polytechnics, the IUTs, the *Fachhochschulen,* the District Colleges ? And how significant will they be in influencing the values and orientations of their students and of the societies that they serve ?

There are other, and broader issues which can be raised in relation to this objective. At one level, post-secondary education can provide students with a more advanced knowledge and understanding than they would otherwise obtain concerning such issues as the maintenance of the ecological balance, the dangers of unlimited and uncontrolled technological advance, the problems of the 'third world', the importance of internationalism and the nature of cultural change. At another level, authorities, teachers and students can act upon the presumption that we are presently involved in a major cultural revolution, which amounts to more than a phase in the working out of familiar trends in the process of industrialisation and technical change and which offers choices that have not existed before and are unlikely to recur. To adapt the language of T. S. Kuhn, already referred to in this chapter, it can plausibly be claimed that the weaknesses of the *existing cultural paradigms* are being demonstrated by the events around us, and that the time is ripe for the innovations that will enable new paradigms to be formed. On this reading, educational institutions must identify the major elements of the cultural revolution and decide either to work with the grain of the changes they imply or, where necessary, to exercise countervailing force to oppose these changes. (Reisman 1958, Floud, 1962). This may require, for example, a position to be taken on such issues as whether we are moving, or should move, towards what has been called a more 'person-centred' society, in which achievement motivation, the willingness to defer gratification and the drivenness that have been props of industrialisation to date will become less important, and in which the goals of the economic system and of technological growth will become secondary to broader goals of self-fulfilment and enhancing the quality of life (*). There are powerful currents flowing in contemporary society that lend support to such a movement, which would inevitably have repercussions, not only for the content of courses and methods of teaching, but for the whole orientation towards academic and vocational 'success' that characterises post-secondary education. Radical opinion would support the view that the university, the polytechnic, the teachers' college and the professional school should not simply be the means whereby students are taught about cultural change, but should themselves play an active part in the process of such change. This activist role is, as we have seen, rejected by some as antithetical to the purpose of post-secondary education. The average teacher in the college and the university is neither prepared for the consequences of or sympathetic towards such activism —

"... he is, of course, a specialised person, too modest to indulge in bold general visions. He has learned disillusion and self-control, usually at the cost of emotional richness ... he is not a politician ; almost by definition he has renounced wider power, and mostly he is too busy and too interested in his job to care even about power within the university ... he has shed responsibility. And herein lies selfishness, a selfishness highly characteristic of intellectuals, that the student — who accepts responsibility for the whole universe — is quick to detect. There must be both reform and resistance, but both are species of *action.* It is our incapacity to act that makes me wonder if we shall pull through." (Wiles, 1969).

(*) The expression 'quality of life' defies ready and simple definition and demands systematic analysis of a kind that the limitations of the present paper do not permit. The loose usage employed is felt to be justified in a discussion document of this kind.

The objective under discussion in this section requires that institutions of post-secondary education should examine the responsibility they have for both the consideration of and contributions towards the quality of life and processes of cultural change, and be willing to act upon the outcomes of that examination.

Summary

This chapter began with a consideration of the difficulties inherent in the definition of the broader social and educational objectives of post-secondary education. Such objectives should avoid the hortatory orientation that is endemic in political statements, involve the possibility of some kind of systematic evaluation, but not be limited to those functions which are readily quantifiable. A tentative and inexhaustive list of ten objectives was then presented, and the implications of each discussed. In the following chapter some of the main features of recent developments in post-secondary education in Europe will be considered in the light of the objectives dealt with in Chapters One and Two.

Chapter three: Structural and institutional changes in post-secondary education

To attain the objectives outlined in the preceding chapters requires that the number of places in institutions of post-secondary education be considerably increased during the next decade. The key factors are the changes that have taken place and are in process of taking place in secondary education in member countries. In many countries structures are evolving which defer until late adolescence the traditional differentiation of pupils into academic and non-academic streams; elsewhere the proportion entering and surviving until the end of secondary courses which lead to the university have substantially increased; in both cases the result is to increase the demand for places in post-secondary institutions. In the first section of the preceding chapter reasons were given why a simple policy of expansion of existing institutions and courses is not in itself a sufficient answer to the problems that the pressure of increasing numbers create. In this chapter attention will be given to ways in which member governments are attempting to tackle these problems, and to some of the further issues that arise from these policies.

1. GENERAL CONSIDERATIONS

In post-secondary education, as in other areas of human activity, there are hierarchies of prestige and esteem which have a powerful effect on the demand for places. The effects that these have differ considerably between countries. Generally speaking, it is the traditional universities that have had greatest prestige and which have attracted the greatest demand for places; exceptions to this generalisation include certain institutions of university status but without the title of university that cater for special interests and have only limited numbers of places (including, for example, certain schools of music and drama in Denmark and England) and some other institutions which operate a strict *numerus clausus* and prepare for particular occupations (such as primary teacher training colleges in Norway). It is clear that the status distinctions and criteria of prestige that were characteristic of a system in which only a very small proportion of the population completed the secondary stage and continued their education are bound to be affected by the expansion of numbers in the post-secondary sphere that is likely to occur in the next decades. The point has been well stated in a report to the Council of Europe's Committee for Higher Education and Research from the Irish Delegation (1970):

> "An important general matter at the heart of the question of diversification is how best the non-university higher education institutions and the universities can be brought into contact and co-operation with each other. Without such co-operation, which must somehow originate within themselves, a certain academic and social cleavage, of which at least the social aspect is disappearing at (secondary) level, will continue in higher education, to the great detriment of society."

Yet at the same time certain of the characteristics of the traditional systems, such as excellence in research and scholarship, need to be preserved. How do we continue to furnish an environment in which first class work will be done and to which scholars and research workers of the first rank will be attracted, within which the new knowledge that is so essential to the achievement of the technological and social progress of society will be developed and nurtured, whilst at the same time continuing to expand provision, democratise both access and internal government, and satisfy the needs of groups of students who intellectually, socially, and in terms of motive, may be very different from those with which we have been accustomed to deal? Above all, how do we do all these things without appearing to provide inferior substitutes for "real" university education, and whilst keeping open for as long as possible opportunities for all who show the necessary capacity to be able to participate in courses and research of the highest standard? This is the *core of the problem* that we face today.

It is a problem that has the most profound political significance. As we saw when discussing the social demand factor in the previous chapter, successful participation in traditional structures of post-secondary education has given rise to certain expectations concerning occupational destination and subsequent levels of social prestige. When much larger proportions of the age group participate in post-secondary education, these expectations are unlikely to be fulfilled to the same

extent, and students will need to modify their aspirations accordingly. Recognisable differences will exist between post-secondary institutions, which, in recognition of varieties of student need, interest and capacity, will have differing degrees of involvement in research, will tend to prepare for occupations at different levels of prestige, will attract staff of varied standing, and are likely to be subject to different patterns of public and private expenditure. These differences will not be acceptable by increasingly educationally self-conscious electorates and politicised younger generations in democratic countries if the differences in the rewards, social status and conditions of work of the vocations to which different kinds of post-secondary education lead remain large or are widened. *The implications of large-scale extensions in the availability of post-secondary education, and of the diversification of the institutions in which this education is provided, include a reduction in income and status differentia associated with professional and para-professional occupations.* This has already happened at the manual level, where differentia between skilled and unskilled labour have tended to narrow. Given such a narrowing of differentials, plus some modification of student expectations, diversification is a politically, as well as an educationally acceptable solution. Without these concomitant reforms, it is all too likely to be perceived as a way of providing a cheaper and rather inferior type of provision for the mass, whilst preserving the distinctiveness of certain traditional institutions for the few. The political consequences of diversification being perceived in this way are serious; educationally they may be disastrous. This is especially so in countries which still maintain a system of "open faculties", to which all students who successfully complete a specified form of secondary education have access. The wastage of such students is already very high. Ill-conceived programmes of diversification, without concomitant changes elsewhere in the educational system and in society as a whole, are likely to make such wastage even greater.

Broadly speaking, there have been two traditions in European countries in the way in which students are admitted to universities and to institutions of comparable status; sometimes these two traditions exist side by side in the same country. In both it has been necessary for candidates to have achieved a given level of performance in the public examinations taken whilst at school, or in some other educational institution. As far as the traditional university structures in countries such as France, Germany and in Scandinavia are concerned, a satisfactory performance in this examination (*Abitur, baccalauréat, student examen, examen artium*) entitle the holder to a place in an open faculty. Elsewhere, as in England and Wales, the university admits only a proportion of those who hold the formal examination requirements; a *numerus clausus* is exercised.

In the one tradition, passing the examination ensures *entitlement* to a place; elsewhere it ensures only *eligibility*. Institutions which maintain open access normally have high wastage rates and low productivity; all those qualified to try have the right to do so, but many will not succeed. Branches of study with a *numerus clausus* tend to have lower wastage rates, probably for reasons such as the volume of resources allocated to this kind of education and the qualities of the students selected. On the other hand, a *numerus clausus* may have the effect of denying access to students who, given the opportunity, might have proved capable of succeeding. In several countries developments are now taking place which may alter the traditional patterns. In Germany, for example, proposals for a new structure of secondary school examinations, with an *Abitur I* at the end of ten years (equated to the *Mittlere Reife, brevet* or 'O' level) and an *Abitur II* following a further two to three years of more specialised study than has been the norm to date, include the idea that the *Abitur II* would no longer of itself confer the right of entry to university. It is possible to foresee a *numerus clausus* existing in a wide range of faculties in a few years time, with admission being dependent upon the level of marks obtained. (Böning and Roeloffs, 1970). In the United Kingdom, consideration has been given to the abolition of the present 'A' (Advanced) level General Certificate of Education examinations at the end of the 13th year (Upper Sixth Form) and the substitution of two examinations, one to be taken at seventeen to establish eligibility for post-secondary education, the other at eighteen in the subjects that the student is likely to study at university or elsewhere.

These steps, and the present trend towards the provision of a greater range of more diverse opportunities for study at the post-secondary level, can be seen as an attempt to overcome the weaknesses of both open access and the application of a strict *numerus clausus*. But if alternative structures are perceived as lower level substitutes, they will fail to attract students who can obtain places elsewhere and will not achieve the objects of diversification. The French Vth Plan provided for 168,000 students in IUTs in 1972/73, but only 12,000 students were registered in 1968/69 and it seems doubtful

if the rate of expansion of these institutes will enable the target to be achieved. In the course of a discussion of increasing numbers in post-secondary education, a background paper on the work of the Swedish U 68 Commission states that the "... forecasts were based on the assumption of a greater swing from universities and higher educational establishments to other post-secondary education. Despite a considerable expansion of these latter forms the desired effect does not appear to have been achieved".

To the extent that new types of institutions are less rigorous in their entrance qualifications and provide a qualification of a lower standing to that of the first degree, it is wrong to claim that they have "equal status" with traditional university faculties, and other high status institutions. Such "parity of esteem" is unlikely to exist whilst there are large differences in the rewards and prestige of the types of occupation for which the various institutions prepare. If opportunities for students to transfer freely in both directions between one type of institution and another exist, and if such transfers are seen to take place, this may help to raise the status of the new foundations and remove some of the basis for discontent.

2. NEW STRUCTURES FOR POST-SECONDARY EDUCATION

It is only very recently that the term "post-secondary education" has begun to be used. Until a few years ago, in official and academic documents and in popular speech, the term higher education was employed to refer to the processes of full-time education available to individuals who had completed secondary schooling. Higher education was divided into university and non-university sectors, the latter including most forms of training for primary and secondary teaching, full-time and (exceptionally) part-time studies for various technical diplomas and licences, and some kinds of professional preparation. Although there were considerable differences between the amount of growth in both sectors experienced by member countries for each of the five year periods 1951-1956, 1956-1961, and 1961-1966, the overall national rates for the fifteen year period show a substantial similarity. The figures in the following table have been extracted and rearranged from statistics published by OECD (*) and show, firstly, the annual average growth rate in university and non-university higher education respectively for the period 1956-1966 and, secondly, annual growth figures for the number of university type degrees awarded during this period.

Annual average growth rates, 1956-1966, per cent

	University places	Non-University higher education	1st degrees awarded
Austria	9.8	N.A.	5.6
Belgium	7.1	9.7	4.1
Denmark	10.2	7.6	3.9
France	9.4	8.9	6.3
Germany	9.5	10.9	6.9
Ireland	6.4	2.2	5.3
Italy	6.7	10.3	2.5
Netherlands	8.1	7.9	2.6
Norway	13.1	N.A.	5.7
Portugal	6.7	8.1	2.8
Spain	5.4	N.A.	3.1
Sweden	12.2	3.6	8.5
Switzerland	7.5	9.7	4.8
Turkey	7.5	14.9	7.4
UK	6.2	7.8	6.2

Figures of this kind suggest a distinctiveness of university level and non-university level of post-secondary education that is difficult to maintain in the face of recent and on-going developments in member countries. To categorise all the types of structural change that have taken place, are taking place, or are planned presents great difficulties, and any classification is bound to be deficient in many respects. To the inevitable difficulties that go with attempts to put institutions with very diverse cultural and historical backgrounds and widely differing administrative and organisational structures into the same category, must be added the problems created by the breaking down of many of the traditional lines of demarcation and the fluid state of developments in the post-secondary sphere. Broadly speaking, however, there would seem to be eight main aspects of the way in which developments in post-secondary education are taking place ; in some countries several of these approaches may be found existing alongside one another.

(*) Provisional figures only. Some corrections have been supplied by member governments. Source : OECD Directorate for Scientific Affairs, *Development of Higher Education in OECD Member Countries, Quantitative Trends*, DAS/EID/69.23.

(i) *Creating new universities*

It would be unfair to many of the new universities that have been created in recent years to entitle them "traditional", since they have initiated many innovations and sometimes have features which mark them off clearly from their longer established counterparts. The institutions included in this category have in common their full and unequivocal official status as university institutions ; entrance standards and course requirements that are legally similar to those that exist elsewhere in the country concerned ; the right to award their own academic degrees or to present candidates for the national degree ; a level of research activity, multi-faculty or multi-subject structure and a basis of financing that is the same as that of existing universities. Included in this category are institutions such as the universities of Trondheim and Tromso in Norway, the Universities of Bochum in Nordrhein-Westfalen and of Konstanz in Baden-Württemberg, and the Universities of Kent, Sussex and East Anglia in the United Kingdom. There are many similar examples throughout Europe, which, together with the expansion in size of existing universities help to account for the growth in number of university students that took place during the 1960s.

It is nearly always easier to introduce innovations where there is no heritage of past assumptions and procedures to be reckoned with, and some of the new universities are notable for the changes they have introduced in such matters as the organisation of faculties and departments ; the structure and content of degree and diploma courses — with an emphasis on plural-disciplinary approaches and area studies (see below) ; methods of teaching ; in the processes of internal self-government, and in staff/student relations. Further reference to some of these innovations will be made in the relevant sections of this paper.

(ii) *New universities from existing structures*

(a) By division or amalgamation

In some countries new universities have been created by the division of existing structures which have become administratively and academically too complex and unwieldy to function effectively as a single unity. A notable example is Paris, which now has no fewer than thirteen universities, eight of which co-exist in the centre of the city, sometimes sharing laboratories and facilities in the same building, whilst the remaining five will be developed on the periphery of the city — Vincennes, Porte Dauphine, Nanterre and so on. There will be a good deal of specialisation in the work of these various institutions. Paris I, as it is still called at the time of writing, will be concerned mainly with law, economics and some of the other social sciences, whilst legal studies will predominate at Paris II ; Paris III will concentrate upon linguistic studies, Paris IV on the traditional humanities, and Paris V on medicine and the human sciences. An example of division in the United Kingdom is the university of Newcastle upon Tyne which was created in the mid-sixties by splitting off King's College, Newcastle from the much older University of Durham, fifteen miles to the south.

Whilst size and geographical local have played an important part in divisions of this kind, special factors have played a part in some countries, such as the language problem in Belgium, which has led to the creation of four universities, two Dutch and two French speaking, from the former Catholic University of Louvain and the Free University of Brussels.

(b) By up-grading

This has been an important source of new university structures during the period of rapid growth during the sixties. The tendency for educational institutions to aspire towards higher standards of work and higher social and educational status is well known, and can be seen in operation at every level from the elementary school to the university. This tendency is in many respects laudable, and has brought many benefits both to individual pupils and students and to the societies concerned. But it also gives rise to problems. The institution that is over-concerned with upgrading can sometimes neglect the bulk of its work in favour of more advanced levels of study and an involvement in research, and thus fail to satisfy the objectives which led to its creation. This can be accompanied by demands for increased financial support, better facilities, and the provision of improved staff/student ratios, the case for which is often argued in terms of greater equality of opportunity and parity of esteem. The inherent upward pressure that is generated inside many educational institutions reflects the understandable ambitions, aspirations and ideals of the staff and students concerned; such pressure can help to create a dynamic sense of purpose in the system as a whole. But considerations of public policy will sometimes dictate the need for such aspirations towards higher status to be controlled and re-directed.

In the United Kingdom the Secretary of State for Education had to make it clear in 1965 that no new universities would be created for the time being and that it was necessary for a substantial proportion of the institutions providing courses at degree level and for professional careers to remain within the "public sector" under a rather closer degree of social control than that to which the universities proper were accustomed.

In relation to the creation of the *Fachhochschulen* (special subject institutes of higher education) in Germany, it has been suggested that :

> "... there seems to be considerable and understandable fear on the political side that the change in rank and entrance requirements for (these institutions) will in the long run, lead to the demand to be paid, staffed and equipped like the traditional universities. There are similar fears for the employment conditions of the graduates of these institutions. For the Civil Service and public as well as many other branches of employment, career chances and salary largely depend on the level reached in formal education. The "short course" graduate would be placed a step or two below the "long course" one, and the autonomous university might be pressured to agree that the three years were simply not enough." (Böning and Roeloffs, 1970 p. 39).

The problem is a very general one, and is not only a matter of when a given institution can be said to have achieved levels of student recruitment, teaching and research activity that entitle it to full university status ; there are broader policy considerations involved, which are crucial to the success of a diversification policy in post-secondary education.

Many examples of upgrading to full university status could be quoted, from several European countries. The *Pädagogische Hochschulen* in Germany have been upgraded to university status ; some will soon be able to award the Doctor's degree in addition to the *Diplom Pädagoge*. Colleges of Advanced Technology (CATs) in the United Kingdom evolved from a group of large regional technical colleges, and later became full universities in their own right. In many cases the process of up-grading has been accompanied by a widening of the range of subjects and of the disciplines with which the institution concerns itself.

(iii) *Establishing new institutions for post-secondary studies*

This is one of the most important forms of diversification that has been attempted in member countries in recent years, and the one that has received the most attention. Again, if detail is not entirely to be lost, some sub-categories are needed. But within these sub-categories it is possible to distinguish a variety of ways in which the structures concerned have been created — by upgrading, by broadening the course offerings and educational functions of a former mono-technical institution, by combining a number of separate institutions into a single structure. Furthermore, it is necessary to identify the nature of the relationship between these new institutions and the traditional universities. These vary from virtually complete administrative, financial, social and academic separation, through a loose pattern of association and interchange to the fully fledged comprehensive university (see (v) below). Some illustrative examples may serve to indicate the complexity of the current situation in member countries.

(a) By up-grading

For a long time, as we have seen, it was possible to classify post-secondary education in European countries as university or non-university. Whatever the differences, the universities had recognisable characteristics in the various countries, and for certain purposes could be considered as a whole. Similarly, the sub-university sector of higher education could be seen as including a wide range of institutions, many of a technical or special character, which reflected the way in which educational facilities for training members of many of the newer professions and for applied science and technology had developed, often outside traditional university structures, and had been designed to meet the needs of a clientele that was socially more broadly based than that of the university. The growth in importance of applied science and technology to the economies of member countries led to a considerable expansion of interest in education of this kind during the years after World War II, and many of the former technical colleges began to diversify their courses and provide facilities for more advanced work. It is from this group that have come many of the institutions that today are in process of being up-graded to a status not dissimilar to that of a university, and which are in many cases providing a substantial proportion of their students with university level courses

and qualifications. Whether the offerings of these institutions will be seen as constituting viable alternatives to full university study will to some extent depend upon the length of their courses and the nature of the qualifications that they offer. In the United Kingdom, thirty *polytechnics* have been created by the up-grading of a number of existing technical colleges and, in some cases, their integration with other post-secondary educational institutions such as colleges of art, commercial colleges and teacher training colleges. These polytechnics provide degree level courses, authenticated by a national degree granting body known as the Council for National Academic Awards (CNAA), which are of the same length and yield the same qualification as traditional universities. It is interesting in this respect to note how the distinction between the degrees awarded by a university and other awards at degree level has broken down over the past decade. When the colleges of advanced technology (now full universities) were created in 1962 they were empowered to award the Diploma in Technology (Dip. Tech.). Later on they received permission to award a Bachelors degree, but this had to carry an asterisk, indicating the source from which it had been obtained. After a brief spell, the asterisk was dropped and the degree now awarded is the same as that of other universities.

In respect of the breadth of studies they will encompass, and in the length of their courses, the English polytechnics are rather different from the *Fachhochschulen* that the Prime Ministers of the *Länder* agreed in 1968 should be established in the Federal Republic, based upon existing advanced technical colleges (*Höhere Fachschulen*). These special subject institutions of higher education are defined as "independent institutions of higher education which offer education and instruction on an academic basis" and their legal status and autonomy are to be assimilated to that of universities. But the fact that these institutions are not of equal rank with the university as far as status and entrance requirements are concerned has led some people to doubt their value as a way of reducing the pressure of demand on the established university faculties, and it has been suggested that they may in future become a kind of "undergraduate college" providing shorter courses that will be terminal for some students, but will lead on to upper level university studies for others.

(b) New short-cycle courses

In a number of countries efforts are being made to establish new structures which provide high-level post-secondary courses of shorter duration than the normal university programme of studies. There are several motives for this development. The wastage rates from traditional university type courses in open faculties are high, and it is clear that for many students the courses that they have failed to complete are not those for which they were best suited in the first place (Table 2). The average length of time needed to complete such university courses is also considerably greater than the minimum period. (An analysis of the progress of one thousand students in the medicine and law faculties of French universities shows that only 402 students will obtain their degree and of these only one third will graduate within the minimum period of four years. The average length of study undertaken by a graduate is 5.3 years. To produce these 402 graduates the educational system will have to provide 2999 "years" of study, 7.5 years for each graduate. [OECD, 1969].) Some students may find a life of study uncongenial at the end of two years, but may later wish to return in order to continue their studies, which in some cases is difficult under existing arrangements. For others, two years is all that is needed to complete the general or vocational preparation that they need before entry to employment at about the age of 20. Short cycle courses can also be of value in helping to sort out those who are most likely to benefit from continued post-secondary education at a more advanced level, and may also help students to identify the subject areas, disciplines and professions in which they have greatest interest and in which they are most likely to succeed. For these and other reasons, structures providing short cycle courses, equal in standing to those undertaken during the first years of a full university programme have been established in many countries in recent years.

In Belgium some of the institutions known as "University Faculties" (Namur, St. Louis Faculty in Brussels, St. Ignace Faculty in Antwerp) offer first courses in certain university subjects. In Norway the *district colleges* provide short cycle courses, aimed at meeting the needs of the following groups of candidates :

"— Matriculation candidates who after leaving school or after a period of employment for practical experience or any other lapse in time not devoted to further education, apply for admission to a district college.

— Persons who are not matriculation candidates, but who have acquired other educa-

tion qualifying them to study on a level with such candidates.

— Persons who have started to study at a university/college and after a time decided to attend a course offered by a district college."

It will be seen that the relationship of the Norwegian district colleges and the universities is two-way. One of the objectives of a formal education at the district colleges is to enable students to continue studying at a university without any appreciable loss of time, and the Committee on Higher Education (Ottosen Committee), which recommended the establishment of district colleges, suggested in their report that students who wished to qualify for further study at a university should be able to do so within a normal two-year study period in a district college. Similarly, students who had completed part of their studies at universities/colleges should be provided for in the district colleges by courses which enable them to complete a vocational training. This, as the committee noted, necessitates close co-operation between the universities and the district colleges.

In discussing short cycle courses of university standing mention must be made of the work of the *Instituts Universitaires de Technologie* in France. The establishment of these institutes represents one of the most explicit attempts in European countries to meet the needs of developed technological economies for "middle level" engineers and managers. A statement on this matter in the report submitted to the Council of Europe's Committee for Higher Education and Research is worth quoting in full :

> "The '*cadre moyen*' is first and foremost a man who carries out the duties of an executive at a level lower than that of a senior engineer or manager. He is capable of assembling a piece of equipment or of following through an average sized business transaction. He must have a good working knowledge of several techniques. But the holder of this Diploma can also be considered as an expert in a technical process, able and willing to work in a team under the orders of a senior executive. This being so, the student must be competent in one discipline, but he must also keep abreast of the latest technical developments. The dual nature of the student's training raises some difficult problems, by no means all of which have been solved. And yet the economic life of the country needs men of both types; not all projects are large-scale ones requiring teams of experts and high powered leaders; many are on a small scale and demand competent men capable of designing a system and developing it with the help of workmen."

The relationship between the courses provided in the IUTs and those of the universities is less direct than in the case of the Norwegian district colleges. Only a small minority of students are deemed likely to be capable of continuing directly to the more theoretical studies of a university, and the selection procedures for such transfers are strict. The normal intention is that holders of IUT Diplomas should continue their studies on a part-time or recurrent basis whilst in employment. As in the case of the establishment of the *Fachhochschulen* in the Federal Republic of Germany, doubts have been expressed concerning the ability of the IUTs to provide a form of post-secondary education that potential students and their families will consider to be a viable alternative to the university, especially when access to the open faculties is still unimpeded by any *numerus clausus*. It seems clear that the ability of short cycle structures to cope with the pressure of demand for post-secondary education depends to a certain extent on the links that they have with other institutions. Where the demarcation lines are strict, transfers are few, and both academic and institutional links are tenuous, students of high quality are unlikely to be attracted to the short cycle courses.

Reference should be made at this point to the rapid development in the United States in recent years of two year institutions, often known as "*community colleges*". Whilst such institutions are seldom directly comparable with similar developments in Europe, and the standards of work that they achieve are often equivalent only to those of the eleventh to thirteenth year of European school courses, the two year college does represent an important attempt to cope with the pressure of demand for places in post-secondary institutions, whilst maintaining links with upper level post-secondary education in the universities and preserving opportunities for the student to transfer the credit he has obtained for work at community college level. In the United Kingdom 30 new polytechnics which are in process of being set up following an official recommendation of 1966, are to continue to provide, in addition to courses of normal university length leading to the award of a degree, a large number of shorter cycle courses which provide certificates or diplomas of voca-

tional and professional relevance. Interest has also been expressed in recent months in universities providing two-year courses for the award of "general" as distinct from "honours" degrees at the end of two-year courses, with a smaller number of students than at present going on to complete a full university course in three or four years. This would enable universities substantially to increase their "through-put" of students without the necessity of greatly increased public expenditure on buildings and other facilities.

(iv) *Federal association of new and existing institutions*

In a number of countries, institutions located within a restricted geographical compass are being brought into closer relationship with one another, with a view to stimulating the interchange of students and of staff and the sharing of facilities. The Danish *University Centres* are an example of this type of development. Attempts are being made to break down the separation between academic and non-academic studies, and to establish basic two-year "modules" which would either be terminal or would enable students to go on to further and more advanced work. A report to the Committee for Higher Education and Research of the Council of Europe states that the aims of this policy are as follows :

> " Through the establishment of common basic studies to postpone the student's final choice of study, to create — completely or partly — an integrated education at the first steps of related academic and non-academic studies in order to make transfer uncomplicated and to replace drop-out by transfer.
>
> Through the building up of the studies in modules and the division of subjects into units to diversify the post-secondary education system in a way which allows the student to finish his study with a recognised diploma at a level corresponding to his interests and capability, which will offer the labour market a wide variety of highly qualified manpower and which will make the composition of new studies a running process."

University centres are defined as centres of post-secondary education and research, where the student takes short study programmes of between two and four terms duration which are either terminal or enable him to continue to the highest possible level of academic training. In order to secure economies in scale whilst at the same time avoiding the creation of excessively large institutions, the university centres will tend to specialise in a restricted number of main fields, such as technology and economics or humanities, or biology with medicine and social sciences. The university centre of Aalborg, which is expected to be established in the mid 1970s, will be based on existing institutions including an academy of engineering, a technical college and teachers training college and a branch of the Copenhagen school of economics and business administration.

The Norwegian district colleges, referred to in the previous section of this paper, will also operate on a federal basis. The Norwegian Committee on Higher Education defined such district colleges as "a number of tertiary education units within a specified region united as one organisation. The college is thus more a superstructure comprising higher educational units than a school in the restricted traditional sense. It follows that the college need not be gathered under one roof, it need not even be in the same township or city, although centralisation in one place would be an advantage and should therefore as a rule be the aim."

In the Federal Republic of Germany, the concept of 'co-operative comprehensive universities' has been introduced in which existing universities and other institutions of university level, *Fachhochschulen*, colleges of art, colleges of music and other bodies are linked by joint co-ordinating committees. The purpose of such co-ordination is specifically to ensure that students can readily transfer from one level of study to another, even when entrance conditions and final qualifications are different.

(v) *The concept of the "Open University"*

Among the most interesting of the proposals for diversification of post-secondary education that have been considered in member countries in recent years are those concerning the creation of "Open University" structures, designed specifically to be much more flexible in respect of both entrance requirements and qualifications awarded than traditional structures, and in some cases to use a combination of direct teaching and systematised multi-media instruction. For the purposes of this paper, two variants of this type of proposal can be distinguished, one of a speculative nature in the Federal Republic, the other, already established, in the United Kingdom.

(a) *Baukasten-Gesamthochschule*

A working party under the chairmanship of Professor Dr. Ernst von Weizsäcker (1969) has prepared a scheme for the establishment of an *open comprehensive university*, within which would be provided very diverse types of study course and qualification. The proposed comprehensive university would comprise all existing forms of post-secondary education, the universities and the various other colleges in one single organisation. Numerous district colleges would be grouped around central colleges of higher education (*Zentralhochschulen*) and would legally form part of it. This system would also combine formal higher education with all other forms of post-secondary education, particularly with adult education (permanent education).

The programmes of study are seen as being built up from units (*Bausteine*, building bricks). It is envisaged that a three year programme of study might include twelve units, and it would be necessary for students to pass the examinations of each unit before being admitted to the next. The first academic degree would be awarded to those students who successfully passed ten or more units, half of them in their main subject. It is envisaged that access would be open to all, although those without the *Abitur* would consult professional advisers on study facilities and career prospects who might first of all require them to take some part-time classes prior to entering upon their studies in the open comprehensive university. The proponents of this scheme see its main principles as being the availability of study courses adapted to individual needs combining a variety of disciplines ; the possibility of studying in various departments, which might not all be in the same institution, at the same time ; the possibility of organised recurrent education for those who have already entered employment ; optimal use of the staff, rooms and buildings of existing institutions, and the integration of correspondence courses into a multi-media system.

Weizsäcker and his colleagues see the proposed open comprehensive university as a natural continuation of the future comprehensive school. A similar view has been expressed in the United Kingdom by Professor Robin Pedley (1969) of the University of Exeter, who has proposed the establishment of a pattern of post-secondary studies based upon each of the fifty-eight new unitary regional authorities that have been proposed in the report of the Redcliffe-Maud Commission on local government. Pedley argues :

> "The comprehensive university would bring together and co-ordinate the work of all the existing and higher or further education institutions in the area, which at present under quite different forms of government are likely to compete with, or simply ignore each other rather than to co-operate. Such a pattern would help to sweep out the cobwebs from universities which are too isolated in their thinking, and also to remove the feeling of inferiority which dogs the colleges. It would, moreover, help to promote that equal respect for post-school education at all levels, including part-time as well as full-time education, and that freedom of movement from one type of course to another, which a democratic society might be expected to desire... Without reform of post-school education, the comprehensive principle will be stunted in the schools and some of its greatest benefits lost..." (p. 25)

Proposals such as those of Weizsäcker and Pedley are by far the most radical that have yet been made for the restructuring of post-secondary education. A somewhat less "comprehensive" pattern, but one which still involves major innovation of access, structure and content is the Open University pattern in the United Kingdom, which is discussed in the next sub-section.

(b) The Open University

During the early sixties in the United Kingdom a number of individuals and groups became interested in the possibility of using television and radio for systematic high level teaching, such as is already the case in some parts of the United States. In 1967 a government white paper was issued entitled "University of the Air", following which a planning committee was established with the task of working out a comprehensive plan for an Open University. The change of title was due to the realisation that it would not be feasible to provide the necessary amount of television and radio time to enable all the university's teaching to be conducted through these media.

The Open University received its charter in May 1969, and the first courses will be mounted from January 1971. The Chancellor of the Open University in his inaugural address in July 1969 stated that the University was open in four major respects. Firstly, to *people*. There will be no formal entrance requirements for admission to Open University courses, although regional officers of the University will be available to counsel students who wish to

apply for particular courses. The only bar to the continuation of studies within the Open University will be the failure to progress adequately. Second, the University is open as to the *places* where it operates. Although it has an administrative headquarters in one of the recently developed new towns in the south midlands (Milton Keynes in Buckinghamshire) it is intended that the University will provide for students in any part of the United Kingdom. Third, the University is open as to its *methods*. The first programmes of study will be mounted on the basis of correspondence courses, television and radio transmissions, residential vacation courses, and a limited amount of face to face contact with individual tutors and advisers drawn from the staff of existing institutions in the area where the student is resident. Finally, the Chancellor stated that the University is open to *ideas*. It is clear that the lack of traditional structures and habits will make it easier for the Open University to adapt its methods and approaches to new communications media and to the needs of the students who enroll than is the case with other institutions with longer histories and constraints imposed by existing physical plant.

Open University courses will be available in six main lines of study — arts, science, mathematics, technology, social sciences and educational study. The University awards a single degree at the Bachelors level, the Bachelor of Arts (B.A.) with or without honours according to how many credit bearing courses the student has successfully completed. There is maximum flexibility between faculties, so that students can build up their degree course on the basis of units drawn from the offerings of several faculties. Courses are offered at foundation, second, third and fourth levels, the students being required to obtain credits in two first level (foundation) courses, a further four courses at the second or subsequent levels for a B.A. degree and a further six courses at second or subsequent level for a B.A. honours, at least two of which must be at the third or fourth level.

The Open University will also be able to award higher degrees including the doctorate. First priority is being given to the development of undergraduate courses for the B.A. degree.

The first Open University students will begin their studies in January 1971, the academic year being from January to January as distinct from the normal pattern in the United Kingdom of October to July. In determining the number of students who will be allowed to register for the first courses in January 1971, note will be taken of the distribution of applicants among a number of occupational categories, and efforts will be made to ensure that offers of places are distributed as widely as possible among these categories.

At the moment the Open University is intended to cater only for students above the age of 21 years, and thus it is not in direct competition with other post-secondary institutions which recruit their students at the age of 18 on completion of their secondary schooling. It remains to be seen if the Open University will be used as a way of relieving the pressure of numbers on existing post-secondary institutions by extending its intake to students in the 18-21 group.

(vi) *Non-university vocational and professional education*

So far we have been mainly concerned with a description of some of the ways in which university type studies, either long cycle or short cycle, are being provided in member countries, and the new structures that are under discussion or in process of evolution for the provision of such studies. As has already been noted on more than one occasion in this paper, it is becoming increasingly difficult to make any kind of sharp distinction between university level and non-university level post-secondary work. In the fullness of time it may very well be that this distinction will become so diffuse as to be no longer usable, but for the present it would appear to have some utility in that the concepts of university and non-university study are well understood and furnish a useful structure for discussion. In this and the remaining subsections of this chapter we shall be concerned with forms of post-secondary provision that involve entrance requirements and/or course demands and/or qualifications and awards that are generally regarded as making fewer intellectual demands and as preparing for a somewhat lower initial occupational level than university courses.

The range of non-university level vocational, technical and professional educational institutions in member countries is very large indeed, and it is out of the question to attempt any summary of the main structures and criteria for admission and graduation. Within this broad class of institutions — sometimes even within a single institution — there may be found a very wide range of studies, from those which are the equivalent of work that some students undertake during the upper levels of their secondary education, to courses which overlap with those of the university and may in certain circumstances carry credit for the award of university degrees.

In some countries, it has been suggested that the technical colleges, the title of which conceals a broad spectrum of studies in the humanities and social sciences as well as in technical and vocational training as such, provide a model for the future structure of post-secondary education, in their wide range of offerings, their lack of rigid entrance requirements, the ease with which students can transfer from one course or level of study to another, the wide use of part-time studies, and the possibility of terminating a period of study in order to take up employment, but with the retention of credit for the work done which can later be taken into account when a student returns to full-time or part-time study to complete his qualification.

The *Ingenieurakademien, Akademien für Betriebswirte, Höhere Fachschulen* and *Fachschulen* in the Federal Republic; general and specialist technical schools and colleges in France; certain of the functions of the new district colleges in Norway; numerous colleges of technology, technical colleges, colleges of commerce, institutes of further education and technical institutes in the United Kingdom and in Ireland; the *Hogere Technische Scholen* and *Sociale Academies* (Social work training colleges) in the Netherlands; the higher vocational schools, higher technical schools, and higher schools of administration and economics in Switzerland; the Turkish technical academies, and the many kinds of agricultural college that are to be found, especially in countries in which agriculture is still an important element in the economy; schools and colleges for the training of medical auxiliaries, such as physiotherapists and laboratory technicians — all of these can properly be included under the present sub-heading. The range and diversity of the work involved is enormous, and is paralleled by the great importance of these institutions to the economic and social development of the communities and societies which they serve.

It is through institutions of this kind that much of what will later in this paper be discussed under the heading of "recurrent education" takes place. There is often involved in the work of institutions at this level a high degree of partnership between local municipalities, the national authorities for education, and industry. In this connection mention should be made of the arrangements in France whereby the educational standards of each department of the university institutes of technology (considered above) are supervised at national level by a board including representatives of both the teaching profession and of industry, in which the latter predominate. Both trade union and managerial interests are represented on these boards, which lay down the outlines of the syllabus and ensure that it is relevant to the needs of the industry or profession to which it relates.

It is easy in connection with vocational and technical education to forget the direct contribution that is made to post-secondary provision by the activities of industrial firms, through the operation of apprenticeship schemes and also in their own technical colleges and provision for recurrent education through re-training and refreshment courses.

(vii) *Teacher education*

One of the most important forms of post-secondary education provided in member countries is that for intending teachers in primary and secondary schools. In some countries a substantial proportion of university graduates enter teaching, and many of those who are continuing their post-secondary education in non-university institutions are preparing for work in the primary and lower secondary schools. The numerical significance of teacher education in the pattern of post-secondary education as a whole justifies its having a more important place than it has been given here. But in recent years there have been a number of country by country and international studies of teacher education and supply (*), and, given that the title of the Conference has been deliberately chosen to suggest a global approach to post-secondary provision it has been thought best to omit any detailed discussion concerning the structures within which teacher education is carried on and the content of the courses that intending teachers follow. There is, however, one point which should be made. Within recent years, institutions responsible for providing teacher education have been up-graded in a number of member countries, e.g. in the Federal Republic of Germany, England and Wales. In some countries these institutions are now able to confer academic degrees (**). One aspect of this up-grading has been to widen the range of vocations to which students in former teachers' colleges may follow, and thus to introduce important new factors into the equation between the demand for teachers and the supply that is forthcoming from

(*) e.g. OECD, 1969 (v.).

(**) Such as the *Diplom-Pädagoge* in Germany and the Bachelor of Education in England. (The latter is in fact *conferred* by the university with which the Colleges of Education are associated, but all the teaching for the degree is undertaken in the College.)

universities and colleges. At the same time, the up-grading of other institutions and the increasing range of their studies, and the establishment of new university type courses, has increased the sources of supply from which teachers may come. It seems clear that the process of diversifying post-secondary education is bound to have important effects upon the ways in which intending teachers are recruited and prepared for their tasks.

(viii) *Recurrent education*

There is at present a lack of clarity and commonly agreed meanings in the concepts that are used to describe some of the more far reaching policies, plans and ideals for the future development of post-secondary education in Europe. Terms such as *permanent education, life-long education, adult education, in-service education, recurrent education* and *post-work education* tend to be used interchangeably and without any very systematic attempt to define the relationships and differences between them. A certain amount of conceptual confusion is no doubt inevitable at the present time. It reflects the way in which educationists and policy makers, from diverse cultural and institutional backgrounds, are struggling towards a clearer understanding of the significance and implications of the tendency for individuals to become involved in various kinds of formal and informal educational activity throughout their lives, rather than simply in childhood or immediately prior to entering upon an occupation. Of the various terms used, recurrent education is perhaps the most recent, the most radical, and that which bears most closely on the development of post-secondary education as a whole. In order to appreciate its meaning, it will be necessary first of all to look briefly at some of the other related concepts that are in use.

(a) *Adult education* is a term traditionally associated with the provision of opportunities for liberal and cultural studies, of varying degrees of formality, for those who have already completed a period of secondary and, sometimes, post-secondary education (*). Just as the educational systems of member countries include a large number of technical and vocational colleges, so they make extensive provision for the non-vocational adult education of their citizens. Both public and private institutions provide a bewildering variety of programmes, varying from a single lecture by a visiting specialist to a one or two year programme of systematic study, in artistic, cultural, linguistic and non-vocational technical studies. It is by this means that many individuals have come to recognise how their own interests, in both senses of that term, may be served by continuing study, and have gone on to enroll for more systematic programmes of work leading to the award of recognised qualifications, either to equip them for a specific profession or occupation, or to up-grade them within the sphere in which they are already active. But because the type of non-vocational education with which we are concerned under this heading has little apparent direct connection with the economy or with the production or improvement of the manpower available to serve the interests of the occupational sector, there is a lack of systematic data both within and between countries concerning the numbers of adults who are enrolled in various types of study programmes, and the subjects with which they are concerned. Estimates in the United Kingdom suggest that about one in every sixteen members of the adult population participate in some kind of non-vocational adult education, which is provided through the auspices of the university extra-mural boards, organisations such as the Workers Educational Association, and adult education centres financed by local education authorities. It may be of interest in the present context to refer briefly to the growing interest that is being shown in types of education for retirement. As longevity increases and the age of retirement falls, men and women may expect to have available a period of between ten and twenty years in which to pursue interests that the preoccupations of work and family commitments may have made impracticable during their working lives. Indeed, there is ample evidence to show that the maintenance of individual and social well-being amongst those who are past working age is to a large measure dependent upon their ability to find interests and pursuits which are satisfying and which maintain their sense of usefulness and worth. In this connection, non-vocational and adult education has a considerable part to play, but only in a few countries have any substantial resources been devoted to the development of this type of provision.

(b) *Permanent education.* Again, definitions of what is meant by this term vary. Studies commissioned in recent years in this field by the Council of Europe include the following statement :

> "The term permanent education... is a new concept which comprises the whole field of

(*) This definition excludes fundamental adult education, which seeks to remedy lack of basic skills, e.g. literacy, consequent upon inadequate primary and secondary schooling.

education spread out over the entire lifetime of a person, in appropriate stages and periods, taking into account the continued development of the abilities, motivations and aspirations as they vary with age and with the settings in which the individual is placed from period to period in his life".

Permanent education does not describe a system ; in constitutes a *principle* in terms of which systems might be organised. This term has done much to communicate to educationists and others in member countries the importance of regarding the certificates and diplomas that an individual obtains at the end of a period of full-time secondary schooling or post-secondary education as being not the end of systematic education, but only the end of a beginning. Social and cultural change ; the rapid obsolescence of existing skills and knowledge; the need for individuals to have opportunities for intellectual and cultural refreshment in the course of a longer working life ; the possibility of delayed intellectual development ; the need to satisfy new motivations and interests that develop in later life — all these are among the factors that have led to a recognition that the needs of the individual and society are not adequately met when formal educational provision is restricted to little more than the first two decades of life.

(c) Of the remaining terms with which we are concerned, *in-service education* and *post-work education* have generally been used to refer to periods of further retraining and refreshment that the individual may experience in the course of his working life. As they have been used by most commentators they have had a somewhat more directly vocational orientation than adult education.

As far as particular professions and occupations are concerned, it has been argued that there is a clear obligation on the individual to undertake a further period of full-time or part-time study after a certain number of years as a practitioner. There is a movement in some occupations to require this as part of the contract of service. Capelle (1969) refers to the requirement of the *Institut National des Techniques Nucléaires* that its students must take further training courses in order that their diplomas may remain in force. The diploma awarded by the *Institut* contains spaces for entries which certify the completion of subsequent courses. There is already a *de facto* connection between the amount of in-service education that a practitioner obtains and his prospects of securing preferment and promotion within his profession. In several professions there are moves on hand to formalise this relationship. For example, it has been suggested that the teacher's contract of service should specify duties extending over a longer period of the school day than children are actually in school, and for a larger number of weeks in the year than the school is open. The additional time would be devoted to various kinds of in-service training and refreshment. Proposals to implement schemes of this kind are at present under active discussion in both France and the United Kingdom. All this, of course, is made easier by the tendency for the length of the working week to be reduced. In the United States many of those who now work a shorter week in their primary occupation, tend to use their additional "free" time by taking up additional forms of paid employment. If the legal requirement of continued in-service education is to be feasible, it needs to be linked to increases in remuneration that are adequate to balance any loss of free time and/or additional earnings that the individual might otherwise have obtained. There already exist in member countries a large number of multi-purpose educational institutions that provide many kinds of in-service education and training. The "mature" student has become an increasingly common member of university classes, and technical colleges also assume substantial responsibility for the further education and training of workers and executives from particular industries and professions.

A second important aspect of in-service and post-work education is the provision of opportunities whereby an individual may be re-trained for another occupation. This is becoming increasingly necessary at a time when technological innovation is causing many existing skills to become redundant, and when some individuals, recognising that their working conditions are an important element in their standard of living, are choosing to give up remunerative but unsatisfying occupations in order to be re-trained for other culturally and socially more rewarding work. In the United Kingdom there has been a steady flow of mature students into Colleges of Education, some of whom have given up jobs that carry salaries and status considerably higher than those of teachers.

(d) Having looked briefly at each of the other terms that were mentioned at the beginning of this section, what is the specific meaning that is left to be conveyed by the concept of *recurrent education* ? Some of the definitions that have been attempted seem to be very close to those of permanent education and life-long education to which reference has already been made. For example, in a statement to the VIth Conference of European

Ministers of Education at Versailles in May 1969, the former Swedish Minister of Education, Mr. Olof Palme, referred to recurrent education as constituting an "interplay between education and other work all through life". The concept of recurrent education differs from some of the other related terms commonly in use in the degree of explicit attention that it demands shall be given to such questions as *inter alia,* the optimal distribution of educational opportunities at different stages of the individual's life ; the financial and other problems of providing educational opportunities for adults, many of whom have family responsibilities and are geographically immobile ; the effect of the provision of a "second educational chance" on the admission requirements traditionally associated with post-secondary study ; and the ways in which the structure, content and methods of teaching and learning characteristic of the secondary stage of education are influenced by the likelihood of enhanced educational opportunities in adult life.

One of the most important features of discussions about recurrent education has been the extent to which they have encouraged a questioning of the continued expansion of immediately post-school opportunities for young people to pursue periods of full-time education. It has been argued that the period of full-time education undertaken prior to entering upon an occupation cannot be prolonged indefinitely, and that the interests of society, industry and of very many individuals would be better served by the opportunity to intercalate a period of productive employment between various stages of full-time and/or part-time continued education. An organised system of recurrent education may, for instance, reduce the kind of educational demand that does not derive from personal and professional interests but rather from a desire to establish vocational security.

The mere existence of opportunities for individuals to return to full-time study at later stages of life is not, in itself, an adequate basis on which any member government could argue the case for the redistribution of educational resources between immediately post-school and recurrent education. Students and their families are not likely to be satisfied with short cycle courses and opportunities to return to full-time study in later life unless these are clearly linked and credit is given for the work done at the initial stage. The idea has therefore developed that governments might *guarantee* their citizens a certain minimum number of years of education, which individuals could take up at various stages of life according to their needs, interests and motivation. In the Nordic countries there has been a good deal of discussion of how education of this kind might be financially supported by an extension of existing social security systems. By this means, individuals could be guaranteed at least a proportion of their precious income whilst pursuing courses of full-time study, and such payments would take account of the fact that adult students have responsibilities that are considerably more extensive than those of their younger counterparts.

We are as yet only at the beginning of the systematic consideration of the problems and potentialities inherent in the concept of recurrent education. For the reasons already mentioned in this section, it seems likely that many member governments will be giving more detailed attention to some of these problems and potentialities in the years ahead, and especially to the implications that the adoption of the principle of recurrent education might have for the distribution of resources between different kinds of educational provision. From this brief discussion, it will be clear that the ideal of recurrent education embraces and is consistent with many of the on-going and planned structural reforms that have been considered in this chapter, and that some of the more radical developments, such as the use of multi-media systems, the bringing of post-secondary education to the individual by decentralisation of provision and, ultimately, TV and computer links, and the idea of the Open Comprehensive University, providing for a wide variety of needs and of age groups, are very much in tune with the types of reform and action that would be consequent upon any widespread adoption of the principle of recurrent education.

Summary

In this chapter we have examined a number of developments in post-secondary education that are currently taking place or are under discussion in European countries. These developments were classified under eight headings — creating new universities ; the division, amalgamation and upgrading of existing institutions to form new universities ; establishing new types of institution for post-secondary study, such as the Polytechnics in England, the *Instituts Universitaires de Technologie* in France and the *Fachhochschulen* in Germany (again, sometimes as a consequence of upgrading) ; the federal association of new and existing institutions ; the Open University ; changes in non-university vocational and professional education, and in teacher education ; recurrent education. Discussion of the last of these necessitated a brief examination of permanent education, adult education, in-service education and post-work education.

Chapter five: Organisation for learning

It has already been emphasised that the objectives discussed at the beginning of this paper will not be achieved simply by the expansion of existing institutions or the creation of new ones, or by additions to and adjustments in the pattern of expenditure of finance for capital and current projects and for student support. A great deal will necessarily depend upon the ability of the institutions concerned to establish what have been called "new maps of learning" and to develop greater flexibility in the organisation, structure and content of courses and improved means of guiding students into programmes and courses that are best suited to their interests and abilities.

1. Flexible learning systems

Flexibility is easier to state as a social objective than it is to accomplish as an educational reality. The boundaries of institutions, whilst they may on occasion get in the way of that desired interchangeability of credits and ease of communication that governments desire, are necessary to the integrity of the institutions concerned and to the sense of identity of their staff and students. The creation of new maps of learning will not readily dissolve boundaries and status hierarchies that have developed and matured over long periods of time and which are inextricably linked with the social and economic structure of society. But such boundaries can be made more permeable than at present, and where necessary, modified to take account of the needs of a system of post-secondary education that will increasingly require to be planned as a whole, rather than on a piecemeal and *ad hoc* basis. Similarly, terms such as "guidance" can sometimes conceal an element of direction, either overt or due to structural deficiencies in the availability of particular programmes of study or in student support, which in the long run is both economically dysfunctional and politically unacceptable. Some indications of the form that greater flexibility in the organisation of studies might take are already available from the experience of member countries.

In France, it has been argued that some kind of *rapprochement* must take place between the highly specialised offerings of certain establishments and the over-generalised abstract culture that is dispensed by some of the more traditional institutions. In more specific terms, experiments such as the training of middle level executives and technicians by means of two year courses in IUTs must be balanced by five year programmes of preparation for engineers in technologically oriented universities, such as Lille, Montpellier and Clermont-Ferrand. The tendency towards the planning of courses of varying length is in fact a very common feature of present thinking about post-secondary provision in member countries. In the district colleges of Norway, the university centres of Denmark, and in the French IUTs it is suggested that a *two-year "module"* should be the basis of many of the courses provided. Such thinking is very much in line with developments in the United States. The functions of the community junior college, in which the basic courses are of two years duration, have been stated as being

- providing the first two years of first degree programmes,
- providing programmes of occupational study, especially of a technical nature, and,
- providing continuing education for adults.

In the present context it may be of interest to note the rapid development of this type of post-secondary education in the United States.

> "In 1968, there were more than 950 community junior colleges serving almost two million students, ... Several States, e.g. California, Florida, Illinois and New York have comprehensive plans for community junior college development which are almost completed. These plans envisage the establishment of a system of community junior colleges which will be readily accessible to all persons living within the State. Full implementation of these plans will place opportunity for the level of post high school education within the reach of almost everyone. The pattern already established in California and Florida may well become the accepted procedure in most of the fifty States. In 1967 one in every 62 persons in Florida was a student in at least one course in the community junior colleges of the State. Similar ratios for California and New York were 1:32 and 1:115 respectively. While other States trail this ratio by a considerable degree, one may safely predict that a relationship somewhat near Florida's 1: 62 ratio is a reasonable expectation in the foreseeable future ...
>
> The students who need education at this level include those who have dropped out of high school before they completed the programme as well as those who graduated. The range of

educational need extends from illiterates to high school graduates who need new vocational skills for special up-grading in their chosen occupations. The comprehensiveness of education at this level should provide for the particular educational needs of each one and the general educational needs of all". (Wattenbarger, 1969).

It is also claimed that by placing the first two years of a four year degree course in a community college, many of the existing financial, geographic and motivational barriers to continuing education will be removed. During the two years of the basic course, assessments of progress can be made which enable the student to be counselled as to the likelihood of his successfully completing a full four year course. The process by means of which a student's aspirations are re-oriented towards a course more suited to his interests and abilities, and some students are "cooled out" of the study programme, has been extensively documented (see Clark, 1956 and 1960).

2. Units/Credits schemes

Current discussions of the development of post-secondary education include a good deal about the development of a units/credits system, which would enable ready interchangeability of students between courses and institutions at different levels and with different kinds of terminal qualifications. The particular type of interchangeability that seems to be the most important for our present purposes is that between what have earlier been called *"short cycle" and "long cycle" programmes* of post-secondary study. The majority of the former are provided in existing technical colleges or other local and regional institutions, while most of the latter remain the province of institutions at university level and some of the new polytechnics. No single model is likely to fit the diverse needs of European member States, but there seem to be possibilities in a number of them for schemes that will enable students to transfer from a local institution in which they have completed the first two years of post-secondary education to a university in which they complete a three to four year programme and also have the possibility of going on to work at second degree level and undertaking research. The proposed arrangements for the Norwegian district colleges and the Danish university centres make explicit provision for transfers of this kind. In the United Kingdom, France and Germany, although present proposals would permit transfers, there appears to be more doubt at present as to the acceptability at the higher level of the courses and credits that have been obtained in the lower level institution (technical college, IUT, *Fachhochschulen).* A relevant consideration in designing units/credits systems and 'learning blocks' is that what the individual gains from successfully completing any particular course includes the value of the option to undertake further study. To make appropriate options more freely available than at present through the operation of a units/credits system is thus to enhance the value of the education undergone.

Another aspect of the organisation of learning in new structures of post-secondary education has been the attempt to devise *pluri-disciplinary and inter-disciplinary approaches.* We are still at the early stages of obtaining a clear definition of what is understood by these terms in the various European countries. Interest in obtaining such definitions derives from :

— a recognition that many of the problems of the contemporary world can only be tackled by combining methods, techniques and knowledge from several existing disciplines;

— disillusionment with the educational value of some of the existing programmes of post-secondary education, especially in the traditional university. This disenchantment is particularly marked in a country such as France, which has experienced a very rapid growth in the numbers of university students, without any really major changes in the structure of the university curriculum and the prevailing paradigms of knowledge (*) ;

(*) "...when one puts the question to the professions, as we have done in France, they reply : we prefer a secondary school leaver with his *baccalauréat* who has never gone into higher education rather than someone who has spent one or two years at the university and has left again without a degree. In other words, whether we talk in terms of market prices or what you will, the conclusion is incontrovertible : the value of people who have enrolled for higher education at the present time is negative. Why is it negative ? In most cases precisely because they have had to submit, or an attempt has been made to make them submit, to mono-disciplinary education and to degrees, if I can put it like that, which they very quickly discover are not much use to them, as the professions themselves confirm. And I can assure you that we should be in for big surprises if we carried out a survey in all the European countries of the functions of education in relation to the professions. I believe therefore that it would be better to give them an education which teaches them 'how to learn', as the old saying goes, or something on the lines of another slogan of the month of May 1968 — 'Des chercheurs qui cherchent on en trouve, des chercheurs qui trouvent on en cherche'." (Cotta, 1970).

— a demand on the part of student bodies, the composition and interests of which have changed a good deal in recent years, for a greater measure of social relevance in their studies ;

— a recognition of the fact that existing practical courses cannot be up-graded and professionalised simply by adding a theoretical component. Such modifications may add to the status of a course in the short term, but they generally yield little long-run educational or professional benefit.

The demand for inter-disciplinary and area studies, for social and vocational relevance, is not without its critics, and is in some respects inimical to some of the other objectives of post-secondary education. To study a particular problem or "area" from the viewpoint of several disciplines, without having previously acquired some knowledge of the epistemological distinctiveness of the methodologies and viewpoints of the disciplines concerned, carries with it the risk of superficiality and a failure to assimilate the full meaning of the "language" of different disciplines. There would seem to be room in most courses for studies of both kinds. By means of those of a mono-disciplinary nature the student gets "inside" a particular discipline and its way of looking at the world. By focussing on a single topic or area of concern, he is helped to grasp the contribution that academic studies of diverse kinds can make towards our understanding of the world.

The advantages of units/credits systems are not only in permitting ease of transfer between courses and institutions, but also in providing for *variations* in the previous training and experience of students. For example, in some schools of education that form part of universities in the United Kingdom, a credit system is used for the award of higher qualifications and masters degrees in education for experienced teachers. The number of course units that need to be taken to obtain the diploma or degree are varied according to the previous training and educational background of the student, and there is no longer a rigid requirement for attendance over a specified period of years or at a specified number of lecture courses. The newly established Open University, to which reference was made in a previous chapter, has agreed that all qualified teachers should receive two units of credit towards their studies for an Open University bachelors degree on the strength of their previous two or three year course in a college of education. One of the most radical proposals for a units/credits scheme is that of Weizsäcker, who has suggested that the units of the *Baukasten-Gesamthochschule* should be of four to six weeks for intensive units, eight to ten weeks for less intensive units and two to three weeks for a quarter or half unit, with existing curricula being split up into units of varying lengths and new inter-disciplinary units added. Access to a full study course of three years (six semesters) would be open to those who successfully pass three units or already held the *Abitur*, and a further ten or more units (half of them in a main subject) would require to be completed before the award of the first academic degree (Weizsäcker, 1969).

3. The technology of teaching

To attain greater flexibility and to reduce wastage due to repeating and premature drop-out requires not only a new approach to the organisation of learning, and more attention being paid to the guidance and counselling of the student, but also the need to give attention to methods of teaching and examination. In the past, and to some extent still at the present day, favourable staff/student ratios, face to face teaching and a carefully designed tutorial system, together with low wastage and failure rates have been associated more with "*élite*" than with "open" institutions for post-secondary education. The *Grandes Ecoles* in France, the universities of Oxford and Cambridge in the United Kingdom, have very low failure and wastage rates, and the size of the groups in which teaching is undertaken is a good deal smaller than in the open faculties and technical colleges, where there is a greater use of formal lectures delivered to large groups and a high rate of both in-course wastage and end of course failure. The extension and democratisation of post-secondary education carries with it the risk that the wasteful and inefficient teaching and examining methods that have hitherto characterised "open" systems may become even more widespread.

There is no easy solution to these problems. To admit all those who are formally qualified to enter a course, subsequently eliminating that large proportion who prove unable to achieve the necessary standards, is in a sense more democratic than the operation of a strict *numerus clausus*. Given the weaknesses of existing methods of selection, it is difficult to predict with sufficient accuracy the extent to which individuals are likely to make a success of their post-secondary studies, and it can be argued that open access gives everyone a chance to find out for themselves whether they are likely to succeed, and is thus both more democratic and

more just than the selection processes that would otherwise be required. Unfortunately, however, this "contest" system, as it has been called by the American sociologist Ralph H. Turner (1961), can be, as we have seen, extremely wasteful of both human and financial resources. It is unlikely, especially in the face of a continued expansion of numbers and a possible shortage of teachers of sufficiently high quality in certain subjects, that member States will be able to improve upon existing staff/student ratios. The salaries of staff account for a high proportion of the budget of most institutions providing post-secondary education, and ways are at present being sought to make better and more productive use of the teaching manpower available, rather than to increase the proportion of staff to students. In this situation, what can be done to improve the quality of the teaching experienced by students, and to reduce the wastage due to failure in examinations ?

Though significant advances in both the theory and practice of *educational technology* have been made during the last five years, there is still relatively little experience in its application to higher education ; and much of that experience, moreover, has been gained in the North American environment rather than in Europe. The evidence suggests that there are prospects of achieving more effective learning by the application of new concepts, methods and media, though these prospects depend on a substantial commitment of money, time and trained personnel of a kind which is still in very short supply. They also will depend on the ability of institutions of post-secondary education to make suitable adjustments to their organisational and teaching/learning patterns. It is important to make a distinction between the application of new methods which are primarily aimed at securing economies of operation by improved communication of existing instructional patterns and those which are directed at more effective learning. The use of both open and closed circuit television and other forms of recording undoubtedly permit instructional programmes to be distributed to a larger constituency, either within an institution or within a group of institutions ; provided the constituency is large enough, reductions in unit cost may be achieved. It must be stressed that this 'mechanical' relay does not necessarily achieve any improvement in learning, and it may well arouse students' dissatisfaction through its impersonality and the lack of contact with live teachers. In general it may be said that such systems are desirable only when no alternative is available or adequate tutorial or small-group support can also be offered to the students to take account of individual needs and interests. But, in a wider sense the procedures of educational technology have much to offer, not least by their emphasis on more precise specifications of educational objectives, the use of trial and testing procedures for the development of instructional materials and a systematic evaluation in practice. Whether the materials are designed for direct instruction or to permit self-instruction by students, it seems probable that they may be more effective instruments of learning than many of the conventional teaching methods now employed. The domain of educational technology is one in which the learning resources are systematically matched to the curriculum and teaching needs they serve. (MacKenzie, Eraut and Jones, 1970).

A second possibility is that the student's work should be made more *self-directed* than at present. In this connection a recent Swedish report (Larsson, 1970) has argued that a greater degree of self-directed study has the effect both of making the student's work more "age-resistant" (i.e. less easily made obsolete, because skill subjects will be emphasised rather than content subjects) and also has implications for the future role of the university teacher.

> "The effect of (self-directed study) on the organising of the course study is that the amount of classroom work supervised by teachers will diminish. Instead the rate of the student's activity on his own will have to be raised. The students will themselves have the main responsibility e.g. through different teaching aids supplied, for getting the training required or suggested by the course descriptions. In this in the future radically changed situation for acquiring the skills and knowledge supplied at university institutions, where the student is trained to get on his own what he needs, without the direct help of the teacher, the role of the teacher will also have to be changed. The task of the teacher will have to be devoted mainly to analysing the content of the different courses and subjects, keeping them up to date and to transform the course content into aids for self-instruction. The traditional role of the teacher can hardly be completely superseded but the direct contact between teacher and student will mostly be devoted to giving stimulation and the kind of intellectual training that communication with an experienced and knowledgeable individual provides."

If study is to be self-directed to a greater extent than at present, potential students will have to acquire the appropriate attitudes of mind and techniques prior to beginning courses of post-secondary education. The *upper forms of the secondary school* thus have a responsibility for preparing the young person to work in a self-directed manner ; where secondary school examinations stress rote learning and the acquisition of knowledge, these must be seen as an obstacle to the development of the kinds of skills that students will increasingly need during periods of post-secondary education. Where, as in schemes of recurrent education, adults return to full-time study after a period of employment, there may be a need for some kind of part-time "bridging" or "qualifying" courses to be provided which will help the individual to acquire the habit of self-directed study, which may never have been acquired, or may have atrophied in the face of many years of routine work.

A third way of reducing both wastage and student dissatisfaction is by a *reform of the examination system*. There is a good deal of evidence to show that traditional methods of examining in post-secondary education are both unreliable and invalid. They often tend to produce undesirable kinds of negative feedback, encouraging students to acquire large quantities of information which is rapidly forgotten after the examination is over. Post-secondary institutions in a number of countries have begun to use systems of continuous assessment which dispense with a final examination but take into account the standard of work that the student undertakes over the whole programme of study. Attempts to evolve a structure of this kind are being made in the French IUTs, where the student's comprehension of the syllabus is tested continuously throughout the year, and the final certificate is granted on the basis of all remarks entered in a dossier. Continuous assessment is not without its drawbacks or its critics. Students, as in respect of many other issues, have mixed views. They often welcome the abolition of the final examination, with all the strain and other difficulties to which it gives rise. But they sometimes feel that continuous assessment is a less "objective" process than a formal examination, and one that is more at risk than a straightforward test of performance and understanding of being influenced by personality and character assessments. In addition to continuous assessment, various kinds of "objective" scaled tests are in use, more often for the purposes of student guidance and as checks of progress than as final examinations for the award of a diploma or a degree. It has long been the custom in connection with some courses for students to undertake some kind of special study or dissertation which constitutes a proportion of their final marks, and gives an opportunity for sustained study in depth of a particular topic or issue which is both relevant to their needs and in tune with their personal interests.

4. The quality of teaching

Finally, mention may be made of the need for the staff of institutions of post-secondary education, the majority of whom will be concerned more with teaching than with research, to receive some kind of training in teaching methods. The United Kingdom Select Committee on Education and Science reported that student criticism of the quality of teaching and related criticism of the content of syllabuses has been central to much student dissatisfaction. The then Secretary of State for Education and Science stated that he regarded indifferent teaching as one of the causes of student unrest. "The teaching in the universities is not as good as it might be ... It really is frustrating when students day in, day out, week in, week out, are subjected to indifferent teaching." The Select Committee concluded :

> "We believe that newly appointed staff should receive some form of organised instruction or guidance on how to teach ... Present arrangements are unduly haphazard and should be improved ... We do not feel that it is an infringement of academic freedom to provide that the teacher should be subject to the opinions not only of his colleagues but also of his pupils. It is true that students can, at least in some institutions, 'vote with their feet' (i.e. no longer attend badly taught courses) but this is not always a satisfactory substitute for the constructive expression and consideration of student views, for which more formal provision should be made.
>
> The responsibility of improving standards of teaching must rest with individual institutions, but, to help them in this, a central body should have the responsibility of promoting experiment and research on methods of teaching and disseminating information about the results." (p. 150).

In some countries, the rapid expansion of post-secondary education has brought into the lecture room men and women with little experience with dealing with young adults and no first hand knowledge of the techniques of teaching. In some institu-

tions, the national and international preoccupations of senior staff have meant that much of the lower level teaching has been undertaken by junior staff members who have themselves only recently graduated, and this, especially when it is coupled with teaching in very large groups, is, as American experience testifies, a potent source of student dissatisfaction.

Summary

The topics that have been considered in this chapter — flexibility of courses and structures, interdisciplinary approaches and "new maps of learning", the use of units and credits systems, the improvement of teaching and examining — all justify more extended treatment. To a very large extent they are the responsibility of institutional authorities, and, given the variations of purpose and need that exist both between and within member states, it is impracticable for detailed central direction of these matters to be attempted. Given, however, that these matters are of central importance to the development of post-secondary education, member governments have a direct interest in promoting thought and discussion which will lead to the breaking down of unnecessary rigidities and the reform of obsolescent structures.

Chapter six: The government of post-secondary education

In previous chapters we have examined the objectives of post-secondary education, some of the new structures and institutions that are emerging in member countries, the financial and cost implications of providing immediately post-secondary and recurrent education for a much larger proportion of the population, and some of the possible approaches to organisation for learning within both new and existing institutions. The theme of the present chapter is to be interpreted broadly. It will be taken to have five major aspects :

- The relation of institutions of post-secondary education to society and the State ;
- Their relationship to industry and to professional groups within society ;
- Their links with the local communities which they serve or in which they are located ;
- Problems of internal self-government ;
- Student participation in institutional government.

What follows is an attempt to identify some of the aspects of each of these topics that are capable of being discussed on a international basis, and which have implications for the way in which post-secondary education is organised in the future.

1. *Post-secondary education and the State*

This is clearly a subject about which large volumes could be, and indeed have been, written ; an understanding of the nature of the university, the insight and sensitivity into political and social process that enables sound judgements to be made concerning problems of autonomy, responsibility and participation, all of which may be helped by systematic study of what has been written over past generations concerning the government of education at national level, cannot be conveyed in a discussion paper. Instead, the identification of two major areas of concern must suffice.

The fact that European Ministers of Education have decided to devote their Seventh Conference to a consideration of the problems of post-secondary education is an indication of the national concern that at present exists about developments in this field. Such concern has its roots in the desire of democratic societies to provide increased educational opportunities for their citizens ; recognition of the fact that prolonged schooling is more important to the health of the economy and of society than in the past ; a desire to foster social mobility and greater equality of opportunity through the educational system ; anxiety at the high financial cost of satisfying the demand that has been shown to exist for all forms of post-secondary education ; concern at both short term and long term effects of politicising staff and student bodies ; and awareness that the traditional university on the one hand, and the vocationally oriented technical college on the other, are no longer the only valid models for the future development of educational provision for those who have completed their primary and secondary schooling. Post-secondary education has become a matter for public and political concern and attracts a great deal of attention in the press, on radio, television and the public platform. That this should be the case is virtually inevitable. Education and politics are both about how we should live, and as such they cannot meaningfully be separated. On the other hand, the imperatives of political and educational action and decision making are not identical, and it can be argued that educational purposes and procedures can be harmed by becoming too closely associated with the political processes of the mass media and the pluralistic democratic state.

It is not difficult to suggest some of the ways in which the present spate of public concern with the development of post-secondary education can be dangerous. Many of the issues involved are highly technical and complex. When such issues are treated politically and through the mass media they tend inevitably to be over simplified. There is a tendency towards the polarisation of discussion, in which various "sides" and "positions" must be clearly identified, and preferably associated with the utterances and actions of particular personalities. The resulting over-simplification can be particularly harmful to debates about post-secondary education at international level, since much of our information about what happens in other countries tends to be derived from the press and from articles in journals. It is in this connection that the continued activities of bodies such as the Council of Europe and OECD, in making available facts and figures concerning developments in member countries, assume such importance.

Another risk involved in the politicising of debate about post-secondary education is that certain policies will come to be identified with the views of particular parties, and may become election issues. If carried to an extreme, this can lead to a lack of stability in the provision of financial and other forms of support which is inimical to the proper pursuit of long-term educational objectives and diminishes confidence and morale just as it undermines the case for long-term planning. As a consequence of such instability there may be a tendency for first class scholars and research workers to be attracted by offers from other institutions abroad, where there may appear to be a better chance of being able to carry on scholarly activities and research unimpeded.

None of this is to argue that post-secondary education can hope to be free from the influence of public and private debate concerning the purposes and goals of education and of society. The days of the "ivory tower", if they ever existed, are at an end. A *balance* has somehow to be held between the legitimate interests of the state and of society in the objectives and processes of post-secondary education, and the need for some degree of autonomy and self-determination on the part of post-secondary institutions themselves. Similarly, a balance has also to be struck between, on the one hand, response to short-run pressures deriving from the economy, from technological development and from political factors, and, on the other, the longer-term educational goals which inspire and legitimate the procedures and practices of individual teachers and institutions. It has been alleged by Helmut Schelsky, among others, that a balance of this kind no longer exists in some countries, and that short-run and status imperatives are seriously threatening the educational and social foundations that enable post-secondary education to be a democratising influence in contemporary society (Schelsky, 1969).

From this derives a second point that needs to be made in connection with the relationships between post-secondary education, society and the state. In all countries there is a need for mechanisms for planning and resource allocation of a kind that will provide post-secondary education with some insulation from the over-simplification and rationalisations that are inevitably characteristic of political debate, whilst at the same time ensuring that the system as a whole remains flexible and responsive to social need.

Within most member countries there have been examples within recent years of the establishment of commissions to study the future development of the system of post-secondary education or of particular aspects of it. Many of the United Kingdom developments referred to in Chapter Three owe their origin to the *Committee on Higher Education*, whose recommendations in 1963 for the expansion of higher education were accepted by the government of the day as a basis for future policy. In Norway, the *Ottosen Committee*, previously referred to in this paper, made far reaching proposals concerning the establishment of District Colleges and the forging of better relationships between university and non-university institutions. In April 1968 the Swedish government established the *"U 68" commission* to make a plan for post-secondary education in Sweden for the 1970s. The commission has divided its work into three phases and its full report should be published in 1971. The first phase had to do with the quantitative planning of the educational system in relation to the needs of the labour market, the second with the theoretical analysis of major policy questions, the discussion of which is leading to the publication of a number of preliminary analyses to stimulate public debate and to guide the final phase of the commission's work, which is to do with policy on the planning, organisation and location of institutions of post-secondary education for the next decade. The commission is undertaking major studies on such issues as the computation of the demand for higher education, estimates of future manpower needs, factors affecting the choice by students of different kinds of education and profession, and the consequences of investment in education. Its work is closely co-ordinated with that of other Ministry of Education commissions that are concerned with related problems, such as the *Commission on Admission to Higher Education*, established in 1965, and the *Committee on Economic Study Support for Adults (SVUX)*. There are numerous examples from other countries of work by commissions of this kind, which have certainly influenced the development of post-secondary education in Europe during recent years, but the full effects of the reports of which have probably not yet been felt in some member countries.

But there is clear evidence that something more is needed than the setting up of *ad hoc* bodies which undertake studies of post-secondary growth and need, and make recommendations for the development of particular kinds of courses and institutions. Valuable though such work may be, it does not provide a basis for *continuing review and planning* of the kind that will increasingly be needed in member countries. Some permanent bodies responsible for the allocation of resources and for aspects

of the planning of post-secondary education do already exist. In most countries, however, these are either concerned with only one part of the post-secondary system as a whole (e.g. the universities) or are restricted in their terms of reference to a particular aspect of the work of all post-secondary institutions. An example of the former is the *University Grants Committee* in the United Kingdom, which allocates among universities the resources made available by the government, and provides, through its general letters of guidance, and specific letters to individual universities, an outline of the planning imperatives that guide university development during specified five year periods (quinquennia). An example of the second kind of partial planning mechanism is the *Wissenschaftsrat* in the Federal Republic of Germany, which was set up jointly by *Bund* and *Länder* in 1957. Although the *Wissenschaftsrat* has had a considerable influence on thinking about post-secondary education as a whole, its original terms of reference were distinctly science oriented :

— On the basis of the individual plans prepared by *Bund* and *Länder* in accordance with their spheres of responsibility, to develop an overall plan for the promotion of science, to co-ordinate the *Bund* and *Länder* plans, and to established points of special importance and a priority rating ;

— To establish an annual priority programme ;

— To make recommendations for the allocation of the funds provided in the *Bund* and *Länder* budgets for the promotion of science.

The *Wissenschaftsrat* is not the only body concerned with planning in post-secondary education in the Federal Republic of Germany. The *Westdeutsche Rektorenkonferenz* and the *Landesrektorenkonferenzen*, the permanent committees of the *Ständige Konferenz der Kultusminister der Länder*, together with the *Deutscher Bildungsrat* (German Education Council) are all interested and involved in educational planning which bears upon the future of post-secondary education. In addition, and with power to take administrative decisions, there is the Planning committee established to co-ordinate, on a national basis, the planning and construction of universities and the Federal/*Länder* Commission for Educational Planning.

One of the more radical proposals concerning the establishment of new planning and co-ordinative machinery at national level is that of the United Kingdom Select Committee on Education and Science, which has proposed that a *Higher Education Commission* should be established with statutory powers and responsibilities extending to all institutions of higher education. Such a Commission would provide a national forum for the consideration of matters of common interest to the various institutions that make up the system of higher education, would facilitate the guidance and co-ordination of their activities, and would give advice to the government on their needs. In making this recommendation, the Select Committee note that "the establishment of a Higher Education Commission would provide a means of removing the disparities between institutions and a clear recognition of the problems of higher education as a whole" (Select Committee, 1969). To create a body expressly charged with responsibility for the whole of what in the United Kingdom is still known as "higher education", represents an important move in the direction of unifying planning and policy making in the area with which this paper is concerned. From the experience of member countries in recent years, the establishment of adequate means for the discussion of policy in post-secondary education, and for the co-ordination of the institutions responsible for providing courses at this level, together with means to ensure that due account is taken of the importance of both institutional autonomy and social accountability, would seem to be a major priority.

2. *Post-secondary education, industry and the professions*

A large proportion of the courses provided in institutions of post-secondary education are, directly or indirectly, vocational in character. It follows from this that there must exist means whereby industry, the professions, trade union groups and other bodies associated with the performance of particular roles and functions in society may play a part in discussions concerning the structure and content of the education provided for their future members. Here, as in an earlier section, we have to emphasise the importance of keeping a balance between the proper autonomy of educational institutions in determining the pattern and content of their own courses, and the needs of the various groups and interests that make up the wider society. R. M. Hutchins (1953) has argued that the function of a professional school in a university is not so much to train for the profession, but to *criticise the profession*. Some kind of dynamic tension needs to exist between the institutions responsible for preparing individuals for the performance of particular occupational

roles, and the interest groups that grow up to protect the performance of these roles in society. Changes in techniques and methods of production make it no longer appropriate for the members of a particular craft or guild to have the exclusive control over the means whereby new members are inducted into the required pattern of knowledge and skills.

The links between post-secondary education, industry, the professions and other such groups are many and various. Such links tend to be less close and direct in the case of the traditional universities and rather more direct in relation to the work of technical colleges and other new types of post-secondary institution. Consultations nearly always take place with professional and occupational interests about the design and content of courses and examinations which carry with them the right to practice a particular skill, trade or profession. In France, the educational standards in each of the departments of the *Instituts Universitaires de Technologie* are supervised at the national level by a board which comprises representatives of the teaching profession and of industry, chosen both from managerial levels and from the trades unions, with the latter in a majority. The twenty-member board lays down the outlines of the syllabus, supervises the working of the department and deals with problems that may arise from the introduction of industry-based syllabuses. In the Netherlands, the process of replanning post-secondary provision has been undertaken by a number of *commissions* based upon the needs of particular occupational sectors. It has seemed more appropriate in the Netherlands to establish these sector commissions, which are based upon the needs both of educational institutions and of trade and industry, rather than to create a general committee on the co-ordination of university and higher vocational training.

In the United Kingdom, a concern with remedying the deficiencies in vocational education led to the *Industrial Training Act* of 1964, which was based upon the principle of partnership between industry and the education service. The three main objectives of the Act have been stated as

- to ensure an adequate supply of properly trained men and women at all levels in industry,
- to secure an improvement in the quality and efficiency of industrial training, and
- to share the cost of training more evenly among firms.

Industrial Training Boards have been established for groups of industries, and have the statutory task of making recommendations about initial and in-service education for the occupations concerned. Some thirty such Boards have been established for industries which employ more than fifteen million workers. Industry makes a contribution to the costs of vocational training for their workers by means of a training levy, and the existence of the Boards is beginning to be felt as an important influence on the content and organisation of courses within the field of vocational training.

In conclusion, it must again be stressed that the relationship between industry, commerce, the professions and workers' organisations on the one hand, and educational institutions on the other, must be one characterised by close contact and consultation, rather than by subordination and dependence. Whilst there is room for a contribution to be made to post-secondary provision by technical colleges, vocational and general courses and other programmes of training established by and on behalf of particular firms and trade union groups, the pressures of a complex economy and dynamic technology, together with the social requirements of a democratic society, demand that the majority of educational institutions shall possess an appropriate measure of autonomy in deciding the content and methods of what is taught. There is no difficulty in stating a principle of this kind or of obtaining agreement to it; the problems begin when one tries to work out arrangements that balance accountability and autonomy in a way that is acceptable to all the interests concerned. Difficult though this task may be, it is clearly one to which a great deal of energy has been, and will continue to be devoted in member countries.

3. *Post-secondary education, the community and the region*

As a general rule, the traditional universities have been national institutions, drawing their students from all parts of the country in which they are located. As we have seen, however, this national character has concealed a very varying rate of participation by students from different regions, with rural youth from areas of scattered population at a marked disadvantage in comparison with their counterparts in more highly developed urban neighbourhoods. Similarly, most of the forms of non-university post-secondary education that have been provided in member countries have been on a local or regional basis, the technical colleges and other institutions concerned having close links

with industry and the community in the areas which they serve. The development of a new concept of post-secondary education is likely to bring about changes in this pattern.

In some countries, university institutions have been concentrated in the national capital or a limited number of other centres. In France, for example, until quite recently two thirds of all the university students in the country were to be found in Paris. Similarly, in countries with a total population that is small in relation to the total land area, such as Norway and Sweden, most university education has until recently been provided in the large cities in the south. Although there are considerable variations between member countries, it is probably fair to say that for the majority of students of the traditional universities, the age of 18 or 19 has been that at which they left home and established themselves in apartments, university provided accommodation, private homes and other living accommodation adjacent to their university. It has been argued that this confers many benefits both upon the institutions concerned and the individuals. The opportunity to mix freely with students from many different backgrounds who are studying a variety of subjects ; freedom from the constraints of family and of home ; easy access to museums, libraries and other centres of national culture ; the opportunity to participate in a common culture of civilised intellectual discourse ; the development of cosmopolitan and international orientations ; and the opportunity to work out a life style and personal philosophy of one's own, have all been cited as among the gains to the individual student from the existence of a university system that in its basis of recruitment and its orientations is national and international, rather than regional and local. Seen in this light, the university is one of the institutions by means of which a *national culture* is developed, and students from a wide variety of home environments and backgrounds are made aware of the character of their national heritage and its links with the history and continued development of other societies.

But the traditional pattern has also had its drawbacks. Too many of the men and women that it has drawn from the provinces and from rural areas have stayed on after graduation to work in the centres where the universities are found. As a consequence, regional development has been inhibited, and there has been an over concentration of population and resources in areas that are geographically, socially, culturally and, sometimes, climatically, attractive. Among other disadvantages has been the tendency for "higher" professionals to receive their training in traditional university structures, whilst the *cadre moyen*, para-professionals and middle levels of management have been the products of local and regional institutions. This has tended to emphasise discontinuities in the social and cultural background of individuals working at different levels in the same industry or occupation, and may sometimes be a contributory factor to the misunderstandings that underlie a proportion of industrial disputes. A point of particular relevance in the present context, is that adult students returning to a period of full-time or part-time study after employment in industry or elsewhere find it difficult to be as geographically mobile as 18 and 19 year olds. The needs of recurrent education make it imperative that *opportunities for study at all levels should exist within a reasonable travelling distance of the individual's home*. As yet, the use of radio, television and other forms of educational technology has not developed to a point where it can overcome problems of distance and geographical inaccessibility.

Thus, in recent years we have seen a tendency for university level courses to be established other than in existing capitals and major centres. In France, for example, a large number of new universities have been set up in the provinces, and the same trend has shown itself in each of the Nordic countries. It has sometimes been necessary to provide financial and other inducements to university scholars and research workers to encourage them to take up appointments in new institutions which are many miles away from the major urban centres ; provisions of this kind have been a particular feature of university development in the northern region of Sweden. Regional interests and needs have also featured largely in Norwegian thinking about the establishment of new structures of post-secondary education. The District Colleges, discussed in an earlier section of this paper, have explicit links with the communities within which they are located. The Ottosen Committee suggested that the government of the District Colleges would need to be considered at no less than *eleven* different levels. Nationally there would be required a directorate of district colleges, a council for district colleges, and special committees for the individual subject groups (similar in their composition to those already referred to in connection with the links between the French IUTs and industry). Locally, there would be a board for the district college, a permanent secretariat, special units for main groups of subjects (the counterparts of the national committees already referred to), regular meetings for the heads of contributory schools, a regional council meeting for the district

college, regional students' committees, and students' organisations. In addition an intermediary body, termed an "agency for professional contact", would link the departments and study units of the district college with the various industry based committees. vocational specialists and employers. The Ottosen Committee recommended that Norway should be divided into twelve educational regions, and that subsequent planning should take place on a regional basis.

Some of the proposals for comprehensive universities and multi-media university systems referred to in Chapter Three also involve a large measure of regional co-ordination and planning. In the United Kingdom, Professor Pedley has proposed that comprehensive university networks should be established on the basis of the existing *area training organisations*, which at present co-ordinate the activities of teachers' colleges and provide for the participation in their work of employing authorities, teachers' organisations and other local groups. The Open University has established a pattern of regional offices, from which face to face contact and some kinds of student counselling will be provided.

From all this it is clear that the planning of post-secondary education cannot take place independently of broader social and economic planning for the identifiable geographical, cultural, ethnic and linguistic regions that may be found in member States. Ways will have to be found in which national requirements for the provision of particular kinds of post-secondary education can be matched with local and regional needs and interests.

4. *The internal self-government of institutions of post-secondary education*

Universities, as well as individual professors and teachers, have traditionally placed great emphasis on the importance of their institutional autonomy, and have linked this with the existence and maintenance of academic freedom. Whilst there are many differences in the degree of self-government enjoyed by universities in different countries, some of the problems of recent years apply to all of them. The basis for internal self-government in some universities has been explicitly democratic for a very long time (e.g. Oxford and Cambridge) but elsewhere, the professor or head of department has traditionally enjoyed a status much higher than that of his colleagues, and a substantial measure of personal and institutional power. In the United Kingdom, there has been a move to widen the basis of recruitment to university committees and governing boards, and the senate of many universities now includes a larger number of junior staff. In Germany, Schelsky (1969) claims that there are two basic weaknesses in university government at the present time.

— A guild-like basis of self-government by persons of rank faced by new tasks of knowledge and above all of research, is proving functionally weak, ineffectual and in some cases unoperative.

— There has been a failure in human and intellectual communication between the traditional practitioners of teaching and research and the recently developed "middle strata" *(Mittelbau)* comprising the *Dozenten, Assistenten* and scientific ancillaries.

It seems that in many countries, the chief complaints about the existing basis of internal university government is that it is relatively slow and inefficient, that it tends on occasion to be unresponsive to national need and interests, that there can be a collegial over-protectiveness that ensures the continuation of the tenure of incompetent office holders, and there is a lack of interest in co-ordinating the activities of the institution concerned with those of other educational and social agencies.

At the other end of the traditional spectrum of post-secondary provision, it is sometimes alleged that the technical colleges and other local and regional institutions have been too closely supervised in their work by lay governing bodies and providing authorities which are not sufficiently sensitive to academic and scholarly imperatives, and which stress detailed day by day accountability at the expense of long term cost effectiveness. In the United Kingdom the colleges of education have for a long time wished to be included within the university sphere as far as finance and control are concerned. Such a change was in fact recommended in the report of the Committee on Higher Education, but was rejected by the government in accordance with their decision to maintain a "binary" system of post-secondary education. The government did agree, however, that there was a case for the reform of the pattern of control over the work of the colleges exercised by local education authorities, and a special committee was set up to review these arrangements. Its recommendation included the establishment of academic boards responsible directly to the college governors for the teaching and examining of the college, and a greater mea-

sure of autonomy from the direct financial control of the providing authority. Articles and instruments of government similar to those recommended for the colleges of education have since been developed for the new Polytechnics that are in process of establishment, and it has been recommended that these, too, should enjoy a substantial measure of autonomy. (Study Group on the Government of Colleges of Education, 1966).

One of the most systematic attempts to reform the internal administration of institutions of post-secondary education has been that of the Finnish Government, which in December 1969 put forward a bill laying down the structure and powers of University councils, Boards of Administration, Departments and Institutes, and specifying minimum qualifications for University Rectors and Vice-Rectors, and Department and Institute Chairmen. The bill followed what the Finnish delegation to the Council of Europe's Committee for Higher Education and Research (1970) have called a 'lively debate' :

> "In this debate the position and composition of the collegiate bodies has been particularly emphasised. The foremost matters of discussion are : the 'one man one vote' principle, i.e. general and equal voting right when appointing the administrative bodies of the universities ; the 'fifty-fifty principle', according to which the teachers would elect one half and the students the other half of the members of the administrative organs ; and the 'three-partite' principle, which means that professors would elect one third, the other university staff one third and the students one third of the members of the administrative organs."

In general, there seem to be important changes taking place in the distribution of power between the various controlling committees and boards of the traditional universities, especially in some countries in the powers of the individual professor, whilst elsewhere, institutions which are already under direct public control are beginning to be granted a greater measure of institutional autonomy, and in line with the universities, are giving more attention to the part that all members of their staff can play in the determination of policy and in decision making.

5. *Student involvement in the government of post-secondary education*

The political and social importance of student activities, especially of their militancy at institutional, local and national levels, might seem to justify separate and extended treatment in a paper of this kind. But no such discussion of the issues of student militancy is intended. (For analyses of this theme see Lipset (1966) ; Rossandra (1968) ; Oliva and Rendi (1969) ; Seale and McConville (1968) ; Martin (1969) ; Quattrocchi and Nairn (1968).)Among the reasons for this are, firstly, that reference has been made in a number of the sections of the paper to the ways in which student attitudes and responses are affected by such factors as the availability of places, status distinctions between different levels of post-secondary education and ineffective teaching ; secondly, there has already been a great deal written in recent years about student activities, rather little of which has been of a factual and dispassionate nature, and in the time available it has proved impossible to provide an adequate summary of the extensive literature involved ; thirdly, in so far as student militancy is a *symptom* of certain underlying weaknesses in existing patterns of post-secondary education, an effective cure is dependent upon attention being devoted to the underlying weaknesses rather than to the symptoms. In the United Kingdom, a Select Committee of the House of Commons undertook a careful study of student relations during 1968/69, and the Report of the Committee contains three paragraphs that are worth quoting in full.

> "As the evidence given to us confirmed, certain dominant characteristics emerge as distinguishing the pattern of student dissent. There is a growing awareness of the common identity of 'students' seen by themselves as a social group, transcending national boundaries, and distinctive by their disassociation from the established sectors of the societies in which they live. At the same time there is also a common tendency of students to identify themselves as members of a particular academic community and, as such, to claim to share as equals with the staff, within that particular university, a society that is unique.
>
> The international character of the student outlook is emphasised by their common attitude to various issues in international politics, which 'radical' students tend to oversimplify in basic moral terms. In student protest, however, there is a strong vein of domestic dissatisfaction with immediate conditions — environmental, moral, and academic — and the tendency to reduce international issues to uncomplicated moral issues is paralleled by an equally direct censure of apparent inaction

over local, social or political problems. The issues are different in the various countries, but the student reaction everywhere has much in common.

These characteristics of student unrest are separate from any particular ideology that may condition individual 'radical' student groups. The 'radical' student movement is pragmatic and experimental and moreover, as one observer has noted, 'the student actions... appear to be fed on the opposition they meet in the process of action at least as much as on the issue over which they began'." (Select Committee on Education and Science, 1969, p. 13.)

Whilst no theory of student militancy can be advanced here, it must be noted in passing that the bulk of student unrest has been in the traditional universities, in the open faculties, and in other institutions where the courses and curricula are not directly connected with the subsequent performance of a particular occupational or professional role. With certain exceptions, students preparing to be teachers, engineers, medical doctors, or accountants, have been relatively unresponsive to demands that they participate in student militancy. Where such groups have shown any level of activity, it has tended to be as a counter movement to the activist radicalism of students in the humanities and social sciences, who have predominated in the ranks of the more militant. It has been argued that whereas in the past, such intelligentsia as existed in Western European countries was firmly anchored in its values and orientations within established *élites*, we are now seeing the emergence in the uncommitted intelligentsia, comprising students who are being prepared for no particular occupational role by the process of post-secondary education that they are experiencing.

But our present context is not that of international student militancy, but of the extent to which student participation in the government of institutions of post-secondary education may contribute towards the fulfilment of the objectives that were set out at the beginning of this paper. In more and more institutions, students are coming to be accepted as representative members on boards and committees, and in some cases are being admitted to the highest decision making authorities. *Responsible participation* of this kind has nearly always been found to be helpful both to the student body and to the fulfilment of the educational purposes of the institution and of the system as a whole. The staff and administration of institutions of post-secondary education need in the present climate to be more than ordinarily sensitive to the implications of those kinds of decision and event that are likely to give rise to difficulties in relationships with students, and in so far as student participation in government facilitates communication and enables such issues to be more readily recognised, and the necessary action undertaken, it is a welcome development. In some countries, where those responsible for the internal self-government of institutions of higher education have proved resistant to suggestions that there should be some reasonable measure of student participation, it may be necessary for the influence and pressure of the national authority to be brought more directly to bear.

A not unimportant additional consideration is that within a system of recurrent education, a much larger proportion of students than at present can be expected to be mature men and women who have already had a good deal of experience in connection with the government and management of industrial, commercial and other institutions. These people possess the kind of experience and knowledge about institutional government that could be extremely useful in the counsels of universities, colleges and other institutions of post-secondary education.

Summary

This chapter has sought to identify a number of aspects of the government of post-secondary institutions which might usefully be discussed at international level. These were the relation of such institutions to society and to the State; their relationship to industry and to the professions; their links with the local communities in their area; problems of internal self-government and, finally, student participation in institutional government. The importance of the existence of adequate planning machinery for post-secondary education was stressed, and examples provided from recent developments in a number of European countries.

Tables

TABLE ONE

Enrolments in all higher education as a percentage of population of 20-24 year age group : 1950, 1955, 1960, 1965
(Provisional)

Country	% of the population of 20 to 24 years			
	1950	1955	1960	1965
Austria	4.3	4.3	8.0	8.9
Belgium	5.1	6.2	9.1	15.1
Denmark	7.0	7.6	10.7	13.8
France	—	6.9	9.8	17.4
Germany	4.1	4.8	6.1	8.7
Ireland	4.0	5.0	7.6	9.7
Italy	5.7	5.4	6.5	11.2
Netherlands	6.2	7.3	10.6	13.7
Norway	—	—	—	11.3
Portugal	2.0	2.3	3.3	4.8
Spain	—	4.9	5.3	6.9
Sweden	4.8	6.3	8.6	13.1
Switzerland	5.5	5.5	7.4	7.7
Turkey	—	—	2.1	3.4
United Kingdom	—	6.7	8.4	11.9
Yugoslavia	3.3	3.9	8.6	13.6
(USA	20.0	24.9	31.8	40.8)

Source : OECD Directorate for Scientific Affairs. — Development of Higher Education in OECD member countries : quantitative trends. — DAS/EID/69.23 April 1969, Table 32, p. 50 (modified). — All figures provisional.

TABLE TWO

Enrolment ratios, as a percentage of the age group, in third level (post-secondary) education in 1965 and 1980

(Estimated)

Country	Year			
	1965	1980		
		* Min.	* Trend	* Max.
Austria	9	19	22	26
Belgium	15	24	28	32
Denmark	14	23	23	24
Finland	12	13	15	18
France	17	25	31	37
Germany	9	18	24	31
Ireland	10	11	14	18
Italy	11	16	24	34
Netherlands	14	13	17	22
Norway	11	20	24	28
Portugal	5	3	6	9
Spain	7	8	13	20
Sweden	13	15	26	40
Turkey	4	1	4	8
United Kingdom	12	14	20	26
Yugoslavia	14	13	40	73

(*) For technical details of the calculations, see Annex III of the source mentioned below.

Source : OECD Committee for Scientific and Technical Personnel, Conférence on Policies for Educational Growth. — Background Study No. 1, Educational Expansion in OECD Countries since 1950, Annex III, Table X (modified). — STP (70)6.

TABLE THREE

Hypothetical enrolments which European countries would have to achieve if by 1980 they were to have the same proportion of the 20-24 age group in post-secondary education as the USA had in 1965

(Provisional)

Country	Enrolments		*Indices*
	in 1980 1'000s	*in 1965/66* 1'000s	*1965/66 = 100*
Belgium	246.5	84.0	294
Denmark	145.9	52.0	281
France	1,625.0	504.4	322
Italy	1,640.8	408.4	402
Netherlands	455.6	124.0	367
Norway	122.0	28.9	422
Sweden	209.4	77.6	270
United Kingdom	1,649.2	429.5	384
Yugoslavia	587.8	184.9	318

Source : OECD Directorate for Scientific Affairs. — Development of Higher Education in OECD member countries : quantitative trends. — DAS/EID/69.23 April 1969, Table 31, p. 49 (modified). — All figures provisional.

TABLE FOUR

Students enrolled in technology as a percentage of total enrolments				
Country	1950/51	1955/56	1960/61	1965/66
Yugoslavia	17.4	17.8	24.8	24.4
United Kingdom	12.4	15.6	18.5	20.4
Portugal	22.7	21.1	19.3	19.9
Austria	—	20.6	20.7	18.4
Netherlands	17.5	15.5	17.8	16.1
Germany	13.9	17.7	16.9	13.5
Norway	12.7	20.8	17.6	12.4
Sweden	16.8	15.2	14.4	11.9
Belgium	12.9	11.3	12.6	11.2
Switzerland	12.0	12.4	13.1	11.0
Denmark	13.7	15.5	15.1	10.9
Spain	4.0	5.4	8.5	10.9
Italy	13.1	11.7	11.4	10.7
Turkey	5.3	5.7	5.4	7.4
Ireland	8.6	9.4	6.5	7.4
France	8.5	8.1	10.0	6.6

Source : OECD Directorate for Scientific Affairs. — Development of Higher Education in OECD member countries : quantitative trends. — DAS/EID/69.23 April 1969, Table 26, p. 42 (modified). — All figures provisional.

TABLE FIVE

Proportion of girls in higher education circa 1950 and 1965

Country	c. 1950 percentage	c. 1965 percentage
Austria	21	24
Belgium	26	32
Denmark	24	35
Finland	39	48
France	32	39
Germany	20	23
Ireland *	27	31
Italy	25	32
Netherlands	20	25
Norway *	n.a.	24
Portugal	24	35
Spain	n.a.	21
Sweden	29	38
Switzerland *	13	18
Turkey *	20	25

(*) University only.

Source : OECD Committee for Scientific and Technical Personnel, Conference on Policies for Educational Growth. — Background Study No. 1, Educational Expansion in OECD Countries since 1950, Table XII (Taken from OECD Statistical Survey on the quantitative development of higher education, to be published), modified. — STP (70)6.