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A COMPARATIVE ANALYSIS OF THE DEVELOPMENT AND STRUCTURE OF EDUCATIONAL SYSTEMS.

Methodological foundations and the construction of a comparative educational scale

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1. Introduction

"Education" understood as the product of the institutionalized transmission of knowledge, skills, attitudes, and so forth,[1] has a central place in many areas of society: Aside from *economic* aspects--education in the sense of the transmission of qualifications, as the acquisition of "human capital," as a factor of investment and growth--education is seen as the necessary presupposition of participation in culture and society--"education as a civil right" (DAHRENDORF 1965), and there are *ideologically normative* elements of education--the promotion of the dominant social and political values through the educational system. Education is thus seen as an important prerequisite of nation and state-building--especially for the development of the idea of the nation-state--in the 19th and 20th century. For it was only in the process of the standardization of curricula contents that the basis for the formation of shared elements of consciousness was achieved, one of the prerequisites for the idea of the nation-state (FLORA 1972, 1975).

This paper primarily focuses upon the importance of education in the process of the formation of *classes*: in other words, it focuses on the class allocation function of the educational system. Class structures are not invariant structural features. The relative importance of single classes is subject to historical change, and the composition of class membership is characterized by exchange processes between classes. These fluctuations--also referred to as social mobility--have often been interpreted as a constitutive element of the concept of class. According to Max Weber, classes are characterized by frequent exchange within (the same class) and infrequent exchange between the different classes of society. In the same vein, GOLDTHORPE (1980) emphasizes the importance of a certain degree of demographic stabilty as a minimum condition in the process of class formation.

The shifts in the size of classes and the changes in class membership take place via inter- and intra-generational mobility processes. In these processes, education plays a central role which might vary both between societies and over time.

1.1 The Function of Education in the Process of Class Structuration

To what extent, in fact, does education represent a structurating force in the long path in life from social origin to occupational position? Educational systems are selective in terms of a three-fold process, and thus can be seen as the *transmitters, results* and *causes* of structures of inequality. First, the accessibility of education proves to be a selective process dependent upon socio-economic and *socio-cultural background*. Different social strata are characterized by different levels of aspiration in terms of the education of their children; they also vary in the

financial and cultural resources of support which they can offer (BOUDON 1974, BOURDIEU 1982). Secondly, a selection process occurs within the *educational process itself.* Though selection is more or less meritocratically organized, the performances required nevertheless can be more easily realized by children with the corresponding cultural capital, i.e., the "appropriate" socio-cultural background, since educational contents often demonstrate a 'middle-class bias' (BOURDIEU/PASSERON 1971; MEULEMANN/WIESE 1984). Thirdly, *selection mechanisms* come into play in the *process of occupational allocation*, a process more or less heavily dependent upon specific education certificates. Here, education becomes an instance of the reproduction of class structures and social inequality through credentialism and the use of educational certificates as signals of productivity in the screening process of employees by employers (WEBER 1956; BOWLES/GINTIS 1976; BOURDIEU/PASSERON 1971; HURRELMANN 1985).[2] Since the educational system functions as a structurating factor of inequality, it has been seen again and again as a point of departure for *structural changes*, i.e., as a means for securing class distinctions or equalizing class differences by increasing or reducing existing selection mechanisms. Access to higher education is made possible for a larger or smaller fraction of the disadvantaged classes. In this way, the intellectual capital of this part of the population can be secured, and at the same time, the entire selection system can be meritocratically legitimated. This problematic--the tension between openness (equality of oppurtunity as openness towards above) and barriers (elite formation as the closure toward below) has characterized the development of the educational system since the 19th century (cf. LUNDGREEN 1980, 1981; LUTZ 1983).

The reproduction mechanisms of social classes and strata can, however, go beyond the simple nexus between origin-dependent educational achievement and education-dependent occupational allocation. This can occur when educational oppurtunities are not only unequally distributed according to class, but in addition, the connection between education and occupation varies according to class in the sense that certain educational resources are a *conditio sine qua non* for members of disadvantaged classes, but not for members of privileged classes.

In the present study, analysis focuses upon the *selection effects which the educational system has for children of different social origin and upon the educational system's function in social selection and the allocation of individuals to class positions.* The specific selection processes taking place within schools, i.e., the manner in which selection is realized according to meritocratic or other criteria, is outside of the scope of this paper.

Thus, we are starting from the premise that the educational system is assigned an important role in the class structuration process. This is naturally, but one of many conceivable positions. The consequences which the educational

system has for social mobility and the structure of social inequality varies according to which connection is assumed between education and class position, or between social origin and education. On one end of the spectrum of possible arguments Schelsky's well-known thesis might be found that the traditional connection between social origin and educational success is no longer given in advanced societies. This situation ultimately leads to a high rate of mobility processes and to the de-structuring of class society. This thesis--in modified form--has recently once again been argued for by several authors (BERGER 1986; HRADIL 1987). On the other end of the spectrum, we find arguments tending to claim an ever-intensifying connection between the educational and occupational systems (FLOYD 1959) and the claim that "education is increasingly the mediator of the transition of status beteen generations" (HALSEY 1977:184). Nor should one omit positions such as that of JENCKS (1972) which assume that education *per se* can hardly affect the structures of class-dependent inequality.

One could add many other different positions to this list.[3] However, they are not essential for the question posed in this paper; for even if one assumes that the influence of school is not great, the following question can still ultimately only be answered empirically: How compelling are the transitions from class-specific origins to educational certificates and from educational certificates to positions in the occupational system? And thus, what is the significance of educational systems for stabilizing or transforming societal structures?

Moreover, this question can only be answered in the framework of an international comparison, since only in this way is it possible to grasp the effect of differing institutional frameworks and varying economic and social policies on the structure and function of different educational systems.[4]

1.2 What this paper is about.

With regard to this task the present paper has a preparatory function, namely to develop measures for education which are adequate for the study of the role education plays in structuring the patterns of intergenerational class mobility in different industrial societies, more precisely in those European societies primarily investigated in the CASMIN-Project: England, the Federal Republic of Germany, France, Hungary, the Irish Republic, Northern Ireland, Poland, Sweden and Scotland.

Whereas for measures of class, we are able to make recourse to the class schema developed by J.H. GOLDTHORPE (1980)--in the meantime extended to all the aforementioned nations treated by the CASMIN-Project, the construction of a comparative educational scale proved to be an equally difficult task. Explaining the criteria used for constructing such a comparative scale of education, describing the decisions made in the light of our knowledge of the historical development of the different national educational systems and

documenting the concrete operationalizations for each country together comprise the main purpose of this paper.

Chapter 2 presents some of the basic problems resulting from the development of such a scale and discusses the main approaches and (partly) available solutions we did not opt for. Chapter 3 describes the different national educational systems in the following order: the Federal Republic of Germany, France, Sweden, England, Scotland, the Irish Republic, Northern Ireland, Poland and Hungary.[5] By means of various indicators largely related to the organization of the school system, we will pinpoint the common and distinguishing features in the historical development of the national educational systems and describe the educational systems as found at the time of the survey. Since in the case of almost all countries, this point in time is the beginning of the seventies, our analyses are *de facto* located in a social-historical framework. Chapter 4 contains the details of the comparative educational scale constructed. It describes the defining elements of the common scales and the ways it has been built up from the information available for each country.

2. The Development of an International Comparative Classification for Educational Systems

Even though systematic international comparisons have gained increasing importance in recent years, the problems connected to the development of an international comparative scale of education have rarely been made the concrete object of analysis. This is all the more puzzling, considering the fact that since the beginning of comparative research, the basic problems it has posed both in terms of its conceptual and theoretical foundations and in terms of its empirical data base have been recognized.[6] It is precisely in international comparisons where the researcher is usually *not* able to make use of his/her own primary surveys, and is instead dependent upon secondary data. This, however, means, that the parameters of the survey cannot be controlled. The formulation of the problem and its methodological execution (in terms of definitions, concepts, classifications) involved in the analysis of even such seemingly clear-cut topics as education vary markedly from country to country and are *de facto* often taken as given in the case of comparative investigation (MÜLLER 1986).[7]

The lack of comparative scales and restricted empirical data initially limited the comparison of educational systems in the fifties and sixties to simple, numerical indicators such as the comparison of the number of secondary school graduates or the length of education. Such rough, quantitative comparisons proved to be problematic, given the great variety, differentiation and dynamics in educational systems.[8] Nevertheless, especially in historical analyses, one is still

dependent upon the data *available*, and the criteria used to generate this data often cannot be controlled.

The construction of instruments for comparative measurement, i.e., scales, turns out in fact, to be very difficult today as well. Educational systems systematically different in character have to be mapped upon a uniform scale. This fundamental problem of standardization cannot be solved in an unambiguous and uncontroversial manner, since, in a strict sense, this would presuppose that the educational systems to be compared, shared the same basic structures. The possibility of comparison has thus been put in question by some authors, who emphasize the nationally-specific combined effects of different social institutions (cf. MAURICE 1982, ROSE 1985). The classification process ultimately leads to the homogenization of social reality and the levelling of nationally distinctive characteristics. The danger always exists that "that which is considered 'interference' and is correspondingly done away with, actually represents the most important aspect of research, namely, its national elements" (PESCHAR 1984:15).

2.1 Problems in the Comparison of Educational Systems

The problems of an international comparison of educational systems can best be illustrated in terms of a few examples. Contemporary educational systems have arisen in a long historical development within diverse fields of social forces. For example, since the French Revolution, the conflict in France pitted the Church against the centralized State. The enormous importance of (largely parochial) *private schools* (alongside of public schools) has been the result of this historical line of conflict. France is also characterized by a high degree of standardization and strict, *bureaucratic* direction in its educational system, arising from the country's traditional centralization. In *Germany*, or more accurately in Prussia, the German Empire and the Federal Republic, on the other hand, *federal diversity* and decentralized features of the educational system were able to win out. Private schools play only a subordinate role here. What is distinctive to Germany, however, is the dual system of occupational training which grew out of elements of the estatal heritage. This system is found in only a very few countries, but has wide-ranging consequences for the process of occupational placement (HALLER et al. 1985, KÖNIG/MÜLLER 1986).

Systematic institutional differences, touched upon in the examples of private schools and occupational training, can be found in many of the features of the organization of education: in differences in the actual openness of educational institutions brought about, for example, by tuition requirements; in the different divisions of secondary schooling into different school types; in the different ages at which selection for secondary school types takes place and in the different selection criteria employed; in differences in organization and internal

differentiation in the field of higher education and in its admission criteria; in differences in the integration of general and vocationally-oriented training; in differences in the importance of private and elite schools; in differences in the organization and spread of systematic further education after entry into the working world; in differences in the extent of co-education; and, in differences in the integration of educational measures for handicapped children into 'normal' school operations, and thus in differences in stigmatization and exclusion caused by the educational system (cf. also FLORA 1975).[9]

Finally, as regards the links between the educational system and the employment system, we find marked variations in the importance of school diplomas and training certificates on different national labor markets.

2.2 Previous Approaches To Comparative Educational Classifications

Of the multiplicity of attempts at operationalizing education, we would like to characterize briefly three approaches.

2.2.1 Number of Years of Schooling

One of the oldest attempts at comparatively measuring education, is based upon the number of school years (BLAU/DUNCAN 1967). It is clearly oriented around the American school system which exhibits a low degree of institutional differentiation (WANNER 1986). In measuring education in this way, a linear connection is postulated between inputs in education and outputs. It is assumed that the greater the number of years of schooling, the higher the level of education and thus, for example, the higher the income or status of the individual. However, this linearity assumption is particularly difficult to maintain for European systems of education, which are institutionally so widely differentiated that 'more' school years does not necessarily mean 'more' education.[10] The same number of years of schooling can vary greatly as a predictor of occupational oppurtunities, for example, depending upon which educational path is involved. This is especially true concerning the division separating educational paths oriented towards general education and those more strongly oriented towards specific vocational qualifications. The number of years of schooling appears to be an adequate instrument only when differing courses for achieving a certain number of years of education do not exist. As a rule, this applies only to those countries with low differentiation in their primary and secondary school system, such as we find in the United States or in Sweden since the sixties. With increasing differentiation of the educational system, the indicator "years of schooling" loses informational value (cf. RUBINSON 1986:524). But even if we do assume that the number of school years is an appropriate indicator, it has to be related to the overall educational situation at the time of its attainment, since it is subject to large cohort-specific

variations. For every historical shift--as for example, in compulsory education regulations--a separate educational scale taking the change into account would have to be developed for the cohorts affected.

2.2.2 Scoring Education

Educational scales have been developed by various researchers in recent years, in which educational scores have been generated through scaling procedures in such a way that a specific connection between the scaled educational information and a given criterion (dependent variable, such as income) is maximized, for example by means of techniques of regression analysis (TREIMANN/TERELL 1975) or by means of log-linear models (SMITH/GARNIER 1986). The problems of constructing an interval-scaled variable representing education in this way becomes clear, if we consider the dynamic character of educational systems. All stages of education--regardless how they are defined--are continuously subject to processes of historical development. This applies both, for example, to the 'value' of a given educational certificate on the labor market as well as to the performance level or standards required for a given educational certificate. These changes would consequently also have to lead to corresponding changes in the generation of educational scores, which would ultimately lead to a great number of educational scales. Moreover, in this procedure, the educational scale is only operationalized in reference to the specific criterion (variable) used.

The most convincing scaling approach is probably that of SORENSEN (1983), in which on the basis of certain assumptions, educational scores are generated from a hierarchized educational distribution. A related possibility is the quintile approach. Education is scaled according to the relative position in the hierarchy of the educational continuum, realized by proportionally dividing up upper, middle and lower segments. Here, apart from the problem of developing an unequivocal hierarchy, the characteristic dividing lines (certificates) are ignored. In other words, the actually existing differentiation of the educational system always only approximately corresponds to this proportional division into segments.

Just as in the effort to grasp the educational system in terms of years of schooling, in the case of educational scores it is also hardly possible to take institutional differences adequately into account.

2.2.3 ISCED Scale

Since 1970, the Statistical Office (Bureau) of the European Common Market has published educational statistics on its member countries. The basis of these statistics is the "International Standard Classification of Education" (ISCED) developed by UNESCO. This classification model is oriented around certificates,

divided into two phases ("cycles"). The first phase corresponds to the lower part of secondary schooling up to an intermediate degree. The second phase leads to the certificate required for the entry into the university and all other kinds of institutions of higher education. This stage includes academically-oriented high schools, the higher levels of comprehensive schools, and different types of vocationally-oriented schools such as technical high schools, vocational technical schools (e.g. the German *"Berufsgrundbildungsjahr"*). The fourth stage includes all the types of higher education: polytechnics, technical colleges, schools of the health system, art academies or institutes, teachers colleges and universities. The problematic nature of the ISCED-Scale becomes evident, when one more closely analyzes how certain educational paths in different educational systems are treated in the terms of this scale. To exemplify this problem, let us take the German system.

On the one hand, the ISCED-scale refers only to full-time students. In this way, however, part-time training, as for example apprenticeship in the Federal Republic, is not taken into account. On the other hand, all types of *full-time* vocational training (independent of the length of training), are included in the classification. Moreover, the inclusion of several vocational training courses in the upper secondary level leads to a considerable heterogeneity on this level. For example, the one-year *"Berufsgrundbildungsjahr"* provides graduates of the lowest level of compulsory education with the most elementary, practical vocational knowledge. The vocational technical schools (*Berufsfachschulen* and *Berufsaufbauschulen*) also lead as a rule only to an intermediate degree, and in no way correspond--in the German educational system--to training on the level of the upper secondary level. Just as questionable is the inclusion of technical schools and health system schools in the fourth stage category, since these schools generally start from an intermediate degree and only lead to the entry qualification for technical colleges.

It should be evident through the brief discussion of these different approaches that the effort to construct a comparative international classification of education poses the basic methodological problem of standardization. Standardization according to number of school years ignores the historical shift in the legal regulations of compulsory education. It ignores the differences in educational paths and thus the varying meaning of certificates and of nationally-specific traits of educational systems. This criticism also applies to the abovementioned approaches at scoring education. The ISCED Scale is afflicted by the fact that it is strongly biased in considering only full-time education and that it

subsumes many kinds of rather elementary full-time vocation education under higher secondary or tertiary education.

Given the great importance that we attribute to the specific processes of institutionalization that have developed in the course of historical development in particular countries, we find it indispensable to describe briefly in the following section the essential distinctive characteristics of each country's educational system as well as the historical process of its development.

3. The Description of National Educational Systems

The descriptive characterization of educational systems is certainly a precondition for the deeper understanding of the educational structures of individual countries. In order for such a description to be fruitful and to the point, it is necessary to concentrate upon certain given components. Given the marked differences between the various national educational systems, it is justified to ask what is in fact shared. In other words: what are the qualities of educational systems that permit us to abstract from the manifold differences and identify and focus upon those patterning qualities which enable the essence of the different systems to be appropriately characterized?[11] Even this descriptive characterization has to be guided by theoretical criteria and oriented around the essential structural characteristics, which in accordance with our cognitive interest, play an important role in the function of allocating class positions.

A central structural characteristic of educational systems is the structure of the selection process. The selection processes in an educational system are decisively determined by the political-administrative characteristics of the system such as the *"degree of centralization"* and *"of standardization."*[12] According to Hopper (1968), a high degree of standardization connected to strongly meritocratic selection criteria leads to comprehensive type school systems with insignificant educational barriers and a high percentage of youth with advanced education (e.g., in the USA and Sweden). On the other hand, a high degree of centralization connected to aristocratic selection criteria tends to result in a school system with strict selection processes (e.g., France). While it seems important to take into account the degree of standardization and of centralization it remains an empirical question whether the hypotheses proposed by Hopper are in fact valid.

Another important feature of educational systems is the *biographical point in time of the selection process* and the kind of formal *differentiation and specialization of the educational paths*. On the one hand, the role which social origin plays in determining the educational path of the individual is dependent upon the temporal localization of the points of differentiation in the educational biography. The earlier decisions between different educational paths have to be made in the educational biography of an individual, the more extensive is the influence of

social origin. On the other hand, the processes of allocating individuals to occupational positions are directly affected by the point in time differentiation takes place as well. An early selection--as found for example in German-speaking countries--fixes at an early date later occupational careers and leads to more homogeneous socio-cultural milieus, whereas very late selection processes such as in the USA at very least impede the fragmentation of cultural milieus and tend to result in large sections of the population possessing largely similar educational backgrounds. The point of time of selection cannot be considered in isolation from the form and configuration of differentiation. This involves the questions: which educational paths are still open after the different selection points; and in how far does it remain possible to later change from one educational course to another.

Apart from the structure of differentiation of the educational system *per se*, the *factors which influence the transitions between different branches of the educational system* have to be considered. This includes above all institutional barriers such as tuition or the availability of educational facilities in the place of residence, the setting of quotas for certain educational courses, as well as the criteria according to which educational institutions select students.[13]

Of great importance for the explanation of variation in the pattern of relations between the educational and the employment system is the degree of *institutionalization of occupational training*. In countries with highly formalized occupational training (such as the Federal Republic of Germany), the acquisition of such occupational qualifications becomes a necessary condition for attaining correspondingly skilled occupational positions. On the other hand, in countries with strong elements of "on-the-job" training, educational certificates necessarily do not possess such a high degree of selective power (KÖNIG/MÜLLER 1986). Since we expect that precisely the type of institutionalization of vocational training is a crucial element in determining the closeness of the links between the educational and occupational system much attention has to be given to this aspect in our examination of the different countries.

Besides the arrangements for acquiring vocational qualifications, the existence of *certificates* continues to be decisive for the allocation function of educational systems. In countries where certificates play an important role, i.e., where an educational track normally closes with a certificate (gained via examinations), such certificates function as signals. Those holding such certificates are favored in the allocation of correspondingly skilled positions. This may be because certain labor capacities are anticipated by the employer given the applicant's possession of a given certificate (and the corresponding evaluation of this certificate; ARROW 1973; SPENCE 1974). Or, this may be because the

possession or non-possession of certificates can legitimate the unequal treatment of different categories of employees.

A further element greatly contributing to understanding the present educational structures of most countries is the century-long *struggle between Church and State* over supremacy in the educational system. The school system was "secularized" by the State at different points in time as a result of the course of this conflict. The consequences of a different course of this struggle in different countries can be seen in the varying importance of *confessional private schools*. In some countries, the dualism between a private Church-controlled and a public State-controlled educational system still exists today, whereas in other countries the school system has come completely under the aegis of the State. For this reason, attention must be paid to the way in which this conflict took place in different countries and the marks it left on the educational system.

After this short overview of the general features of educational systems which appear essential to us, we will now begin our description of the national educational systems--starting with the Federal Republic of Germany, France and Sweden. As a second section, we will treat the English-speaking countries of England, Scotland, Northern Ireland and the Republic of Ireland, and close with the Eastern European countries of Poland and Hungary. While in each of these nations we will briefly summarize the historical sources of the specific national educational institutions, our main emphasis will focus upon the educational system and its changes in the period in which the populations covered by the CASMIN-Project surveys attended schools and universities, i.e., the years from about 1910 until the end of the 1960s.

3.1 The Federal Republic of Germany

The national educational system in Germany (and other European countries) was first constituted in the 19th century. In medieval times, the *(Catholic) clerical elementary schools* were the essential bearers of general education. They transmitted reading and writing so to speak as by-products of their goal of religious education. The Catholic Church, however, was even more important in the development of the more advanced levels of the school system. It was only in the Reformation that widespread literacy movements finally began, which contributed more to the development of the system of popular education than the elite Latin and monastery schools. Apart from religious institutions, the only education worth mentioning took place under the auspices of the schools of the burghers in the cities (FLORA 1974). The authoritative influence of the Church was rolled back in stages, starting with the Enlightenment and the rise of strong State bureaucracies (SCHNEIDER 1982:211).[14]

In Prussia, schools were "secularized" by the State in 1794, after *general compulsory education* had already been introduced in 1717. However, compulsory education applied only in those places where schools existed. In addition, schools in the countryside were only winter schools. In 1763, however, a general requirement of attending school and instruction was made of all children between the ages of five and thirteen (SCHULTZE et al. 1973:17; LUNDGREEN 1980:33f.). With the establishment of the *State* school, a clear separation of Church and State was achieved relatively early in Germany in comparison to other countries, even though Church influence continued to exist well into the middle of the 20th century (to different degrees in the various states). Confessionalism long hindered effective reforms, and only became less significant in the postwar period.

Thus, in comparison to other European states, the movement towards general compulsory education under public control began relatively early in Germany (Prussia) and it was gradually realized. In the 19th century, the *three-tier system* with its elementary schools, middle schools and Gymnasia--taken over from earlier times and predominant up until today--was increasingly firmly established, in spite of intensive reform efforts existing even then (LUNDGREEN 1980:56ff.).

A decisive change was first brought about by the Imperial School Law of 1920, which provided for a common primary school, grades 1-4, for *all* children. Up until then, children intending to receive their education at a Gymnasium, attended special primary schools as preparation for the Gymnasium, the so-called preparatory schools. Through the introduction of a common primary school for all children, the very early selection through the elite and class-specific preparatory schools was lessened. The formation and expansion of a primary education program shared by all pupils did not, however, in any way change the highly selective character of the following stages of school. Compulsory education was fixed for all states at 8 years. Moreover, for all youth who did not attend advanced schools, attendance of compulsory part-time vocational schools was binding until the age of eighteen (MÜNCH 1979).

The *federative conception*--historically explained by late State formation--remained intact in the Weimar period, and next to confessionalism, represents a further essential barrier to school reforms.[15]

During the period of National Socialist rule (1933-1945), the school system--like other societal realms--was ideologically "brought into line," and gradually centralized. One thing this contributed to, was that after the end of the Second World War, educational policy was once again put under the jurisdiction of the individual states of the federation.

The postwar years are characterized by a restauration of the educational system. It was only after 1965, that the long period of relative stagnation in educational development since the Weimar Republic ended. This was brought

about by diverse efforts at reform: the partial introduction of comprehensive schools, of the orientation level and of the reformed upper level in Gymnasia.

But even this 'openness to reform,' increasingly put into practice since the end of the sixties, was not an educational reform in the sense of the realization of a unified concept. Only numerous partial reforms and developments took place in individual states, often guided by different conceptions and in part taking very different courses.[16]

To resume this short sketch of the development of the German educational systems and its essential features during the time the population covered in our investigation attended school, we can summarize that since the *Imperial School Law of 1920*, the only important development to be pointed to is the gradual institution of eight-year long compulsory education, and then in 1964, its increase to nine years. Particularly the three-tier system--characteristic of the German educational system--can be considered as largely unchanged up until the beginning of the seventies.

In this system, the only aspect of education both *common* and *obligatory* for all pupils was the attendance of elementary school (the primary sector) from the ages of six to ten.[17] After elementary school attendance, selection occurs for the different school types, which are set up as parallel institutions. Up until the introduction of comprehensive schools, the German educational system was clearly set up as a three-part system, presenting the following elements:

a) *Hauptschule*--a four to five-year education (grades five to nine). This is the obligatory school for all pupils who do not attend advanced schools. Its completion opens access to many apprenticeships, mainly in manual occupations.

b) *Realschule*--a six-year education, providing an intermediate certificate. In comparison to the *Hauptschule*, it has higher performance requirements. It does not, however offer academic qualifications; it is directed towards middle-level technical and commercial occupations. Graduation from a *Realschule*--formerly termed the *'mittlere Reife'* and today termed *Sekundarschulabschluß I* (Secondary School Certificate I)--is the precondition for a host of skilled vocational training courses.

c) *Gymnasium*--also a six-year education up until *Sekundarschulabschluß I*. Even if in both a Gymnasium and in a *Realschule*, an intermediate certificate can be achieved which is of equal value--for occupational purposes--the curriculum of a Gymnasium is clearly academically oriented. Up until the reforms of the late sixties and early seventies, it was only possible starting from a Gymnasium--without additional performance requirements or barriers--to achieve the right to admission to higher education by completing

the three-year upper level of the Gymnasium with the *"Abitur"* as the final examination.

d) *Only since the seventies,* have the *Gesamtschulen (comprehensive schools)* also led to the Secondary School Certificate I, and from there, through Secondary Level II to the *Abitur*, granting the right to admission to higher education. However, these comprehensive schools have not completely replaced the old system, and even include within themselves, differentiations corresponding to those of the old three-part system.

The predominant school form as of the end of the sixties was the *Hauptschule*. In Baden-Württemberg, for example, in 1968, circa 64% of the pupils leaving elementary school went on to a *Hauptschule*, whereas only 15% went on to a *Realschule* and only 21% went on to a Gymnasium.[18]

At the beginning of the seventies, orientation levels were set up in increasing numbers (in the fifth and sixth grades). Their purpose was to delay the point of selection until the end of the sixth grade in order to obtain a more reliable basis of judgement of future school achievement, and thus in this way, to open schools up to a greater extent to talented children.[19]

A further distinctive trait of the German school system, which has lasted up until the present, is the close connection between the civil service and the educational system. In no other country do we find such a close connection between the different levels of service and the careers in basic, middle-range, upper and uppermost service on the one hand, and the corresponding educational paths, on the other (on this, cf. KONTNER 1983). Different occupational fields and different levels of authority were seen to correspond to the different educational levels, such that the three-fold division of the school system and the close connection between educational type and career in public service are legitimated so to speak from the different distribution of talent in accordance with the law of nature (KÜHLMANN 1972: 1, 18f.). With progressive industrialization, the rules developed for the civil service were also adopted in the bureaucracies of private industries, thereby creating close links here as well between the educational and school system (D. MÜLLER 1987).

In addition to the area of general education, there has arisen in Germany a no less important and autonomous area of *vocational training*. This is the institution of occupational skills training through apprenticeships, developed out of the estatal tradition. It was largely intregated into the daily work of different crafts and supplemented by part-time vocational schools; this is the 'dual' system of occupational skills training. The increasing demand for qualified labor power at the beginning of the industrialization process resulted in: 1) the vigorous expansion of this form of education, and 2) at the same time, the expansion of

occupational skills training to include numerous manual and non-manual occupations.

Even today the occupational training of future labor power still largely occurs at the workplace, whereas the transmission of theoretical knowledge in trade school, on the other hand, tends to play a less important role. Particularly in the past, having completed an apprenticeship was a necessary precondition for entry into subsequent institutions of further occupational qualification, e.g., for the major engineering schools (cf. LUTZ 1976). As a major consequence of the apprenticeship system, it is established relatively early who will work as skilled labor and who as unskilled, since an apprenticeship is usually not taken up in later occupational life. Only starting in the seventies, have new institutional paths been created which lead through vocationally-oriented schools to the just as recently established new institutions of tertiary education, the technical colleges--preparing for employment in higher technical occupations, business administration or social work.[20]

Thus in Germany, it was and still is possible in an practical-occupational track to obtain the educational qualifications for middle to high-range positions. However, the right to admission to higher education at the university could usually only be obtained after the attendance of the three-year long upper level of the Gymnasium and the 'Abitur'-examination. Up until the beginning of the eighties, due to the lack of alternatives, the *Abitur* led almost exclusively onto the 'one-way street' of study in universities, technical universities or teachers' colleges.

Moreover, a recent development has to be mentioned: in addition to the so-called "first educational track," the possibility now exists to attain intermediate certificates and the right to admission to higher education by means of a "second educational track." There exist a variety of institutions, which as full-time schools, as night schools or as correspondence courses prepare in compact form for equivalent examinations. There are also isolated cases of admission examinations to study in higher education outside of the traditional *Abitur*. Moreover, since the sixties, the possibility does exist to obtain higher education eligibility for specific disciplines in technical college courses. Nevertheless, the "second track" institutions and adult education--as of the early seventies--had only played an insignificant role.

In contrast to the English-speaking European countries, private schools have but little importance in the Federal Republic, even though the right to private schools is guaranteed by law and is subject to federal jurisdiction. In 1975, 4.4% of all students (in vocational and general education) were enrolled in private schools exhibiting in part extensive differences according to school type and state.[21] Most private schools, however, are so-called "compensatory schools" (*Ersatzschulen*),

which correspond in structure and function to public schools and are thus not comparable to elite private schools of other countries.

In summary, the educational system of the Federal Republic of Germany can be described as a highly selective and hierarchically-organized school system, whose three-tier character--in *Hauptschule*, *Realschule* and Gymnasium--was not substantially changed even by recent reforms. The class-specific character of the almost exclusively State-organized school forms was promoted by strict selection processes into the sixties. It first became somewhat less significant in the seventies, through higher rates of participation in education. Above all, this led to more degrees in the middle range, but also to more higher degrees. The apprenticeship system continues to represent the cornerstone of basic vocational training. Approximately half of all the members of a cohort group pass through it. In the Federal Republic as well as in other German-speaking countries it is an essential precondition for assuming skilled positions.

3.2 France[22]

France's educational development has been marked since the French Revolution by the power struggle between the Catholic Church and the centralized State. The influence of the Church has been maintained up until the present in the strong position of private, largely parochial, educational institutions. The influence of the State, and especially the centralized State's need for highly-qualified, loyal State officials has compelled the development of the influential elite colleges. The following is a short historical sketch of France's educational development.

Up until the French Revolution, "education" was the indisputable domain of the Church. Thereafter, the Church was only able to maintain decisive influence in the primary sector of education. From this point onwards, the State took over the control of secondary schools and universities, as State representatives grew increasingly more conscious of the political relevance of "education." Since 1833, State influence has also penetrated into the primary sector. At this time, state-run primary schools were introduced (the "Loi Guizot"). However, they only served to supplement the largely parochial, private schools. Elementary school first became *obligatory* and *tuition-free* for all children in 1882. This was the first instance where the goal of decreasing the "inequality of birth" played an explicit role (HANLEY 1979:257). Nevertheless, tuition remained a requirement of the *enseignement secondaire*, and with the establishment of an upper level of primary school (the *écoles primaires supérieures*), a complete division between a primary (*enseignement primaire*) and a secondary (*enseignement secondaire*) school system was reached, each possessing its own primary level. Advanced education was only possible in the secondary school system, and was thus to the largest possible extent, limited to those who already entered the secondary track in their first school year. The

tuition required for attendance of the *enseignement secondaire* guaranteed an almost perfect class division. Though education was to be "secured" for all, this was only to the extent that it appeared required by economic development. Beyond that, "class situation" decided--in the form of financial resources and the milieu of the parents. VAUGHAN (1980:17) does however view elementary school teacher education in the *écoles normales*--a part of *enseignement primaire*--as a central, though limited, path of upward mobility for the children of well-to-do farmers and as an "incubator of secularization."

Between 1929 and 1933, tuition requirements were dropped for *enseignement secondaire*; the strong demand ensuing was immediately muted through the introduction of an entrance examination. Under the motto of "each according to his ability," strong support for the *école unique* was expressed by the educational minister of the Popular Front government, Jean Zay. This school was, however, only partly realized in school experiments.

Thus, up until the basic reform of 1959, the French educational system can be characterized as follows: General compulsory education was introduced in 1882 for all children from the ages of six to thirteen; in 1936, it was extended to fourteen, and in 1959--through the Berthoin Reform--to sixteen years of age. On the basis of special regulations governing the transitional period, the 1959 extension did not take effect until 1967. The pre-1959 French educational system was thus marked by the unconnected parallel existence of two different educational systems. On the one hand, we find elementary schools. On the other hand, strictly separated from these schools through their own preparatory schools and admission examinations (and by tuition until 1930), there is the secondary, higher, educational system. The *elementary schools* can lead--by means of their own "higher elementary schools"--to teachers seminaries. Following the compulsory term of education, one could also register for *cours complémentaires*. In addition, vocational and technical schools offered specialized possibilities of further education. Only the *secondary educational system*--by means of its preparatory schools, *lycées* and *collèges*--made entrance into institutions of higher learning possible, i.e. the universities and elite colleges. A host of largely ineffective reforms in the period between 1930 and 1958 attempted to integrate the two systems. The reform efforts, however, did not get beyond terminological standardization.

A basic reform first took place in 1959, under de Gaulle and his educational minister, Berthoin.[23] The strict division between primary and secondary education was abolished. Compulsory education began for all children in a common five-year primary school level from the ages of six to eleven. This was followed by a two-year *observational level*, which was extended by Fouchet in 1963, into a four-year *orientation level*. It was the goal of this Secondary Level I, by easing the transition

between different branches of education,[24] to hold open the possibility of revising educational decisions made earlier. For this purpose, *collèges d'enseignement secondaire* (CES, additive comprehensive schools) were gradually introduced. It was only after the observational or orientation level that the determination of educational track was made. The different tracks led to various *baccalauréats* (with considerably different performance requirements and status), to vocational technical schools or to a vocational apprenticeship (CAP).

Vocational training in France is largely intregrated into the general educational system. The *certificat d'aptitude professionnelle* (CAP)--in terms of our scale, the equivalent of German vocational apprenticeship--is, in contrast to German apprenticeship, purely school-internal, basic vocational training.[25] In terms of its status and quality, it has to be put at a level below that of German vocational apprenticeship.

The designations for educational degrees are very diverse, and--in contrast to the actual contents of different educational programs--have been changed very often. On the primary level, the most important degree is the CEP (*certificat d'études primaires*). This examination can be taken at the end of primary school, at the age of twelve. Whereas, since 1933, the CEP is required for admission to secondary school, it also plays an important role in differentiating among the school leavers with only primary education between those who successfully completed the examination and those who enter uncertified into the labor market. In addition to the CEP, we find the *Certificat d'études complémentaires*, a *Diplome d'études primaires préparatoires* and the *Certificat d'études primaires d'adultes*.

A general middle-range educational level can be attained by means of a *Brevet Elémentaire*, a *Brevet Supérieur*, a BEPC (*Brevet d'études du 1er cycle*) or the first part of a maturity examination (*baccalauréat*).

Each of the different *baccalauréats*--according to the subject tested--allows one to take up certain courses at the universities which are organized on three successive levels. The first division of study at the universities is a two-year basic course of study (the "first cycle"), which is largely independent of faculty and completed with a *diplome d'études universitaires générales* (D.E.U.G.), a kind of generalized preliminary diploma. This is succeeded by a specialized study of one's major (the "second cycle"), which is completed with the *Licence* (Diploma) or a *Maitrise* (Master of Natural or Economic Sciences), or prepares one for the examination for the secondary level teacher certificate (C.A.P.E.S.). One can follow this with graduate studies (the "third cycle"), which leads to a *Doctorat du troisième cycle* or to a *Doctorat d'Etat*.

Since 1966/1967, technical colleges have been established on the university level (*Instituts Universitaires de Technologie*, I.U.T.), which train *Techniciens Supérieures* in a two-year course of study.[26]

A distinctive feature of the French educational system are the *Grand Ecoles*, which arose at the time of the Revolution. These elite colleges--such as the *Ecole Normale Supérieure*, the *Ecole Polytechnique* (for engineers), and the *Ecole Nationale d'Administration* (College of Administration)--are characterized by a highly selective student recruitment procedure (*concours*), a long and demanding program and State diplomas recognized as signifying elite education.

The Berthoin Reform and the subsequent changes in the educational system had hardly any effect up until the point of time of our survey, i.e., until 1970. Up until that point, we find a school system divided into two parts, which had experienced numerous attempts at reform and numerous small-scale educational experiments in the decades up until 1959 but no fundamental change to talk of (if one disregards the extension of compulsory education from thirteen to fourteen years in 1936, and the abolition of school fees for secondary schools in 1930--directly followed by the introduction of admissions examinations).

The separation--which up until 1959 existed from the first day of school onwards--between the primary and secondary educational system, and the extraordinarily early selection process it implied, also meant in France that only an unusually small percentage of the population received an education which went beyond the primary level. The *enseignement secondaire* had as its established aim the preparation for higher university education. For a long time, no strictly intermediate courses of study existed. Into the sixties, an intermediate education--in any case seldom--meant in many cases that an originally higher educational goal had been abandoned.

A structured occupational educational system is also an innovation of recent vintage in France. In any case, the already existing institution of vocational apprenticeship could never reach anything near the significance of its counterpart in the Federal Republic.

3.3 Sweden

In contrast to other European countries, Sweden is characterized by very early efforts at permanent reforms. For this reason, it is often referred to as an educational society.[27] Of decisive importance in this context was the continuity in both domestic and international development and the relative homogeneity in economic and social terms (such as e.g., the absence of federative structures and denominational cleavages). Sweden participated in neither of the two world wars and demonstrates an early rise in the standard of living after a rather late industrialization. One explanation of the continuity in foreign policy neutrality and domestic development is the long period of rule of the Social Democrats--from 1932 to 1976. This was a period of consistent development of the welfare state with the expressed goal of equality and equality of oppurtunity. Beyond this, a

consensus existed amongst all political parties in regards to educational policy: Education was not simply conceived as an important resource for entry to positions in the employment system; the democratization of society was to be effected by means of a democratization of education. The integration of the different school types was supposed to flow over into the integration of the different groups of society.

As early as 1842--and thus at a similar point in time as in Germany--general compulsory education was introduced in Sweden. In 1882, six years of school were made obligatory, and in 1937, the figure was fixed at seven years.[28]

Whereas the old Swedish school system was very similar to the German one in structure, after the reforms in the early sixties, the Swedish system (like its American counterpart) has been based upon the comprehensive school principle and shows the least vertical differentiation of all European school systems.

Before 1950, Sweden was characterized by a "two-tier educational system": with on the one hand, the folk school, and on the other, several types of advanced schools (HUSEN/BOALT 1968:75). The majority of pupils went through the folk school. By 1944, 70% of all pupils completed the seven-year term of compulsory education. For the remainder of the pupils with less than seven years of folk school, the so-called "compensatory schools" existed for completing school obligations. For the graduates of the seven-year folk school, subsequent attendance of a "continuation school" was obligatory. Its length varied sharply (e.g., in rural areas lasting only six weeks).[29] After completing compulsory school, a so-called folk high school could also be attended, which offered both general and vocational education.

The graduates of folk schools, compensatory schools and continuation schools had numerous alternatives from which to choose in the *vocational training* sector, a sector largely unregulated by the State. Vocational training was offered by various forms of *work shop schools*, in which training could last up to four years, though it generally averaged two. In addition, there were a host of possibilities (apprenticeship courses, technical courses, masterworkman courses, special courses, and so on) for obtaining certificates in the occupational sector, or for increasing one's qualifications. These possibilities supplemented adult education schools and a system of national instruction which were widespread and had been begun at an early date in Sweden. However, the possibility of advancing into middle and upper-range occupations by means of these institutional arrangements was slight.

Since 1927, the selection for the advance school sector has generally taken place after the first four years of the folk school.[30] Nonetheless, it was also possible to change over into the advanced school system after five or six years of folk school attendance. Since 1905, the main type of advanced school has been the

public intermediate school,[31] where the five-year *intermediate schools* followed four grades of folk school and the four-year *intermediate schools* followed six grades of folk school. Though both ended with an intermediate exam (*Realexamen*), they differed in a variety of ways, as for example, in transition quotas to the Gymnasium (due to differing selection processes) and in the social recruitment of pupils.[32]

Other forms of advanced schools--like the 4-grade *practical intermediate school* (after six years of folk school) or the *six or seven-year municipal girls school* (established to loosen up the vertical structure of the school system)--were less significant in quantitative terms and primarily fulfilled special tasks. Thus, as a rule, the practical intermediate exam implied the subsequent initiation of occupational life (only approx. 4 % of such graduates moved to advanced schools, JÜTTNER 1975: 18). Apart from their efforts in general education, the municipal girls schools (comparable to the *'höheren Töchterschulen'* in Germany) tended to concentrate on home economics. They were not as selective as the public intermediate schools (no leaving examinations and lower substantive standards).[33]

In contrast to Germany, one could only transfer to a three to four-year Gymnasium in Sweden *after the Realexamen*, and thus after nine to eleven years of school and at the age of fourteen to fifteen. The majority of the Gymnasia offered general education and led to the university qualifying exam (*Studentenexamen*). In addition to this general type of Gymnasium, there were also business Gymnasia and technical Gymnasia, which offered occupationally-qualifying exams. Prerequisite for the transfer to the university was the graduation from a three to four-year Gymnasium.

As early as the beginning of the forties, discussions of reform were initiated, which led to major institutional changes.[34] After numerous comprehensive school experiments had already taken place in the fifties, the nine-year comprehensive school was introduced and made compulsory for all children in 1961,[35] and in 1966, as the logical consequence of the reform of the "base of the system," the introduction of the new type of Gymnasium was carried out.

The nine-year elementary school is divided into three three-year phases (the lower, middle and upper levels). In this way, it links the old folk school and the different forms of Secondary Level I. Since 1962, attendance of this school has been compulsory for all children between the ages of seven and sixteen.

The upper level of elementary school corresponds to the last three obligatory grades (seventh through ninth grade from the age of fourteen to sixteen, analogous to Secondary Level I in the Federal Republic of Germany). This is the stage in which differentiation first takes place--in the form of mandatory subjects and (advanced) level courses. Furthermore, (advanced) level courses in English and mathematics are offered on two different levels with the more demanding of each of the two courses being a prerequisite for admission into the university-oriented

educational tracks of the Gymnasium.[36] The overwhelming majority of any given age group passes through the entire comprehensive school: in 1974/1975, only 5.5% of all pupils did not complete their elementary education.

Completion of elementary school largely functions as the prerequisite for admission to advanced schools. It is less important as a precondition for entrance into occupational life, since vocational training has largely been incorporated into the Gymnasium in Sweden. Accordingly, only a quarter of all elementary school graduates failed to take up some form of advanced education. Nevertheless, a substantial array of possibilities in further and adult education are offered for the later education of this section of the population.

Given this system, the transfer into the secondary sector occurs at a much later age than in other countries. (It occurs at the age of sixteen; this was also already the case in the old Swedish school system.)

The Swedish Gymnasium--building upon the comprehensive school--corresponds to the educational institutions of Secondary Level II in West Germany. It is a full-time school with all-day classes. It consists of 21 tracks (*linjer*)--which are further subdivided into branches and variants, as well as of numerous "special courses" (*specialkurser*) in occupational training. The tracks are based upon the following elements of the pre-reform Swedish school system:

a) *Four three-year tracks* and an occupationally-qualifying four-year track, which correspond to the courses of study of the former *Gymnasium*. In terms of contents, they have practically been adopted unchanged in the new Gymnasium. The certificate earned after the third year entitles one to attend the university. The degrees earned in the occupationally-qualifying tracks (Gymnasium economist, Gymnasium engineer) enjoy but little recognition as entry qualifications for the labor market.

b) *Three two-year "theoretical tracks*, which correspond to the former technical school and prepare one for intermediate degrees. They only offer limited possibilities of continuing education in colleges, technical colleges and so on, and are more strongly vocationally-oriented than before the reform.

c) *Thirteen two-year vocational preparatory tracks*, which follow in the tradition of the older vocational schools but realize new conceptions: standardization of length and stronger emphasis on theory and general education. The incorporation of these vocationally-preparatory tracks into the new Gymnasium results in the almost complete removal of occupational training from the firm (KAROW 1977: 144).

Due to the early specialization in the new Gymnasium, there is however--in almost all courses of study at an advanced level--only a low degree of openness between the three (or four) year tracks and the two-year theoretical and vocational tracks. In part, such transfers can only occur by earning additional qualifications.

In addition to the occupational preparatory tracks, there are approximately 500 special courses (formerly workshop schools and compensatory schools) which prepare for occupations for which no training is offered within the official curriculum of the new Gymnasium. These courses also represent the entrance qualifications for advanced vocational courses of study. Course length varies between a few weeks and a maximum of two years, with most courses lasting longer than a year. Completion of elementary school is the prerequisite for these courses. The organization of occupational training in this manner, combined with the fact that this training is state or municipally-run--rather than in the hands of private business--leads to the following contrast to the West German system: on the lower level of the occupational system in Sweden, no close, normative coordination exists between the educational and employment system.

Freedom of choice in course of study is limited, however, in the new Gymnasium. The different sectors of the Gymnasium have admission quotas which are established by the municipalities in conjunction with the future employers of the Gymnasium graduates and on the basis of the total number of training positions provided by the municipalities.[37] Admission is based upon competition, i.e., the median score on the elementary school closing certificate is decisive. Moreover, a prerequisite for admission to the three/four-year track and the two-year technical track is the completion of the more demanding of the two (advanced) level courses in English and/or mathematics. This greatly lessens the significance of the fact that grades are not decisive for promotion in elementary school.

Before 1977, the completion of the new three to four-year Gymnasium was a prerequisite for admission to university studies. In 1977, a reform of higher education was effected. It resulted in a greater occupational orientation of all of higher education (with the exception of post-graduate studies) and in a more open admissions policy.[38] These reforms, however, had no effect upon our sample, and thus will not be dealt with in any more detail here.

In summary, while already in the first half of the century, the Swedish system was distinguished from those of other European nations by a comparatively late selection point for passage into advanced schools and by the fact that a private school system was never able to establish itself in Sweden, it experienced major structural transformation at a time which affected the school experiences of the cohorts born in the era following World War II. A rigidly arranged, vertical and two-tier school system was replaced and fundamentally restructured in the fifties and sixties by the introduction of comprehensive schools and of new integrated Gymnasia. The incorporation of occupational training into the system of general education, the weakening of the formerly strict selection process and the opening

in admissions policy for higher education makes the reformed Swedish school system into one of the most egalitarian in all of Europe.

3.4 England

Of all of the countries included in the investigation, England exhibits the least standardized education system--due to the great importance of different forms of private schools existing alongside of the public school system. In order to gain an overview of the structure and development of the English educational system, given this diversity, it is necessary to break down the following discussion into four parts: (a) a description of the schools of general education at the primary and secondary level in the English public school sector; (b) a characterization of the private school system existing parallel to it; (c) an overview of the types of certificates which can be achieved in the English school system; (d) a discussion of the institutions of elementary vocational training; and in conclusion, (e) an account of the different possibilities in vocational and academic higher education.[39]

(a) As on the continent, the provision of education in England was also largely a concern of representatives of the church until well into the 19th century. The development of the English public education system followed thereafter on the basis of a series of acts of fundamental educational legislation.

The *Education Act of 1870* laid the basis for the universalization of schooling on the *primary level*. The *Education Act of 1902* created the foundation for a national system of *public secondary schools*, which in turn, was reformed to a considerable extent through the *Education Act of 1944*. Finally from *1964* onwards, the large-scale introduction of *comprehensive schools* initiated the last fundamental stage in the development of English education in the secondary school sector up until now.

This chronology of the most important political decisions by means of which the English system of primary and secondary public schooling gradually reached its present form points to the relatively late development of public education in England. General compulsory education was first introduced in 1876. It was made obligatory for all children between the ages of five and eleven in 1880, and it was not extended to age fourteen until 1918, to age fifteen until 1947, and to age sixteen until 1972. Well into this very century, the majority of children still left school at the age of eleven.

Even today, the age of eleven plays an important role in English education. In 1902, public secondary schools were introduced for 'higher education.' They could be attended subsequent to the compulsory education period then in effect--which ended at eleven years of age. Admissions were governed by a competitive entry examination, the "Special-Place Examination." The age of eleven was

unaffected by subsequent reform legislation--it remained the point in time, from the beginning of the century until now, when the decision on future course of study was made.

Up until the decisive reform act of 1944, the English public school system demonstrated the following structure. Aside from primary schools, two types of higher schools existed: (1) Grammar schools--that type of school in which the educational prerequisites for subsequent university education could be achieved, and (2) Technical schools--considerably fewer in number and shorter in duration--aimed at providing a more advanced basic education with a technical and natural sciences orientation. By far the majority of pupils only attended primary schools. This continued to hold even after 1918, when compulsory education was extended from age eleven to age fourteen: for most pupils simply remained in primary schools which were then extended three years in length. Besides the admissions exam, the school fee regulations also acted as a barrier blocking secondary school attendance. Whereas primary schools became free in 1918, fees continued to be required for secondary school attendance.

The Education Act of 1902 also established the basic components of administrative organization of the English public school system--features existing up until the present day. The administration of the system was transferred from the national Board of Education to the Local Educational Authorities (LEA). Since the LEAs are independent of the Government, this gradually-implemented arrangement was a major contributing factor to the low level of centralization and uniformity found in the English school system.

The reform act of 1944 maintained many of the tradition elements of English education. Nevertheless, it also introduced a series of significant reforms aimed at creating the preconditions for the following state of affairs: that all children after the age of eleven receive the chance to change to that secondary school appropriate to their abilities. Primary schools were herewith restricted to the ages of five to eleven.[40] Thereafter, all pupils moved into one of three secondary type schools. Here, the "secondary modern school"--as the new 'residual school'--took its place alongside of the aforementioned Grammar Schools and technical schools, whose admissions remained selective. In this way, a three-tier school system was established in which, in comparison to Germany, the Grammar School (ages 12-18) corresponded to the Gymnasium, the technical school (ages 12-16) to the *Realschule*, and the secondary modern school (ages initially 12-15, later 12-16) to the *Hauptschule*. However, the technical schools never became very important in quantitative terms.

The reform of 1944 was explicitly aimed at increasing equality of educational oppurtunity. Three reforms were to bring this about: (1) the re-organization of the courses of study through the introduction of the secondary modern school; and

especially, (2) the abolishment of school fees for all secondary schools and (3) the reformed transfer mechanism provided by the new "Eleven Plus Examination." In this context, since other criteria--such as general school performance, school recommendations, intelligence tests and parents' educational and occupational plans for their children--were now considered in the decision on school transfer, the importance of competitive tests was lessened. However, given the scarcity of enrollment positions in Grammar Schools, the *Eleven Plus Examination* ended up playing the same role as a competitive exam as the previous Special Place Examination--in spite of the best of intentions to the contrary. It was only through the gradual introduction of Comprehensive Schools starting in the middle of the sixties that the social selection effect of the Eleven Plus Examination slowly decreased.

(b) The *private schools* ("Independent Schools"), rich in tradition, remained relatively unaffected in both the primary and secondary sector by the developments in public schooling--during the entire period of investigation. The social selectivity of private education remained constant throughout all developments in the public school sector, and so did its composition both in terms of number and social origin. A minority of roughly 6% of all pupils attended private schools in 1970 (STÜBIG 1970:112). Recently, the number of pupils has even increased slightly.[41] Nevertheless, relatively speaking, private education has lost some of its importance due to the enormous expansion of public education.

English private education constitutes a system encompassing all stages of education from kindergarten up until university. Existing prior to the public system, it has influenced the latter in a variety of ways.

On the primary school level, there are private *infant schools* (from ages five to seven) and *preparatory schools* (from ages eight to thirteen) for private pupils. They are then followed--on the secondary level--by the *public schools* (ages thirteen to eighteen). An important distinction exists amongst private schools between the HMC-Schools (Headmasters-Conference-Schools) and the non-HMC-Schools. Traditionally, the HMC-Schools demand high standards both academically and financially, and constitute the most exclusive schools.[42] The non-HMC-Schools tend to be heterogeneous in character and offer a kind of Grammar School education for those children of rich parents who failed to pass the admissions test for public Grammar School.

A unique position--between the independent private schools and the public schools--is taken by the *"direct grant schools"*. Though they are privately run, in return for direct government funding they have to promise to keep a certain percentage of their enrollment positions tuition free and open for those pupils who attended public primary schools and were able to qualify for admission by means of examinations. All other enrollments can be allocated according to the

private payment of educational fees or through the financing of local authorities, who increase the number of Grammar School spots they can offer in this manner.[43]

The so-called *"voluntary schools"* represent yet another type of private school. The voluntary schools are parochial schools, the majority of which are Anglican (7000 schools) or Roman-Catholic (2000 schools). They are funded by the LEAs in proportion to the degree of independence they exhibit from their church affiliate.

(c) The private schools, Grammar Schools (and to a lesser extent, the technical schools and secondary modern schools) constitute that group of schools in which the possibilities of achieving recognized education degrees are concentrated. In England, such degrees only exist on the secondary level, and there on a higher and lower level. In *1951*, the *General Certificate of Education* (GCE) was introduced. It could be gained at the age of sixteen--after five-year secondary school attendance--at the Ordinary level ("O" level, comparable to the German *Mittlere Reife*) and at the age of eighteen--after seven years of secondary school attendance--on the Advanced level ("A" level, comparable to the maturity level). The GCE "O" level exam replaced the former Ordinary School Certificate; the GCE "A" level exam took the place of the former Higher School Certificate. These exams are prerequisites for admission to university studies. A distinctive feature of the English tradition consists of the fact that these certificates are granted for individual subjects. As a rule, entrance into a university requires the "A" level certificate in two subjects and the "O" level certificate in three subjects. Five "passes" on the "O" level can be considered as a worthy intermediate degree. Both "O" level and, in individual cases, "A" level exams can also be achieved at secondary modern schools. However, this is in fact very rare.

In addition to these examinations, administered independently and outside of the schools, there is also, since 1965, a school-internally administered leaving certificate which can be achieved after five-year secondary school attendance (including in a secondary modern school): the *Certificate of Secondary Education* (CSE). The CSE clearly represents a lower standard than the "O" level GCE; nevertheless, they are linked insofar as the best grade on a CSE is equivalent to a lower-grade "O" level.

The completion of a selective secondary school in England does not as naturally entail higher educational studies as it does in other countries.[44] "O" level and "A" level exams are also considered as good foundations for the direct entry into occupational positions which offer good career oppurtunities within the service classes.

(d) The frequently direct transition from various school types to working life is connected to the fact that in England, direct *occupationally-related education*

does not play nearly the role that it does for example in West Germany. This holds not only for the graduates of higher levels of secondary school education but also for those completing only the minimal compulsory educational program.[45] As far as vocational training programs are concerned, the institution of apprenticeship does exist in England, even if it is not very widespread. Prior to the Second World War, apprenticeship lasted five to seven years. This produced highly-qualified, but much too little skilled labor. After World War II, apprentice training usually lasted but two years--accompanied by a considerable loss in average level of quality. Moreover, systematic training plans and exams are often lacking, resulting in a great part of occupational training being "training on the job."

As a rule, occupational training is not subject to government control and takes place in the firm. Even the so-called "day release" of youth beyond compulsory school age until the age of eighteen for occupational training courses of "further education" was up to the judgement of the employer. This resulted in only a small percentage of pupils passing through any further schools at all beyond compulsory schooling. In reaction to this state of affairs, the Industrial Training Act of 1964 provided for establishment of thirty industrial training boards with the task of promoting day release and improving apprentice training (FRIEBEL 1971: 305f.). Since this legislation provided no obligatory powers, the measures were largely unsuccessful. Thus, up until the present in England, one can assume formally, largely unregulated basic vocational training.[46]

(e) Outside of the primary and secondary educational sectors and the forms of basic vocational training already discussed, there exists in England a complex juxtaposition of different types of educational programs, often referred to under the rubric of "further education." These institutions (City and Guild colleges, colleges of technical education, etc.) offer a variety of educational programs, some of which, by being interlinked, allow for progressive advance from one course to another. They all demonstrate a strong, practical-vocational orientation and lead to diplomas of varying standards.[47]

At the university level, the English system also demonstrates a host of distinctive features. First, one must point here as well to the long private educational tradition. The colleges in Oxford and Cambridge have the longest tradition (first founded in 1167 and 1209, respectively). Modern universities were first established in the 19th and 20th centuries in reaction to the demands of the Industrial Revolution. This took place through the development of local colleges (the "civic" or "red brick" universities) and after the Second World War above all in the sixties with the opening of a host of new universities and the large expansion of the total student population (1957/1958: 95,000 students; 1967/1968: 213,000).[48]

A further unique feature of the English system consists in the fact that a series of courses of study which in other countries are typically part of university

education, take place in England outside of its confines. This holds especially for the training of such professions as those of medical doctors, lawyers and architects. They receive their education in a kind of high-level apprenticeship, where theoretical knowledge is transmitted and occupational activities practiced in close conjunction with one another.

The most important components of higher education are, however, the universities and the colleges of education (teachers training colleges). While the universities prepare their students for a wide array of professional and administrative tasks, the colleges of education culminate in the teaching profession. A defining characteristic of higher education in England is its low drop-out rate.[49] As a rule, whoever enters a university, leaves it three years later with a diploma; whoever enters a college of education needs two years to do the same. The admissions regulations are not standardized, varying from university to university and from subject to subject. Every university is free to admit or exclude any student it so desires.

The English educational system--given its early selection process at the age of eleven--demonstrates few points where alternative paths of education can be taken up. The Eleven Plus Exam represents the decisive selection mechanism, placing students in different secondary school types. Here, poorly performing children of affluent parents are offered a great variety of private schools. This guarantees that the upper classes are able to provide their children with the educational foundations they feel necessary for the entry into the work world. The lack of widespread and standardized vocationally-oriented courses of study probably contributes, on the other hand, to the fact that in England, the connection between achieved educational degrees and subsequent location in the class structure is weak only in comparative terms. Whereas, for the cohorts entering the labor market until the seventies, the educational system distributed only a very limited number of generally acknowledged occupationally-linked certificates, the tradition of private schools provided the alternative of *socially* significant credentials.

3.5 Scotland

As part of the United Kingdom, Scotland's decision-making powers are limited to only a few areas. These include--besides law and religious questions--education. Equipped with its own Education Department since 1872 (though located in Scotland only since 1938), Scotland has developed an educational system which differs in a variety of ways from that of its neighbor to the south.[50] Nevertheless, in comparison to other countries, the great similarities to the English system are undeniable. Special emphasis was laid from the very beginning--since the Scottish Education Act of 1872--on distinguishing the Scottish education

from the 'elitist' educational system of England. The effort was to create a more democratic and above all, more meritocratic system than was found in England. Central to this conception was the idea of unrestricted entry to the university. Every intelligent individual, regardless of social background, should be given the oppurtunity to attend a university. Given the widespread accessibility of scholarships and their low study fees, Scottish universities in the middle of last century were relatively open for that time. In 1860, the percentage of university students--relative to the total population--was three times higher than in the other European countries. Even if several countries had caught up by 1914, Scotland still has today--relative to its population--a greater university capacity than either England or Wales (cf. OSBORNE 1965; ANDERSON 1985).

In contrast to England and Wales, the division between private and public schools never played a particularly important role. This is both indicative of the specifically Scottish educational tradition as well as an expression of Scotland's poorer economic position. From the pupils of any given year of birth, never more than 2% have even attended private schools.[51]

For a long period of time, the system of public secondary schools chiefly aimed at realizing the prerequisites for future university attendance. Intermediate educational degrees first gained greater importance late in development (starting in 1961). In spite of many efforts, schools of general education were never able to establish themselves on an intermediate educational level. As a rule, after a short period of time, the curriculum was once again directed toward potential future university attendance. In Scotland--in contrast to England and Wales--the technical schools (founded in 1887) also were never able to establish themselves.

The *Education Act of 1872* first made education compulsory for all children from five to thirteen years of age. In 1883, this was extended to the age of fourteen. From 1889 onwards, elementary school attendance was free, and starting in 1918, this also held (with but few exceptions) for secondary school attendance as well. Even by around 1900, 88.5% of all elementary schools were state-controlled. The *Education Act of 1918* gave the (largely Catholic) parochial schools the oppurtunity to become part of the public school system without losing their influence on the teaching of religion. By 1920 this had led to the existence of almost exclusively public elementary schools (OSBORNE 1965: 45).

Before 1900, secondary-level education was offered in *Parish Schools* in the countryside and in *Burgh Schools* in the cities. The Parish Schools primarily provided elementary education for the period of compulsory education. They also, however, made entry into the university possible and were taken advantage of by the local middle classe. In smaller towns, the Burgh Schools resembled the Parish Schools; they were not socially selective and also usually took on the task of providing elementary education. In contrast, in the larger towns and cities, they

developed into purely middle class schools, which were socially selective and required school fees. Here they offered only secondary school education and can be compared to German Gymnasia.

From the end of the 19th century up until the Second World War, the effort was repeatedly made, strictly to separate (spatially) primary and secondary school education,[52] and to supplement higher secondary school education with education on an intermediate level. These efforts, however, were of only limited success.

Post-primary education (i.e., secondary school education) usually began at the age of 12, the point in time for the transfer to more advanced schools. On the elementary level, it was organized in the *advanced departments* (since 1898), in *supplementary courses* (since 1901) and in *advanced divisions* (since 1921). Only in the Advanced Divisions were, in addition to two-year courses (covering the requirements of compulsory education), three-year courses also offered, which provided a kind of intermediate education. This repeatedly re-organized post-primary schooling took place either in elementary schools or in regionally unified, central schools. It was frequently the case, however, that especially in rural areas, this schooling took place within so-called *omnibus schools*, which unified several types of schools or courses under one roof.

In 1898, the three-year *higher grade schools* were introduced, whose aim was to provide in three-year courses an intermediate secondary school education with a greater practical orientation than the higher (five-year) secondary schools, the *higher class and endowed schools*. This school was hardly accepted as a "middle-level school." Instead, its task was quickly shifted toward secondary education oriented toward later university admission. As a result, some *higher grade schools* also established five-year courses (up until the age of 17) and administered the National Leaving Certificate, which qualified one for university admission. In 1918, these schools were upgraded into full-fledged higher *secondary schools*. At the same time, since the last quarter of the 19th century, there existed special secondary schools, the so-called *higher class* and *higher class and endowed schools*.

After 1947, new terms were established for a secondary school system which remained dual in character: *junior* and *senior secondary schools*. The junior secondary schools are the former advanced divisions and *three-year schools* (the extension of compulsory education to the age of fifteen had made three years of secondary schooling mandatory). The *senior secondary schools*, like the previous secondary schools, lead in five years to the Scottish leaving certificate.

At the same time, however, even after the Second World War, many omnibus schools continued to exist, offering certificate as well as non-certificate courses of study. The omnibus Schools were termed 'comprehensive schools.' This is somewhat misleading, since in terms of their internal organizational structure these schools were not comprehensive schools in the sense of reform pedagogy;

the form and time of selection--with few exceptions--did not differ from normal practice.

The transfer from primary to secondary school education at the age of twelve, was governed since 1898 by the *qualifying exam* or the *eleven plus*. Initially conceived as a transfer exam, which at the very least permitted the transition into the advanced departments of elementary school, it gradually turned into a selection exam, controlling admission to the (higher) secondary school. The percentage of pupil admitted to selective secondary schools, however, was always higher in Scotland than in England: whereas in Scotland in the thirties, 30-35% of all pupils moved on to a selective school, in England, this figure was only roughly 17%.

Intermediate and lower-level school closing exams have always played a subordinate role. Since 1903, an *intermediate certificate* existed, which could be taken after three years of secondary school instruction (and thus at the age of fifteen).[53] Since most pupils left school at the end of the compulsory period (at age fourteen), it never became very important. For this reason, the *day school exam lower* was introduced in 1923. It could be taken a year earlier at the end of the mandatory period of education. In contrast to the Higher Exams, it was not a national exam; it was administered internally, by the individual schools. In 1940, these intermediate exams were abolished without replacement.[54] It was not until a much later date--namely in 1962--that a kind of intermediate closing exam was introduced, the so-called *Ordinary Grades*. They could be taken after four years of secondary school in four to five subjects. The "O" grade is comparable to the English "O" level. However, in Scotland (as opposed to the original intention in England) it was introduced for those students who did not aim at the 'Higher Grades' required for college admission. From the very beginning in Scotland, this exam was also possible in schools which did not lead to the Higher Grade, i.e., in the junior secondary schools.

Admission to the university has been governed since 1888 by the *National Leaving Certificate*.[55] Since 1908, the exam on which it is based has been taken at the end of a five-year course of study, and thus, as a rule, at the age of seventeen. The exam usually encompasses four to six subjects, all of which must be tested at the same time (the so-called "group exam"). One can choose between two different degrees of difficulty for each of the individual subjects examined--either the *Higher* or *Lower Grade* exam. At different times, different numbers of Higher and Lower Grades have been necessary for the conferral of the certificate. Since 1924, the minimum of Grades with which one could receive the National Leaving Certificate has been lower than the number needed for university admission. In 1951, the minimum number of Highers and Lowers was abolished and the "group exam" requirement was dropped, i.e., from then on, exams no longer needed to be

taken at the same time. In the 1962 reform, the Lower Grades were replaced by the aforementioned "O" grades. They can be obtained either in conjunction with the Higher Grades at the age of 17 or 18, or independently at an earlier date.[56]

For Scotland, one has to distinguish between three different kinds of 'fee paying schools,' two of which--the *local authority schools* and the *grant aided schools*--are integrated into the public school system. The third, the *independent schools*, are private schools in the stricter sense of the term, and differ from the other two since they are outside of the jurisdiction of state administration.

In 1964, approximately 2% of all secondary school students attended local authority schools, i.e., schools largely located in cities in which local authorities require school fees. Though the Education Act of 1944 did establish that free secondary school spots should be available for all children, as soon as this requirement is met, local authorities are then permitted to demand tuition in some schools. The grant aided schools are comparable to the English direct grant schools and in part make free spots available, though they are not obligated to do so. In 1964, roughly 2% of all pupils attended these schools. Finally, the Independent Schools, as in England, are differentiated into HMC and Non-HMC Schools. They are completely outside of the Scottish public school system and, in contrast to all other schools, exclusively award English certificates. In 1964, they also included 2% of all pupils within their institutions.

Especially in the postwar period, many similarities have arisen between the Scottish and the English educational systems. Often commensurate legislation was enacted in both countries within a short period of time. For example, the main points of the English Education Act of 1944 were put into effect in a separate statute in Scotland in the same year.

Nevertheless, some differences do remain. Primary school education in Scotland, even after World War II, has included all children in the age groups from five to twelve, and is thus a year longer than in England. As of 1964, selection for the various secondary schools first occurred at the age of twelve--with the Qualifying Exam. At the primary level, attendance of a private school is rare; almost all children attend the same elementary school (from the ages of five to seven the Infant School, followed by the junior school).

In addition to public secondary schools, there are also private and semi-public secondary schools in Scotland; they have always played however, even after World War II, a rather subordinate role. Nevertheless, there have always been considerable regional differences. For example, roughly 24% of all secondary school students in Edinburgh attended schools with tuition fees in 1964, in contrast to the country's overall 6.5% average.

In terms of the number of school graduates, the postwar years--as elsewhere in Europe--have been characterized by an increasing expansion of the secondary

school sector. Whereas in 1951, only 21% of all pupils remained in school beyond the mandatory period (in England and Wales: 20%), by 1977, this figure had grown to 40% (in England and Wales to 48%).[57]

The number of those successfully completing the Higher Grade Exams, prerequisite for university admission, has always been higher than the number of those passing the "A" levels in England (e.g., in 1976: 17% had at least 3 Higher Grades, while only 9% had at least 3 "A" levels). The Scottish exams differ from the English ones in two ways: they are taken earlier (at 17 instead of 18 years of age), and are less specialized. In England, two or three subjects are enough for the exam; in Scotland, normally at least four or five subjects are tested, although often with only two to three Higher Grades.

In *1965*, Scotland began, similar to England a year earlier, the *Comprehensive Reorganisation* of its schools, by introducing comprehensive schools, spatially distributed to reach all areas. It was only with this reorganization that--for the first time--the selection process was not realized at the age of twelve. Hereafter, all students received the same instruction for the first two years of secondary school. At fourteen, however, they were selected for certificate or non-certificate courses. This development did not affect, however, the youngest birth cohorts included in the Scottish Mobility Study of 1974.

3.6 Northern Ireland[58]

The development of the educational system in Northern Ireland is closely linked to the political development of the country. Up until 1921, when the Irish Republic achieved its independence from Great Britain, the development of the educational system proceeded similarly, north and south. Thereafter, however, the Irish Republic went its own way, while in Northern Ireland, British influence predominated. This has resulted in great similarities between the Northern Irish and the British educational systems. This has especially been the case since the school legislation of 1947. It contains the same terms as the 1944 legislation enacted for England and Wales. Despite this general resemblance, there are three fundamental differences:

1) All the way through secondary school education (and including teachers' education on the college level), there exist two sets of educational institutions in Northern Ireland--a public (Protestant) one and a Catholic one. On the college level, only the Protestant Queen's University exists. Though this religious division in the educational sector is crucial for understanding the religious split within Northern Ireland, both school systems entitle their students to the same oppurtunities. No significant differences between the two can be found. Catholic and Protestant pupils pass through the same selection processes at the same age, both take the

same exams, even though there are differences in certain of the subjects examined. Both systems have similar curricula, even though with different points of emphasis. The instructional methods are similar and state funding is also considerable in both cases, even if it does not fully cover the costs incurred by Catholic schools. Moreover, students of both confessions attend the same colleges. For this reason, it does not seem necessary to take the confessional split into special account in developing an educational scale for Northern Ireland.

2) In contrast to England, no strongly developed system of private schools has established itself, where high student fees are paid for admission. In this way, Northern Ireland--as compared to England--lacks an essential element of social segmentation of the school population.

3) In contrast to England and Wales, no system of comprehensive schools on the secondary school level arose at the end of the fifties and in the sixties in Northern Ireland. The Northern Irish school legislation of 1947 did not plan the establishment of such schools. Moreover, after 1947--again in contrast to England and Wales--no structured, occupationally-oriented school paths on the secondary level were set up. This means that in postwar Northern Ireland, the significant distinction on the secondary school level involves above all the division between selective (grammar schools) and non-selective schools (secondary intermediate schools).[59]

In general, the structure of the Northern Irish educational system is characterized by the fact that in the first years of school, elementary education is not separated from education preparatory for entry into advanced education. Elementary schools provide general elementary education; they resemble the 'National Schools' in the Irish Republic. An elementary school certificate can be, but need not be gained.

In 1918, it was established that education was compulsory up until the age of fourteen. Children began at the age of five, so that the period of schooling typically totalled nine years. It was not until 1957 that compulsory education was extended to the age of fifteen (i.e., to ten years). It is not unusual, however, prematurely to discontinue school in Northern Ireland.[60]

For characterizing secondary education, it is important to distinguish between the periods *before* and *after* the educational legislation of 1947. In the time *before* 1947, which we will first discuss, the option existed between two different courses of study: the transfer to a technical college at the age of thirteen, or the transfer to a grammar school at the age of twelve. Pupils choosing neither of these two options, remained up until the end of their compulsory schooling--if at all, usually only for a few months--in elementary school.

Besides general education, the *Technical Colleges* primarily provided *occupationally-oriented qualifications*. These schools enjoyed a high reputation amongst employers. After two years of attendance, usually at the age of fifteen, a "junior certificate" exam could be taken, then after three years, the real "technical certificate" exam. Both exams consisted of subjects of general education and occupational orientation.

In contrast to the practical, vocational orientation of the technical colleges, the *grammar schools* provided an education aimed at preparing for future academic university studies. Its students either had to pay school fees or--certain performance standards having been met--were granted a scholarship. The precise prerequisites for a scholarship varied from school to school. The tuition fees increased the socially selective character of the grammar schools. Like in England and Scotland, in Northern Ireland too, there was a grammar school certificate system, in which exams could be taken in individual subjects on a higher and lower level of achievement. The examinations for the Junior Grammar School Certificate could be taken after three to four years (and thus at the age of fifteen to sixteen), whereas those for the Senior Grammar School Certificate after five to six years (and thus at the age of seventeen to eighteen). And as in England and Scotland, the exam conditions encouraged relatively early specialization in individual subjects. Exams in six subjects had to be passed for the "senior certificate." These subjects were in part prescribed, in part chosen from a larger list of subjects. The senior certificate was a prerequisite for admission to a university, and additionally, was of considerable importance for entry into a white-collar career.

The structure of the educational system was markedly transformed after the Education Act of 1947, which was very similar to the school legislation of 1944 in England and Wales. The most important changes consisted in the earlier point of transfer into various secondary courses of study; in the establishment of a secondary educational sector, following upon elementary schooling, which was obligatory for all children; and in the more thorough formalization of the criteria for transfer admission to the various secondary school forms.

After the 1947 reform, pupils usually attended primary school from the ages of five to eleven. At eleven, most children took the "Eleven Plus" (also termed "the Selection Procedure"), equivalent to the English Eleven Plus exam, and made up of a combination of intelligence test, mathematics and language test, and teacher evaluation. The Eleven Plus is a prerequisite for attending grammar schools whose tuition costs are borne by the State.[61] This exam, however, became increasing less important until it was completely abandoned in 1964. Even before 1964, pupils who did not pass the Eleven Plus could attend grammar schools if they were accepted and they paid the tuition fees.[62]

Those pupils who do not pass the Eleven Plus and whose parents cannot provide the tuition fees, attend "secondary intermediate schools" or "technical intermediate schools." These are the non-selective schools in which the majority of pupils spend the time from the end of elementary school until the end of the period of compulsory education. For good secondary intermediate school students, the possibility does exist to transfer to a grammar school at the age of fourteen, on the basis of a "transfer procedure" exam.

The Northern Irish educational system was developed along the lines of the English system in terms of its introduction, in 1952, of the GCE "O" and "A" level exams. They gradually replaced the Junior and Senior Certificate (the latter was abolished in 1967). Both the "O" and the "A" correspond to an exam testing specific subjects. Students can take the "O" level in up to 12 subjects, the "A" level in up to four. Prerequisite for university studies is usually the "A" level in at least several subjects--passed with good grades. The "A" and "O" level are also often admission conditions for many non-manual jobs (e.g., in banks, the public service sector, etc.). The "O" level exams can be roughly equated to the Intermediate Certificate of the Irish Republic, whereas "A" level exams approximate that country's "leaving certificate."[63]

The grammar schools differ greatly in reputation and standards. Some can be understood as elite schools, whose pupils later occupy influential positions. Others are less exclusive.[64] Whereas the curriculum of the grammar schools aims to prepare for future university studies, that of the secondary intermediate schools is neither markedly academically nor occupationally oriented. In the course of time, some of the latter schools have established a limited number of advanced courses. They make it possible, if only for a minority of students, to achieve the prerequisites of academic qualification or other qualifications (e.g., RSA/-Pitman's, Junior Grammar Certificate, C.S.E., etc.). The 'best' secondary intermediate schools are comparable to a good comprehensive school in England. In the 'worst' of such schools, the students merely more or less meet their compulsory educational requirements.

Whereas the secondary school system in England and Wales developed into a three-tier system after the 1944 legislation, the Northern Irish system remains essentially two-tiered. The school law of 1947 did allow for the establishment of technical intermediate schools. Like the secondary intermediate schools, they are non-selective, but in contrast to the former, their purpose is to offer specialized occupational qualifications. These schools emerged from the old technical colleges. Nonetheless, the technical intermediate schools were never really able to establish themselves; in the sixties, they were finally disbanded. Whereas prior to the 1947 reform, academically oriented grammar schools were accompanied by practically and occupationally oriented technical colleges in the secondary school

sector, after the reform, the latter type of school was increasingly replaced by general education oriented secondary intermediate schools.

On the other hand, another system evolved to meet the need for occupationally-related qualifications. The Education Act of 1947 upgraded the old technical colleges into "Institutions of Further and Technical Education," which, as a rule, could be attended after the end of compulsory education. They provided a spectrum of practical occupational qualifications at differenct levels of achievement and awarded various certificates, including some of general educational orientation (e.g., "City & Guilds," ONC, OND, HNC, GCE "O" levels and "A" levels, etc.).[65] After 1947, technical education was gradually concentrated in these institutions. They have great similarities to corresponding institutions in England. In the Republic of Ireland, the regional technical colleges and the colleges of technology are their equivalents.

Over time, the institutions of further and technical education (termed the "techs") have become increasing important as alternative paths to studies in higher education. Their "A" and "O" level exams make subsequent further study at a university or a polytechnical institute possible. Recently, the number of students has increased who enter the "Techs" after education in secondary intermediate schools or in the lower classes of grammar schools, in order to then obtain the prerequisites for admission to studies in higher education.

In terms of the university education of those cohorts included in our analysis of Northern Ireland, only Queen's University of Belfast played an important role. It provides a broad spectrum of higher education--including medicine, law and engineering.[66] Most teachers were trained in Stranmillis College (Protestant), St. Joseph's (Catholic men) or in St. Mary's Training College (Catholic women). There were also a few other important rural colleges.[67] In addition, perhaps approximately 25-30% of all university students from Northern Ireland have attended institutions of higher education in England or in the Irish Republic. Many of these students, however, will not have returned to Northern Ireland after the completion of their studies. The preconditions for studies in higher education were favorable in Northern Ireland in one sense: All those admitted to studies in higher education, received a scholarship covering tuition and living costs. This scholarship was granted, regardless whether studies were pursued in Northern Ireland or elsewhere.

3.7 The Irish Republic[68]

The educational system in the Republic of Ireland emerged out of the conflict between the Catholic Church and the English Protestant colonial rulers (KARLE 1987). The Catholic Church exerted a greater and more predominant influence upon the educational system in Ireland than in any other West European

country, for centuries representing a strong countervailing force to British influence.

The development of the educational system can be divided into three phases. The first was marked by English colonial policy, lasting until Irish independence in 1921. It was a period characterized by a host of restrictions upon Irish language and culture. In response, Gaelic language and culture were promoted with particular fervor in the times following separation from Great Britain (i.e., after 1921). This was also the period in which the first efforts were made to develop occupationally-oriented education. The educational reforms of the sixties and the seventies mark the beginning of the third phase of development. Up until the time of our survey however (in 1973), they had not yet taken real effect. For this reason, they have not been taken into account in the following.

Popular education on a broad basis was gradually built up in Ireland in the 19th century, taking place within the framework of the conflict between the Catholic Church and the British colonial rulers, who both sought to secure the greatest possible control over the school system. As a reaction to the "Penal Laws," which prohibited school instruction by Catholics, the "Hedge Schools" emerged, so named due to their initially illegal and secret activities ("hidden behind hedges"). Whereas the Catholic schools were only tolerated within limits and had to survive without any state funding, the Protestant and British-oriented public schools recieved massive funding (ELVIN 1981: 136). This first changed with the introduction of a state-supported elementary school system in 1831, the so-called "National Schools." Catholic educational institutions were now officially recognized and funded.

The Anglican Church responded to this in 1839, with the introduction of its own school system, the "Church Education Society." Due to its high costs however, it gradually lost significance and was ultimately incorporated into the national school system. The result--by the beginning of the 20th century--was a school system which can be characterized as state funded and confessionally associated.[69]

In comparison to other European countries, official compulsory education--for all children from the ages of six to fourteen--was first introduced at a rather late date (1892). Moreover, it only applied to 150 days of the year and was initially restricted to urban areas. Numerous exceptions given official sanction effectively prevented--especially in rural areas--the establishment of compulsory education: for the importance of school-age children and youth for the labor force was much too great in the agrarian state of Ireland. It was only after the "School Attendance Act" of 1926 that school attendance rapidly rose.

After independence in 1921, a cultural nationalism emerged as a reaction to the previous suppression of Irish culture. It found expression above all in the contents of instruction and in the special promotion of the Gaelic language.

The "Intermediate Education Amendment Act" of 1924 for the first time introduced state subsidies for private secondary schools of general education. Previously these institutions had been totally self-funding, primarily relying upon monies gathered from tuition fees.

Though compulsory education begins at the age of six, many children attend pre-school facilities at as early as four. *Primary education* is completed after six years of schooling, in other words, around the age of twelve. In Ireland, there are many very small primary schools where several grades are instructed together. Private primary schools, which increase their pupils' secondary school admissions chances, make up only about 4% of all primary schools and are comparatively unimportant.

After six years of primary school, some pupils remain in this school until the end of compulsory education. The rest have the choice between various paths of secondary education. Besides the *"Second Tops"*, primary school divisions enjoying special recognition, there are tuition-charging, private *"secondary schools"* and various *"vocational schools,"* some of which also require the payment of (low) fees. The admission to secondary school necessitates either the Primary Certificate[70] or special entry exams--with relatively low performance standards. Selectivity is mainly based upon school fees, which vary considerably according to the quality of the school. Depending upon the level of state funding claimed, certain guidelines, such as admissions exams, have to be adhered to. As a whole, secondary schools can be considered as fairly unselective in terms of achievement (KARLE 1987: 41).

Since 1930, *vocational schools* have offered the possibility of a practically-oriented education following primary school. They are often part-time schools and aim at achieving qualifications relevant to the labor market in commerce, in work in office and home, and in manual skills. They offer preparatory vocational training in a combined general and vocational program. This contrasts to their predecessors, the technical schools, which had only offered a purely technical, practical, occupational education. Since 1947, an intermediate vocational degree can be achieved in vocational schools, the "Group Certificate."

For a long time, the practical, vocationally-oriented courses of study were unstructured and largely unstandardized. It was only in 1931, that regulations were first enacted governing apprentice training. Apprentice training exists in full-time form and as part-time schooling parallel to work in the firm. The length of apprenticeships--five years and more--is very long, especially since it does not enjoy a corresponding stature. This type of training program is increasingly being supplemented through the schools. In addition to apprenticeships, "on the job training" is chiefly responsible for providing the necessary, practical, vocational skills.

Secondary school education as a whole lasts five to six years. As the completion of Secondary Level I, originally after four years, and now after three, the "Intermediate Certificate" can be attained by exam. It is not however, a prerequisite for further school attendance. At sixteen, one can attain a "junior certificate" (later, the "intermediate certificate"), at seventeen, a "middle certificate," and at eighteen, a "senior certificate" (later termed a "leaving certificate"). This "leaving certificate," after three years of Secondary Level II, can be achieved by taking either more highly-rated "Honours" exams or lower-rated "Pass" exams. Since 1966, a "Pass" exam no longer suffices for admission to higher education. In this case, a university-administered "matriculation exam" must also be passed. Like in England, the choice of subjects included in the "leaving certificate" plays an important role for possible future courses of study.

Ireland also resembles England in terms of the stature of general secondary school certificates: they are considered good prerequisites for direct entry into working life. Here, intermediate-level certificates open up positions in middle-range to upper-level administration, and higher-level certificates even make possible the admission to the professions.

In the area of tertiary education, one finds--in addition to universities--teachers' colleges and a host of specialized alternatives. As in England, there are non-university tertiary training programs for admission to different professions. Prerequisite for these courses of study is generally the Leaving Certificate. The religious lines of conflict are still reflected today in the different institutions of tertiary education. Alongside of the Protestant Trinity College, founded in 1591, and part of the University of Dublin, we find the Catholic National University of Ireland, with its University Colleges in Dublin, Cork and Galway.

A distinctive feature of the Irish educational system is the fact that until the present day the State has not emerged as the direct funder of schools. In this sense, all schools are 'private'; all of them are under the direction of various organizations ranging from the Catholic Church and other orders to private organizations and education societies. Public funding is contingent upon the extent to which they meet certain state guidelines involving curriculum, student admissions conditions and teacher qualifications. Insofar as no claim is made upon public funding, schools are completely independent. Since *all* schools are private, private operation is not tied to specific conditions of social selectivity like in England.

3.8 Poland[71]

Poland proves to be a country marked by deep discontinuities in its history, representing so to speak a counterpoint to the continuity of development of other countries (such as Sweden). Even though Poland can look back upon a long tradition in the educational field (the University of Cracow founded in 1364; the first national school authorities in 1773), up until 1910, only the Prussian and Austrian-ruled regions possessed compulsory education, of eight and six years of length, respectively. The Russian-ruled region however had none; in 1911, only about 19% of all children attended school there (MAAS 1968: 1). One expression of the vast differences in the development of the three areas of partition is found in the fact that after the establishment of the Polish Republic (in 1918), the 1921 census reported that a third of the population was illiterate (DILGER 1973: 126).

An integration of the educational systems developed along different lines in the regions of former Russian, Prussian and Austrian rule demanded great efforts. Above all, the educational legislation following the First World War served in this direction.[72] It was not until 1932 that the educational system was standardized into three basic school forms: the seven-year elementary school, the four-year Gymnasium and--building upon it--the two-year "lyceum."

The educational goals linked to the establishment of the seven-year elementary school were only realized to a limited extent. In fact, elementary schools with three different programs of instruction and school lengths were introduced: First Level elementary schools consisted of four grades, Second Level elementary schools of six grades, and Third Level elementary schools of seven grades. The first level and second level schools only accomplished curtailed versions of the original programmatic goals. The transfer to a four-year Gymnasium could only occur after grade six of a second level or third level school. Pupils from a first level school had first to attend fifth and sixth grades in a second or third level school before they could enter a Gymnasium. Education up until the maturity exam lasted twelve years (six years of elementary school, four years of Gymnasium, and two years of lyceum).

This organizational and curricular differentiation of schools resulted in a high segration of educational oppurtunities between city and country: in 1938, 46% of all Polish elementary schools were first level schools (of four years), with only one teacher (MAAS 1968:12). Most pupils attending these schools received, accordingly, only four years of instruction. As mentioned above, it was not possible for pupils from these schools to transfer directly to a Gymnasium. Moreover, school fees contributed to the fact that the share of workers' and farmers' children in Gymnasia before World War II reached at most only 15% (DILGER 1973: 126).

In the field of vocational education, the primary type of school for continuing education on the lower level was the three-year vocational school. It was for students who had completed the first level elementary school (four grades) and who then completed an apprenticeship. On the intermediate level of occupational education, a two to four year occupationally-oriented Gymnasium could be attended after completing the sixth grade of elementary school. Corresponding to the educational structure in the area of general education, two to three year occupational lycea followed these occupationally-oriented Gymnasia, but they were quantitatively insignificant (ANWEILER 1975: 136). In the area of vocational education, the share of workers' and farmers' children in the higher school forms was also small.

Whereas only a small percentage of elementary schools were private before World War II (5.1%), roughly 57% of the intermediate schools (i.e., Gymnasia) were (HAMMETTER 1966:7). This resulted in a high degree of selectivity according to financial resources since the private intermediate schools required much higher fees than the public ones. Given the high segregation of programs of study (school types) and the high percentage of schools of continuing education requiring school fees, the Polish educational system before World War II has to be considered highly selective. In comparison to the period of partition, the interwar period did experience a marked dissemination of schooling. Nevertheless, as of 1938, approximately one out of every six Polish school-age children still did not attend school. The Second World War led to the almost full-scale destruction of the educational system, resulting in yet another point of discontinuity in the history of Polish education.[73]

After the war, significant reforms took place in the People's Republic of Poland (as in other East European countries), initially marked by the adoption of contents and organizational patterns of the Soviet educational system. Since 1948, the Polish educational system has been purely state-run (all private schools have been nationalized), centralized and free of all school fees. Moreover, it was made possible by law to take up a continuing course of education leading to a degree in higher education from *every* branch of school. Up until 1948, the focus was on rebuilding the almost completely destroyed educational system, and on integrating those regions promised Poland after the Second World War. The subsequent period of Stalinization up until the middle of the fifties was characterized by an increasing orientation towards the contents of Marxist-Leninist ideology. In terms of school types, however, the structure (and the curricula) of elementary schools and upper schools of general education (lycea) remained practically unchanged. Only the sector of vocational education experienced expansion due to rapid industrialization.[74]

The reform efforts at the end of the fifties finally led to a new legal groundwork in 1961 ("On the Development of the Education and School System"). The most decisive result was the extension of elementary school from seven to eight years of school, put into effect starting in 1966 (MAAS 1968:12). Nonetheless, regional differences continued to exist in the structure of the school system: even in the middle of the seventies, many elementary schools were only equipped with seven grades or less.

The extension of elementary school--mandatory for all children--to eight years meant at the same time a re-organization of the school system.[75] Since 1948, the only school type in the secondary sector of *general educational* character has been the upper school of general education (the lyceum), created through the combination of the four-year Gymnasium and the two-year Lyzeum and leading in four years directly to the qualification for higher education (HAMMETTER 1966:22). Even though the lycea of general education were supposed take on an occupationally-preparatory function after the 1961 reform, they remained solely oriented toward their original purpose: to prepare for studies in higher education. The occupational and income oppurtunities of lyceum graduates who do not go on to more advanced schools are so poor that only a small percentage leave the educational sytem after attending the lyceum.

The criteria for transferring to the lyceum were, up until the middle of the fifties, the completion of the seven or eight grade elementary school and the entrance exam administered by a qualifications commission (which was abolished in 1956; HAMMETTER 1966: 22). The lyceum of general education still maintained its class character, however. In 1978, half of the students in the first class of such lycea were recruited from the intelligentsia (however, only 7% of the same background in the basic occupational schools, which provide education for skilled workers; GOLCZEWSKI/RESCHKA 1982: 180).

In addition to the upper school of general education, there are various possibilities for *vocational training* after completing elementary school. The predominant type of vocational schooling is represented by the *basic vocational school*, two to three years in length, and attended by more than half of all youth (GOLCZEWSKI/RESCHKA 1982: 180). Its primary task is the provision of skilled worker qualifications, and to a much lesser extent, of commercial or agricultural qualifications.[76]

Over 90% of the basic technical students are recruited from families of workers and farmers, and roughly three quarters of the graduates of this school take up a vocation (SOLWINSKA 1985).

Aside from the primary technical schools, above all the *upper schools of occupational training (Technika, lycea)* are of special importance in the Polish school system, since they offer both higher occupational qualifications as well as

the general qualification for higher education. One can distinguish two to three year Technika for graduates of primary technical schools from four to five year Technika for graduates of elementary schools. As a rule, technika (and lycea) are completed with a maturity exam. A small percentage does leave the upper school without a certificate.[77] Like in Hungary, there are also "post-lyceal vocational schools" (higher technical schools, established in the sixties and offering occupational training (as for example, librarian, or auxiliary medical occupations) for graduates of lycea of general education who do not go on to the university. By attending post-lyceal vocational schools, upper school graduates can improve their labor market oppurtunities. After attending a post-lyceal technical school, there is the possibility of college study (higher education).College education lasts four to six years at the university level. Admission to the universities is tied to the maturity exam and an admissions exam.

Alongside of these conventional educational routes, adult education was also considerably expanded in postwar Poland. The so-called "Schools for the Working," before the war only on the elementary school level, were established on all levels after the war, starting with two-year vocational schools for persons who had completed elementary school, up to colleges for the working, with instruction in the evening, by mail, or outside the college (MAAS 1966:30f.). Adult education institutions do not, however, usually lead to higher levels of qualification; they usually provide *post facto* qualifications for occupational activities already performed.

Outside of the general and vocational upper schools (the lycea and Technika)--corresponding in form and function to the German Gymnasium, and of the variety of basic vocational schools--whose nearest German equivalent we can probably consider the apprenticeship system, there is no form of schooling in Poland that can be equated to the intermediate educational level in other European countries (Secondary Level I).

Thus, the Polish school system of the seventies is characterized by a simple structure and a low degree of differentiation. After eight years of elementary school, whoever does not enter into vocational training, has only the choice between higher-level general education at a lyceum--with the purpose of preparing for the university, or higher-level vocational training at a Technikum.

Various efforts aimed at opening the higher courses of education to children with parents of worker and peasant backgrounds, did lead to an increase in the percentage of these children at higher educational levels (HAMMETTER 1966:49f.), but did not result, however, in the long-term consequences hoped for, namely, the equalization of educational oppurtunity (MACH 1987:16).

3.9 The People's Republic of Hungary

Due to the shared historical background of the Hapsburg Danube Monarchy, the development of the Hungarian educational system is closely connected to that of the Old-Austrian school system.[78] During the period of enlightened absolutism, the Ratio Educationis was declared in 1777, in part rolling back the predominance of the church in the educational field. Austrian influence also expressed itself in the fact that only in 1844 did Hungarian become the language of instruction.

Since the postwar period clearly represents a discontinuity in the development of Hungarian education, the development of the various school forms up until the end of the Second World War will first be treated, followed by a discussion of the postwar development.

The Folk School Law of 1868 established the six grade *Folk School*, which was followed by a school of continuing education. School was compulsory for all children from the ages of six to fifteen. After attending the daily, six grade folk school, the compulsory educational requirement was then met by attending the three grades of the school of continuing education, nine hours per week.

The municipalities were obligated to establish and finance schools. The role of the state was limited to school inspection and the support of financially-weak municipalities. The churches remained the primary administrators of schools, owning the majority of them (1868/1869: 95%; 1944: 70%). No aspiration existed to centralize the educational system under state control.

In 1940, the folk school was extended to eight grades. Due to the war, however, this increase in the term of compulsory education could only be realized in part. This reform of external organization was not connected to corresponding changes in curriculum or to substantive improvements such as the construction of new schools or the hiring of more teachers.

After the fourth grade of folk school, presupposing good records, a pupil could move to one of the *advanced schools.* As a rule, the latter collected school fees at a rate dependent upon the pupil's level of achievement. The system of schools for advanced education was quite similar to the German and Austrian one with a general education track preparing for later university access on the one hand, and less academically-oriented Burgher schools on the other.

Approximately 15-16% of all folk school pupils entered into a *Burgher School*, which was officially recognized by the State in the folk school legislation of 1868, and was modeled upon the Prussian German intermediate school (*Mittelschule*). The four grade Burgher School provided a practically-oriented general education with German as a required foreign language. It qualified its students for the lower level career of an official or, for the attendance of an advanced vocationally-oriented secondary school (Technikum) or of a teachers seminary for primary school teachers.

The Hungarian *secondary school system of general education* was initially very heterogeneous. On the one hand, there was the confessional split between state-Catholic and Protestant Gymnasia (the Protestant schools were able to define their internal organization independently). However, the Law for Higher Schools of 1883 standardized the instructional requirements of eight grade secondary schools. On the other hand, different kinds of schools existed in terms of curricula and their status of qualifying for higher education: the humanistic Gymnasium--up until 1924 the only institution awarding general university qualification, and the intermediate school.[79] In 1924, the secondary school sector was reorganized; here, the *Realgymnasium* emerged as a school oriented more towards the natural sciences and modern languages than the Gymnasium with its emphasis on Greek and Latin. Starting in 1934, the different school types in the sector of general education were replaced by the standard Gymnasium.

A quite close similarity to the German-Austrian system is also displayed by the Hungarian institutions for *vocational training.* For the purpose of promoting basic occupationally-related qualifications, even the Ratio Educationis for commercial and industrial apprentices provided for attendance of trade school/Sunday school. The folk school legislation continued this practice, and later industrial legislation developed out of this form a vocational school as a part-time school within the framework of a system of *dual vocational training*. The practical part of occupational training was solely the responsibility of the firms, whereas the theoretical part of professional knowledge had to be acquired in the vocational school. The successful completion of the vocational school (usually three years in length), however, was not a precondition for admission to the journeyman or commercial assistant examination. Access to this form of vacational training was quite open, since the folk school certificate was not a necessary prerequisite for taking up an apprenticeship. In addition to apprentice training--the most important of occupational qualifications--there were also technical schools, building upon the level of the folk schools and providing basic technical knowledge. Other technical schools required previous attendance of the first four grades of a higher-level school.

The *vocationally-oriented secondary schools* (Technika) were officially recognized as secondary schools in 1938, which entitled them thereafter to award an unrestricted qualification for higher education. In these schools, general education and vocational training were closely connected in instructional contents. They enjoyed an excellent reputation for vocational training, qualifying their students for intermediate and upper-level technical and administrative occupations. The four grade Technika could be attended following the Burgher school; an equivalent precondition was the attendance of the first four grades of a higher school (Gymnasium or intermediate school).

By the middle of the nineteenth century, vocationally-oriented technical schools on the level of secondary schools had begun to be established. Gradually, a series of technical colleges emerged, weakening the predominance of humanistic education and resulting in an orientation to education both specialized and according to the demands of industry. By 1871, the Technical University of Budapest had already been founded.

In 19th century Hungary--still marked by the estatal tradition--and continuing up until the socialist revolution, *studies in higher education* were a key to admission to higher class positions. At the same time, access to higher education was selective since all higher educational institutions collected tuition. The founding of new colleges after the First World War increased demand, which however, was controlled through admissions quotas in 1920 (*numerus clausus* legislation).

Before 1945, the Hungarian educational system was characterized by the liberal role of the State, the educational monopoly of the Roman Catholic Church and a high degree of social selection in the advanced secondary schools based upon achievement-dependent school fees. A further trait of the system was its isolation of the different educational routes (dualism). It was almost impossible for the folk school pupils after fourth grade or for Burgher school pupils to transfer into a Gymnasium. Similarly, technical intermediate students had almost no chance of studying at a university. In addition, the regional inequality in the provision of educational institutions was very great. In 1945, compulsory education has still not been fully realized in the countryside.

After the war, in the course of the socialist transformation of the country, a host of reforms were enacted that fundamentally changed Hungary's educational system.

The first educational policy measure of the postwar system was the integration of the folk schools, Secondary Level I and the Burgher schools into the eight grade *comprehensive school* ("General School"). A two-fold purpose guided the abolition of the dual system in the lower level of education: 1) to raise the level of general education, and 2) in conjunction with the shift in the time point of selection, to improve the educational oppurtunities of the lower classes. This reform was completed in 1948, with the nationalization of all schools. This centralization of the school system also involved a standardization of curriculum. All schools also became co-educational.

The school legislation of 1961 extended the term of compulsory education to ten years, up to the age of sixteen. This measure primarily affected those students who either did not attend a more advanced school after the General School or did not obtain their primary school certificate in the normal period of time (1965: 26.5% and 1978: 10.6% of all students). These students had to attend a continuation school, in order to meet compulsory education requirements.

After 1949, the admissions prerequisite for *a vocational school, a skilled worker school or occupational apprenticeship* was the completion of the eighth grade of the General School. In the old system, the completion of folk school was not a necessary prerequisite. In contrast to the pre-1945 period, vocational students had to complete vocational school successfully in order to be admitted to the commercial or skilled worker exam. Besides the vocational schools--which led to an occupation after two to three years of part-time education, full-time vocational schools still existed. For Gymnasia graduates, not intending or able to go on to the university, special branches of the vocational schools were established in 1970. The influence of firms on occupational training (in terms of occupational apprenticeship and the Technika or technical intermediate schools) was limited. The vocational school was made responsible for the entire scope of vocational training. Since 1973, it has counted as part of the secondary school sector, even though it offers no qualification for studies in higher education. To secure the requirements for skilled workers, the vocational schools were methodically expanded.

After the General School was introduced, the *Gymnasium* was reduced to the upper four grades. The elimination of the economic class basis of the old middle and upper classes via nationalization was accompanied by the impediment of these classes in entering schools in secondary and higher education. School fees (collected until 1961) were progressively scaled according to parents' income. A quota system giving preferential treatment to children from the working classes was introduced, but then replaced by meritocratic selection mechanisms toward the end of the fifties.

Another element in the educational reform of postwar Hungary was the effort more closely to link vocationally-oriented and general courses of study in higher-level secondary education with one another. Both in the Gymnasium and in the vocationally-oriented secondary schools, measures were taken to this effect. As the goal of double qualification proved to be unattainable, a series of corrections were made in the 1970s.[80]

In the course of efforts to create a higher general level of qualifications, by 1959, the educational institutions for training primary school and kindergarten teachers had already been shifted onto the level of higher education. With similar aims, some of the earlier (intermediate) Technika were raised to the rank of a technical college (of higher education). accomplished by designating the educational facilities (formerly Technika) as (technical) colleges. The two to four year practically-oriented education in the technical colleges qualified its graduates for the intermediate management level. On the other hand, the more demanding university studies last four to six years.

Admissions to higher education require an admissions exam in addition to the maturity exam. The number of students in higher education is set in accord with the needs of the economy. Although the graduates of the reformed Technika, i.e., the technical intermediate students, possess the general maturity exam, due to their specialized training, their chances of passing the admissions exam to higher education are not the best. Generally speaking, those graduates who have worked towards the *Matura* are favored in admissions. Studies in higher education at night or by mail have lower prerequisites than day-time higher educational studies. The quotas mentioned above in connection with secondary schools are applied to an even greater extent at the level of higher education. This is accompanied by a developed system of scholarships. For a temporary period at the start of the seventies, children of workers and farmers were once again the recipients of special support, in order to better their educational chances--once again lessened by the dropping of quota regulations.

On all levels of education, institutions of *adult education* were set up. Especially for the lower classes, this made it easier to enter into advanced secondary schools. In the fifties, these institutions served in the new recruitment of the leadership stratum from the ranks of workers and farmers. After the consolidation of power, these institutions took on the task of providing that skilled labor for the economy which could not be made available in sufficient numbers by the "first educational track." An unusually high percentage of school and higher educational students studied in these night and mail institutions of secondary and higher education (30-50%).

Taken as a whole, a considerable transformation of the educational system took place in Hungary after 1945. The system was standardized, in terms of both organization and curriculum. The pre-1945 school system was marked by early selection and the channelling of students into courses of study strictly divided from one another. Reforms such as the introduction of comprehensive schools, the greater combination of vocational and general education, and the development of adult education all sought to improve the educational oppurtunities of the lower classes. In the fifties, this goal was also served by quota regulations. The liberalization starting in 1956 replaced this last measure with meritocratic selections criteria--without however, abandoning the furtherance of children of workers and farmers. Postwar Hungarian educational development is also characterized by an orientation towards economic planning and the close linkage of the certificates and diplomas awarded in the educational system to specific positions in the employment system.

3.10 Summary

If one attempts--in spite of all national differences--to classify the educational systems of the nine countries investigated, the following arrangement is probably the most justifiable: England, Wales, Scotland and the neighboring countries of Northern Ireland and the Irish Republic compose the British-Irish block. Apart from their geographical proximity, historical development and political interconnections have contributed to the relatively great similarities of these educational systems. The East European countries of Hungary and Poland increasingly distinguished themselves from the rest of Europe, especially after the Second World War, due to socialist influence and fundamental reforms. Up until then, they had demonstrated strong similarities to Germany and Austria due to their "shared" historical development. Remaining are the continental European countries of France, Sweden and the Federal Republic of Germany. Here the similarities at the beginning of the century were greatest between Germany and Sweden. Though they are neighbors, Germany and France have developed very different systems, something which comes to the fore above all in the differing organization of vocational training.

The formal *institutionalization of general compulsory education* by the State first occurred in Prussia; it was in the avant-garde in the process of spreading literacy to the general population.[81] However, Sweden also introduced compulsory education in the first half of the 19th century.[82] It is only in the second half of the 19th century, that the other countries follow suit, i.e., the countries of the British-Irish block, France, Hungary and Poland (here cf. Table 1). However, the point in time at which state-organized compulsory education is introduced, is not necessarily indicative of the degree of literacy of a given population. The Church, namely, not only maintained institutions of higher education, but also--starting in the seventeenth and eighteenth centuries--increasingly provided the children of the poorer strata with elementary education, usually in the form of reading and writing schools, Sunday schools, or in the first types of vocational technical schools. These last-named schools offered training in elementary manual skills. Moreover, as the example of Scotland shows, a school system can develop--founded on Church-administered schools and the independent educational policies of cities and municipalities--and still become recognized as one of the leading systems in Europe (MACLEAN 1973: 8; FLORA 1975: 157).

SCHNEIDER (1982) sees as religious and constitutional causes of differential development in the *State realization of compulsory education*. Especially in Protestant countries like Prussia and Sweden, the widespread increase in literacy was a process which had already begun with the Reformation. In contrast, in traditionally Catholic countries like France, Hungary and Austria, such processes first began at a later date, after severe conflicts between Church and

State (cf. also FLORA 1972). The late introduction of compulsory education in the United Kingdom countries of Great Britain and Ireland, however, had in part other causes.

In the case of Ireland, the causes lay in the *confessional split* and in the strong resistance that the Catholic Church (as victims of discrimination) put up against the English (Anglican) state in its introduction of--state-controlled--compulsory education. The Catholic education institutions--with a tradition reaching back into the Middle Ages--were initially rolled back after the Anglican Church was raised to the official State church. They were only able to spread again gradually, against the sharp resistance of the State, in the 19th century.

In England, the delay was caused by the resistance of the private operators of schools. It was only in 1870, that the State first received the right to maintain its own schools, and only in 1876, that state control was extended to all schools. A further advance in the unification and control of the school system was achieved in 1888, when school administration and control of the elementary schools was transferred from the 2568 school boards to the 328 Local Education Authorities (LEA; see HERBECK/KEUTSCH 1971: 164).

The two Eastern European countries distanced themselves from Western Europe only after the Second World War. Due to the partition, we find in Poland the educational influences of Prussia, Austria and Russia, whereas in Hungary, it is common knowledge that until World War I, development proceeded along the same lines as in Austria.

Distinct developments in organizational structure have had lasting influence upon the national school systems--still to be seen today. Thus, there are still significant differences in the degree of centralization. While the Federal Republic of Germany is federalistically organized (though this was not the case in Prussia!), in France, as well as in Poland and Hungary, strict centralization is found, including in the field of educational policy. In England and Wales on the other hand, schools have remained decentrally organized, divided up according to LEAs, into local school districts with extensive autonomy. Though this organization (under the LEAs) initially resulted in a unification of the system, it presently contributes more to plurality and heterogeneity. In Scotland, the educational system represents one of the few decision-making areas of Scottish autonomy, even if changes in the English educational system are in fact quickly followed in Scotland. School administration is under the jurisdiction of four cities and thirty-one local education authorities. Sweden is also marked by a decentralized, though strictly hierarchical structure of school administration. However, Sweden is characterized by the inclusion of the different groups of society in the processes of decision-making and direction (WILLMANN 1980: 12).

As the basic structure of most of the education systems, we find a two-part division into a sector of primary, popular education on the one hand, and a higher, secondary educational sector on the other. Initially, they existed as *completely separate branches of education*, with their own preparatory schools and without the possibility of transferring from one system to the other. Countries distinguish themselves considerably according to the point in time in which this dual structure was disbanded. In France, it was maintained until the end of the 1950s. In Sweden, we discover efforts to integrate the two school branches as early as at the beginning of the 19th century (SCHNEIDER 1982: 214): even then, the Gymnasium built upon the intermediate school, and thus no longer represented an independent branch of education. This can be viewed as a very early approach towards more openness to entry into the educational system, something which has been continued by the most recent reforms. In Imperial Germany, private secondary level schools were first abolished in 1920; in Poland and Hungary, this occurred in the postwar years, and in France, the re-organization did not take place until 1959. In England, alongside of the public school system, a fully-developed private educational system continues to exist, offering a program of education from the first year of schooling until the completion of the university. In Scotland and in the two Irelands, though private schools also continue to exist even on the primary level today, they play a much smaller role than in England.

One of the great reform efforts, aimed at opening up the education system and increasing equality of oppurtunity, is represented by the postwar introduction of comprehensive schools. However, by the middle of the eighties, outside of Sweden, only in the Eastern European countries had the comprehensive school been established as the *compulsory school* for all children (for example, in the German Democratic Republic, Hungary and the Soviet Union). Though in most European countries--with the exception of Poland and Ireland--comprehensive schools had been introduced by the middle of the sixties, they were largely introduced as but one type of school amongst other, already existing secondary schools. Thus, though by the middle of the seventies, the comprehensive school had developed into the dominant form of school in England, the old selective school also continued to exist. The establishment of an international trend in the direction of an increase of the comprehensive school as the only form of primary and secondary school (cf. LIEGLE/SCHÄFER/SÜSSMUTH 1980) thus appears--at least at the moment--not to be confirmed.[83]

The different conditions faced in the development of the individual national educational systems is reflected in the considerable sprectrum of variations in the outward structural characteristics of these systems at the beginning of the seventies (cf. Table 2).

The differences begin as early as the length of pre-school education, varying from one year in Northern Ireland to a maximum of four years in France. The age of school entry varies accordingly (with these pre-school differences): in England, Scotland and Northern Ireland it takes places after the child's fifth birthday; in West Germany, France, Ireland and Hungary after his/her sixth; and in Sweden and Poland as late as after his/her seventh.

The length of primary school--attended in common by all children--also varied over a wide range as of the beginning of the seventies (England's private primary schools pose in any case an exception). In Sweden (the old system) and in West Germany, selection for the continuing secondary sector occurred after only four years of primary school attendance, and in France, too, a common primary school attendance of five years was relatively short. In contrast, in England, Poland and the two Irelands, primary schooling lasts six years before the point of branching off into the different continuing courses of education. Especially in Scotland (seven years), Hungary (eight years) and Sweden (nine years), the educational options are left open the longest; here, the first selection processes occur in the period of adolescence. Insofar as with increasing age, decisions are made more according to the preferences of the students themselves and less according to the views of their parents, these countries should demonstrate a lower dependence on social class of origin in their educational oppurtunities.

Finally, the different ages of school entry and the varying lengths of secondary school education combined with sharply differing lengths of studies in higher education, all lead to considerable age differences at the point of entry into the working world.

4. Classification Criteria

In spite of all the problems entailed, international comparisons remain nonetheless necessary, especially for the interpretation and examination of the results of national investigations (MERRIT/COOMBS 1977; MÜLLER 1986). Given the present state of research and in view of previous experiences in the construction of international comparative schemas as developed by various organizations (ILO, UNO, UNESCO, etc.), the problem of standardization can only then be solved if *the formulation of the problem* and the *aims of analysis* are taken as the point of departure. In other words, formal equivalence of categories, or *equivalence in the definition* of categories is not decisive for standardization. What is crucial is *functional equivalence* in terms of definite theoretical connections and in terms of the formulation of the problem (SCHEUCH 1968: 185f.; NIESSEN 1982: 86, 90). In terms of our problem, comparisons are only then meaningful, if the individual educational categories are ascribed the same or at least a similar function.

Now the CASMIN-Project investigates above all processes of class formation and social mobility, and especially the effects of different educational systems upon the pattern of inter-generational and intra-generational mobility processes. If one views educational systems primarily in terms of their function as a factor of reproduction of class structures and social inequality, it appears above all as necessary to distinguish educational levels according to their selectivity effect. Put in another fashion: the different educational levels should--to the greatest extent possible--both optimally reflect the typical, class-specific educational barriers in the educational system as well as enabling the appreciation of those differentiations significant for utilization on the labor market. Given this context of application for the educational scale, the construction of a certificate-oriented educational classification seems appropriate.[84]

These considerations of the problem of classification have led us to develop an educational scale with eight main forms. It is based upon two primary classificatory criteria: 1) the differentiation of a hierarchy of educational levels, both in terms of investment expenditures and the length of education experiences, as well as in terms of the quality of education and the value of the educational certificate achieved; 2) the differentiation between 'general' and 'vocationally-oriented' education.

4.1 General Education

In terms of general education, we distinguish three different educational levels in our overall classification: a primary educational level, an intermediate level and a higher level. Within these three levels, further differentiations emerge, which we will handle in detail. In the following, we would like to discuss those foundational points and criteria with which we make our distinctions. We will also try to make clear, where the distinctions are clear-cut, and where they can be made less unequivocably.

We consider that amount of education corresponding to the minimal school education expected by a society as the (upper) limit for the ascription (of school types or courses of study) to the elementary level of education. Thus what we term *general elementary education* corresponds so to speak to the *'social minimum'* of education in a given society. As a rule, it corresponds to the term of legally compulsory education. No selection processes take place on this level, admission is usually not impeded by school fees or similar barriers, and schooling ends at a (legally) fixed age.

Since there is hardly a country in which all children reach the minimal educational goal expected by society, a separate category was provided on the elementary level for all those surveyed who left the educational system before reaching this goal.

The boundary separating intermediate and higher education can be comparatively clearly drawn for all countries investigated. For us, it consists of those exams marking the completion of secondary schooling (e.g., the *Abitur*, *Maturity*, *Baccalauréat*, and "A" level exams). Thus, in our general classification, we include all those possessing these certificates and all those possessing diplomas from tertiary sector programs of study in the higher education group. In a more detailed classification, we will distinguish between those surveyed possessing at least the prerequisites for a tertiary sector course of study (Abitur, Maturity, Baccalauréat, "A" level exams, etc.), those possessing a lower-level and those possessing an upper-level tertiary sector diploma. We count the successful completion of a traditional, scholarly-oriented university education among the higher, tertiary sector diplomas. The lower-level tertiary sector diplomas, on the other hand, are as a rule characterized by their shorter length of study and their stronger practical orientation (e.g., a technical college diploma, a teachers' college diploma and comparable diplomas).

Between general elementary education and the maturity level--as the lowest stage of higher courses of education, there exist as a rule, a variety of educational courses of study on an intermediate level. Whereas it is comparatively clear-cut to separate between intermediate and higher certificates and to differentiate amongst the higher certificates, great difficulties exist in some cases in distinguishing between elementary and intermediate education. In making this distinction, we have essentially ascribed all those courses of study and certificates to elementary education that a child can participate in or attain, if it remains within the educational system for the length of compulsory education of its country, in those courses of education that can be attended without taking selective examinations. Those courses of study and certificates are ascribed to the intermediate level that clearly go beyond this elementary level, be it through the education in selective schools, be it that the length of education clearly goes beyond the compulsory term of education, or be it that exams were passed which are clearly above the elementary level. Whereas an intermediate exam suffices alone as criterion, lengthened educational term and selective school type usually had to be present in combination, in order to be classified as part of the intermediate level.

4.2 Vocational Training

Since vocationally-related qualifications play an essential role in the entry into various occupational positions, it is indispensable--especially in the construction of an educational classification to be used in the analysis of processes of social mobility--that such vocational qualifications be included in the scales developed. Considerable difficulties are created by trying to take them into account, however, since general and vocational education are in part linked in very

different ways in different countries. In the Federal Republic of Germany (and other German-speaking countries), the existence of the apprentice system provides a clear separation between general education and vocational training. In other countries, these two types of education are more closely interlinked.[85] In terms of historical development, a trend is found in most countries toward a greater degree of vocational training *within schools* and toward its linkage to elements of general education. The increasing number of technical schools, vocational technical schools, schools of commerce, technical colleges, and so on, is an indication of this development.

In our classification, vocational training primarily comes into play on the levels of elementary and intermediate education. On the elementary educational level, it is relatively easy to distinguish in all countries investigated between persons who have only attained the general elementary school education and those who have participated beyond this in additional occupation training. Thus, a corresponding distinction is made in our educational classification. On the intermediate educational level, the division is less unambiguous--due to the variety of ways in which elements of general education and vocational training are interlinked. Nevertheless, we have also distinguished on the intermediate level between two types. The type termed general intermediate schooling consists of an education exclusively or at least largely of general educative character. Intermediate vocational schooling includes all those types of school programs in which, either, general intermediate schooling is joined by additional vocational schooling, or in which a course of study was completed going clearly beyond elementary education but consisting of largely practical, vocational components.

For purposes of presentation and for technical reasons, the three different educational levels (elementary education, intermediate education and higher education) have each been given an Arabic numeral (1,2, and 3, respectively), while further distinctions within each of the levels are marked with the letters: a, b, and c. In summary, then, our educational classification consists of the following categories:

1a. Inadequately completed general elementary education.
1b. General elementary education.
1c. General elementary education and basic vocational qualification.
2a. Intermediate vocational qualification.
2b. Intermediate general qualification.
3a. Higher education--maturity level.
3b. Higher education--lower-level tertiary certificate.
3c. Higher education--upper-level tertiary certificate.

4.3 An Overview of the Educational Classification

Educational systems are to a great extent hierarchical systems, in which successive courses of study build one upon the other. We are assuming that the educational classification we developed can also be interpreted hierarchically. The only hindrance to a clearly hierarchical interpretation is posed by the subdivision of intermediate certificates into general (education) and vocationally-oriented branches. On the basis of the assumed hierarchical structure, ascription to the individual education categories is governed by the highest certificate attained. Students who complete a course of study without attaining its certificate were generally classified in the next lower category. The following overview once again characterizes the individual educational categories developed by taking general and vocational education as well as other variables (length of education, certificates, school types) into account:

Category 1a: Inadequately Completed General Elementary Education

This category includes all persons who can demonstrate less than the "minimum" of education expected by (their particular) society. According to the goal of classification, this category should capture all those surveyed who either did not meet the stipulated term of compulsory education, did not reach the normally envisioned final stage of the elementary education level due to the reiteration of individual school years, or attended schools for the handicapped with markedly lowered standards. The quality of data was in most countries not good enough in order to be able to make this distinction in the same and sufficiently reliably way in every case. Thus, this distinction has only been used in the analyses of a few of the countries, namely, where it could be sufficiently clarified. The special problems posed by individual countries in the making of such distinctions will be treated more exhaustively later in the analysis.

Category 1b: General Elementary Education

All those surveyed are subsumed under this category who have reached *the level of general elementary education*, which usually corresponds to the level of a primary school certificate. Persons classified in this category have as a rule received neither general nor vocationally-oriented education going beyond the legally-set minimum.

Category 1c: General Elementary Education and Basic Vocational Qualification

Those persons are classified in this group who have gone through an *elementary vocational education* in addition to general elementary education. This elementary vocational education varies both in length and in 'quality' between individual countries. However, such differences could not be taken into account.[86]

Category 2a and 2b: Intermediate Vocational and Intermediate General Qualification

Categories 2a and 2b represent certificates on the lower secondary level. In most countries, the greatest difficulties are created by the efforts at ascribing educational certificates to these two intermediate categories. The level of differentiation in the intermediate educational sector varies enormously. Not all countries possess useful certificates or a corresponding level of performance in this category. Moreover, numerous problems of hierarchical classification arise. And finally, those students are also classified in this category who have not attained a secondary level educational certificate if they have attended selective secondary schools for an extended period of time beyond the term of compulsory education, and/or left a school track leading to higher education before the end of the regular term of that school. They were included in one of the intermediate categories dependent upon the type of school attended (general vs. vocational).

Category 3a: Higher Education: Maturity Examination

This category corresponds to a certificate on a higher secondary school level, i.e., to the German *Abitur*, the French *Baccalauréat*, or the English "A" level. Category 3a is as a rule defined as the admissions criterion to university studies.

Category 3b: Lower-Level Tertiary Certificate

This category includes those graduates of *vocational courses of study*, which generally build upon the maturity exam, but lie at a lower level than a typical academic certificate (e.g., an engineering graduate, a primary school teacher).

Category 3c: Higher Education: Upper-Level Tertiary Certificate

This category represents the highest educational level and includes academic *university-level certificates* and other academic titles.

4.4 The Procedure and Its Problems

As should be clear from the descriptions of the individual countries, it is in no way easy to present the educational systems of different countries in comparative perspective. For this reason, we have proceeded in a two-step fashion. The first step consisted in the development of an 'optimal' classification for a specific country, taking into account all of the significant differentiations in this country to the greatest possible extent. The second step was made up of the effort to 'compress' these national classifications into a comparative classification without losing all too much information.

A distorted and much too optimistic picture would result if we tried to conceal the fact that the national (comparative) classifications produced in this way were not only the product of theoretical reflection, but were also compelled to

be the result of pragmatic decisions and the technical restrictions imposed by the data. Thus, a more comprehensive breakdown of the data, even though possible for some countries--given the lack of corresponding educational data or institutional conditions in other countries--was not possible for the overall classification if one wanted to maintain the goal of a comparative classification. As a result, in some countries, important distinctions had to be grouped together, in order to yield a common classification for all countries fulfilling at least the minimal requirement of possessing the same number of categories. This grouping together of important differences naturally leads to a decrease in the observable connection between educational certificates and class positions. Hence, one has to remember that this connection tends to appear weaker in our analyses than in reality due to the necessity of following such procedures.

A further problem is created by the differing quantitative importance of individual categories in the various countries. Thus, those categories cannot be used for analysis that are strongly represented in one country, but have to be grouped within another category in another country due to the small number of cases in that latter country (even though according to theoretical principles of classification its use is completely valid). This made it necessary from the outset to limit the maximum number of educational levels to be distinguished. Especially in the tertiary sector, this led to the possibility of making only a few distinctions, even though precisely in this sector exact and differentiated data on different certificate standards often exists. On the other hand, the educational categories on the lower end of the educational scale--though encompassing a great number of cases--often are very undifferentiated. In some cases, this results from the fact that a large share of the population only attains the legally-stipulated minimum of education. In other cases, the lack of differentiation is connected to attributes of the educational system itself, i.e., in a certain system, a given line of differentiation does not exist, no longer exists or even does not yet exist. Though the lack of a definite form of institutionalization does hamper scale construction, it is an interesting feature of a system and worthy of explanation. It is more problematic, however, when an actually existing line of differentiation is not taken into account in the collection or classification of data.[87]

An additional problem results from historical changes in the structures of educational systems. There is hardly a country in the world today, where all age groups were confronted by the same educational system. Here, the problem of historical equivalence is not only based upon outward changes in the educational system, but is also connected to quantitative rearrangements and functional changes in relative importance linked to them. Changes in the importance of individual educational certificates can result on the basis of changes in other societal subsystems. In some cases, satisfactory equivalents can be produced by

means of the variable of age and detailed data on schooling. In other cases, equivalents have to be adopted that the data collector himself produced, since the necessary informational details were not included in the recorded (and published) data.

The most important qualification to be made concerning the results of the investigation concerns their applicability for present and future educational systems. Our educational classification was developed for cohorts who had to a great extent completed their education by the end of the sixties, and thus, before the large-scale educational reforms in the countries we investigated could really take effect, and before the beginning of the large-scale educational expansion. Thus, ours is a *'historical' classification*, not applicable without modifications for the analysis of the most recent developments. Instead, it must be further developed by taking into account the changes which in the meantime have become reality.

4.5 Classifications of Individual Countries

The following set of overviews describe the manner in which the educational systems of the individual countries are portrayed in terms of the comparative educational classification. The following presents the manner in which the individual educational categories are constructed and distinguished in the different countries investigated.

4.5.1. The Federal Republic of Germany

1a. Inadequately completed general elementary education: No formal education certificate.

1b. General elementary education: Folk school certificates without apprenticeship.

1c. General elementary education and basic vocational qualification: Vocational schools with an industrial, craft or commercial apprenticeship.

2a. Intermediate vocational qualification: Schools for technicians, professional schools (*Berufsfachschule*), technical schools with an industrial or commercial orientation.

2b. Intermediate general qualification: Intermediate Maturity Certificate (*Mittlere Reife*).

3a. Higher education--maturity level: Abitur.

3b. Higher education--lower-level tertiary certificate: engineering schools, technical colleges, teachers colleges.

3c. Higher education--upper-level tertiary certificate: degrees from universities.

4.5.2 France

1a. Inadequately completed general elementary education: No formal certificate.

1b. General elementary education: C.E.P. (Certificat d'études primaires); Certificat d'études complémentaires; diplome d'études primaires préparatoires; certificat d'études primaires d'adultes.

1c. General elementary education and basic vocational qualification: C.A.P. (Certificat d'aptitude professionnel); B.E.P. (Brevet d'études professionelle); Brevet de compagnon; B.P. (Brevet de maitrise); *1ere partie* de B.E.C. (Brevet d'enseignement commercial); B.E.I. (Brevet d'enseignement industriel); B.E.H. (Brevet d'enseignement hotelier); B.E.S. (Brevet d'enseignement social).

2a. Intermediate vocational qualification: 2eme partie: B.E.C., B.E.I., B.E.H., B.E.S.; B.T. (Brevet de technicien; Bac technique 1ere partie; Diplome d'élève brevetè d'une ècole nationale professionelle ou d'un lycée technique d'état.

2b. Intermediate general qualification: B.E.P.C.; Brevet Elementaire; Brevet Supérieur; Bac's 1ere partie.

3a. Higher education--maturity level: All Bac's 2ème partie; university propaedeutic; D.U.E.L.

3b. Higher education--lower-level tertiary certificate: Capacité en droit; B.T.S. (Brevet de technicien supérieur); D.U.T. (diplome universitaire de technologie); diplomes d'écoles d'enseignement paramédical; diplome d'études supérieures techniques.

3c. Higher education--upper-level tertiary certificate: Licence, maitrises, doctorat d'état, doctorat de 3eme cycle, etc.

4.5.3 Sweden

1a. Inadequately completed general elementary education: Ejfullständig Folkskola eller oavslutad Grundskola. All persons are included in this category who could not show a completed elementary school attendance, i.e., or had *less than six years* of of elementary school education, since the length of compulsory education had already been set at six years in 1882.

1b. General elementary education: Folkskola 6-8 Ar; Yrkesutbildning 0-1 Ar. This second group consists of graduates of elementary school (6-8 years) and elementary school graduates with subsequent vocational training of a year or less.

1c. General elementary education and basic vocational qualification: Yrkesutbildning minst et Ar utöver Folkskola. This third category includes all elementary school graduates with more than a year of subsequent vocational training.

2a. Intermediate vocational qualification: Yrkesutbildning minst et Ar utöver Realexam. This group is made up of graduates with an intermediate certificate and subsequent vocational training of more than a year.

2b. Intermediate general qualification: Realexam (även prak. Grundskola Flickskola Högre Folk skola); Yrkestbildning O-1 Ar utöver Realexam. This group is composed of intermediate school graduates without vocational training or with vocational training of a year or less.

3a. Higher education--maturity level: Studentenexamen (Gymnas; Fackgym.); Yrkestbildning 0-1 Ar utöver Studentenexamen. This group includes students with the maturity exam but no further education or with vocational training of a year or less.

3b. Higher education--lower-level tertiary certificate: Utbildning minst ett Ar utöver Studentenexamen. This group includes students with the maturity exam who have gone through several years of vocational training and university students without diploma.

3c. Higher education--upper-level tertiary certificate: Examen fran Universitet och Högskola. Graduates of a university-level institution.

4.5.4 England

The construction of educational variables proved especially difficult for the English educational system, since very heterogeneous elements are of relevance.

The following elements were taken into account: *length of schooling* (school attendance meeting compulsory education requirements vs. additional school attendance, i.e., school attendance beyond the age of compulsory education); the *certificates attained* (no certificate vs. at least a certificate on the "O" level vs. at least a certificate on the "A" level); the *type of secondary school attended* (non-selective secondary schools such as elementary schools, secondary modern schools, comprehensive schools vs. all the remaining selective secondary schools); the vocational qualification attained (no vocational qualification vs. apprenticeship vs. City and Guild College up until a City and Guild certificate "Intermediate" or "Final"); and the *tertiary education courses of study* ("Full Technological" Exams at City and Guild Colleges;[88] HNC and HND-certificates; university-level certificates of at least the "first degree"; courses of study leading to the professions, such as legal adviser, architect, tax and financial adviser, in part occurring as professionalized apprenticeships).

1a. Inadequately completed general elementary education: Persons who report a school leaving age lower than the one expected from legislation on compulsory schooling (taking into account the historical changes in duration of compulsory schooling).

1b. General elementary education: This group includes all those persons who solely met their compulsory educational requirements and attained no further education. This group also includes all students with an *improved or upgraded minimum*, i.e., school leavers from non-selective schools with short school attendance beyond compulsory schooling, school leavers from non-selective schools with an "O" level certificate, and school leavers from selective schools within the limits of the term of compulsory education. This group of an upgraded minimum of general education is very small.

1c. General elementary education and basic vocational qualification: The general elementary education and vocational qualification by means of an apprenticeship up until a City and Guild exam or general education of an upgraded minimum with at most an apprenticeship.

2a. Intermediate vocational qualification: Selective school with an apprenticeship and/or a City and Guild Exam up until an "Intermediate" or "Final" certificate. Whereas Group *1c* includes school graduates with general elementary education and a simple or intermediate vocational qualification as well as school graduates with an upgraded general elementary education and at most a basic vocational qualification, Group *2a* is characterized by a higher educational level. It includes school graduates with both upgraded general elementary education and an intermediate vocational qualification, as well as primarily students from selective schools with an elementary or intermediate vocational qualification. It is typical for these groups that its members generally do not possess any school certificates. Only 3% have an "O" level certificate.

2b. Intermediate general qualification: Selective secondary education without an "A" level certificate. This group includes school leavers from selective schools *with* additional school attendance with or *without* "O" level certificates, graduates of selective schools *without* additional school attendance but *with* "O" level certificates, and graduates of non-selective schools *with* additional school attendance *and* "O" level certificates.

3a. Higher education--maturity level: Secondary school certificate, "A" level or equivalent, with or without vocational qualification. This group includes above all persons who have obtained an "A" level certificate independent of the kind of educational path they followed. Most of the educational graduates belonging to this group do not undertake any further vocational qualification. Of those who have, however, the majority possess a City and Guild certificate.

3b. Higher education--lower-level tertiary certificate: Higher technical school diplomas, City and Guilds Full Technological Certificates, Higher National Certificates/Diplomas (HNC, HND, Level C qualifications).

3c. Higher education--upper-level tertiary certificate: University diplomas and profession-related courses of study (Level B qualifications).

4.5.5 Scotland

The construction of the Scottish educational scale closely followed the English educational classification; in other words, the following variables were also used: *length of schooling* (school attendance meeting compulsory education requirements vs. additional school attendance); the *certificates attained* (no certificate, "O" level, "A" level); the *type of secondary school attended* (selective vs non-selective secondary schools, comprehensive schools); and the *type of vocational qualifications*. The terms and categorizations can be taken from the English educational scale.

4.5.6 Northern Ireland

1a. Inadequately completed general elementary education: Persons who leave school earlier than a year before the end of the term of compulsory education. The normal age of school departure for those above thirty years of age was at age fourteen (cut-off point is age thirteen; cf. also Chapter 3.6 above), for all others, the age of fifteen (cut-off point is age fourteen).

1b. General elementary education: Persons who attended school until at least one year before the end of the regular term of compulsory education (cut-off points as in *1a*). This category also includes persons with incomplete secondary school education without the maturity exam and without vocational training.

1c. General elementary education and basic vocational qualification: Apprentice training or attendance of a technical school.

2a. Intermediate vocational qualification: Persons with an intermediate educational certificate, who additionally, either graduated from apprentice training or attended a technical school.

2b. Intermediate general qualification: Persons having left an academic secondary school (usually a grammar school), with certificates below the "A" level.

3a. Higher education--maturity level: Entry qualification for university attendance, i.e., "A" level and comparable certificates.

3b. Higher education--lower-level tertiary certificate: The highest diploma, either HNC or HND.

3c. Higher education--upper-level tertiary certificate: University education.

4.5.7 The Republic of Ireland

The same classification is used for the Republic of Ireland as for Northern Ireland, though with two deviations:

1. The cut-off point for distinguishing general elementary education is uniformly set for all age groups at the age of thirteen, corresponding to the term of compulsory education, which remained constant at age fourteen for the period in question.

2. A "Leaving Certificate" is included in Category *3a* (higher education--maturity level).

Aside from these two differences, the classifications are identical for both countries. The differences in historical lines of development either do not come into play in our classification criteria, or they have already been considered in the education classification used in the surveys of both countries.[89]

4.5.8 Poland

The educational variable in the Polish data base consists in a ten-fold classification, where five school forms were distinguished solely upon whether a certificate was provided or not.

1. *Elementary school* without certificate.
2. Elementary school with certificate.
3. *Vocational school* without certificate.
4. Vocational school with certificate.
5. *Upper School* without certificate.
6. Upper School with certificate
7. *Technical College* without certificate
8. Technical College with certificate.
9. *University* without certificate.
10. University with certificate.

The codebook (of category terms) is only available in German translation, and the translations have already been "adapted" to the German school types. For this reason, here are the corresponding terms for the individual school types as used in the description of the Polish educational system given above (cf. Chapter 3.8):

i) Vocational school = Elementary vocational school; agricultural preparatory school; vocational preparatory school.

ii) Upper school = Lycea and Technika (general and vocational orientation).

iii) Technical College = Post-lyzeal vocational school.

As can be gathered from the description of the Polish educational system, Poland lacks general and vocational intermediate certificates. Consistent with our procedure in other countries, we have used the information on the type of

Gymnasium attended in order to classify Gymnasial students *without certificates* in the intermediate general or occupation category, instead of grouping them together with elementary school graduates.

The educational variable was broken down in the following way:

1a. Inadequately completed general elementary education: Elementary school without certificate.

1b. General elementary education: Elementary school with certificate, vocational school without certificate.

1c. General elementary education and basic vocational qualification: Vocational school with certificate.

2a. Intermediate vocational qualification: Upper school without certificate, vocational orientations (only one member of this category).

2b. Intermediate general qualification: Upper school without certificate, general orientations.

3a. Higher education--maturity level: Upper school with certificate, technical college without diploma, university without diploma.

3b. Higher education--lower-level tertiary certificate: Technical college with certificate.

3c. Higher education--upper-level tertiary certificate: university education.

4.5.9 Hungary

1a. Inadequately completed general elementary education: Students not having completed the sixth (old)/eighth (new) grade of the folk school. The "old" system includes the age cohorts born up until 1948; the new system includes age cohorts born later.

1b. General elementary education: Completion of primary school (six or eight grades) without continuing education after compulsory schooling.

1c. General elementary education and basic vocational qualification: Primary school and attendance of a vocational school or of a vocational technical school, with at least one year of schooling. This category also includes students with vocational training without the completion of primary school.

2a. Intermediate vocational qualification: Graduates of vocationally-oriented intermediate schools (Technika, technical intermediate schools) without Matura or with less than four years of Gymnasium. Burgher students with subsequent vocational training or apprenticeship.

2b. Intermediate general qualification: Those leaving Gymnasia without Matura and Burgher students without further schooling.

3a. Higher education--maturity level: Certificate of a Gymnasium (General or Technika); university drop-out.

3b. Higher education--lower-level tertiary certificate: Certificates presupposing the maturity level, but not leading to the highest certificate attainable.

3c. Higher education--upper-level tertiary certificate: University education.

NOTES

* In the writing of this paper, we have profited to a great extent from experts on different countries. This, indeed, first made it possible to incorporate nine different countries into the analysis. Our gratitude is owed above all to the following persons: Bodgan Mach (Poland), Bob Miller (Northern Ireland), Janne Jonnson (Sweden), Robert Erikson (Sweden), Clive Payne (Scotland), and John Goldthorpe (England). An essential part was also played in the development of international educational scala by Wolfgang Karle (Irish Republic) and Bernhard Schimpl-Neimanns (Hungary), who wrote their *Diplom*-theses on this topic, and by Karin Kurz, who designed the Scottish educational scala.

[1] Thus, we use the concept of education in a sense distinct from that of the neo-humanistic and classical ideal of education or *"Bildung,"* where *"Bildung"* meant the cultivation of 'higher' faculties--in a normative sense--and not primarily the descriptive product of a learning process. Consequently, the following analysis involves educational systems and not aspects of *"Bildung."* Thus, the concept of education is used in an ideologically neutral sense, even though of course, educational degrees themselves are not free of ideological contents.

[2] Another consequence of this function is the structuration of life-time relationships, i.e., the choice of partner, by means of 'educationally-specific' reproduction relationships which help maintain the given system of stratification (HALLER 1983).

[3] An early overview of the different positions is provided in MÜLLER/MAYER 1976: 18f.

[4] On the significance of the international comparison, particularly for education, see LEIPOLD 1974; ANWEILER et al. 1980:13ff.; PESCHERSKI 1986.

[5] The sources for the respective countries were: the Federal Republic of Germany (ZUMA Superfile, 1976-1980); France (Enquete Formation Qualification Professionelle, 1970); Sweden (Level of Living Survey, 1974); England (Study of Occupational Change, Oxford, 1972); Scotland (Scottish Social Mobility Inquiry, 1974/1975); the Irish Republic and Northern Ireland (Determinants of

Occupational Mobility in Ireland and the Irish Republic, 1974); Poland (Transformation of Occupational Structure, 1972); and Hungary (Transformation of Occupational Structure, 1973).

[6] On the development and problematic of comparative social research, cf. FLORA 1975, MÜLLER 1986, ROKKAN 1972.

[7] This may explain why many researchers making international comparisons do not discuss this problem any further, and why one finds only isolated references to classification criteria (cf. for example, PESCHAR/MACH 1985, KAPPELHOFF/TECKENBERG 1987).

[8] Since the functions of educational systems cannot be looked at apart from their economic and cultural context, it is conceivable and perhaps even probable, that identical allocation patterns are hidden by differences in quantitative distributions measured, e.g., in terms of the number of years of education--and *vice versa*. The number of years of education for example, a relatively sensible indicator for school systems with relatively low degree of stratification, such as the United States, loses its justification if it is used to put the certificates of the *Hauptschule* and the *Realschule* on the same level in the Federal Republic of Germany or if it is used to conflate elitist, private education and public education in England. In other words, the relative significance and 'identity' of different educational systems cannot be grasped on the basis of such an indicator.

[9] Beyond this, essential differences are also found in educational goals and curricula, in the efforts at democratization and participation, in the scientific orientation of curriculum contents and in the humanization of pedagogical interaction--in other words, in those elements considered part of the so-called internal organization of the school system.

[10] Thus a *Hauptschule* student, who after nine years of *Hauptschule* and subsequent vocational training, then obtains his intermediate exam in a two-year commercial school, can show eleven years of school education. However, these eleven years, as a (labor market relevant) certification, certainly may not be rated higher than a 10-year intermediate exam achieved at a Gymnasium or *Realschule*.

[11] "The comparison involves an identification of *independent* variables that serve to explain *common* or *contrasting* patterns of occurence" (Bonell 1980:165; emphasis added).

[12] This is also one of the four dimensions of HOPPER'S approach (1968) to the description of educational systems, whose typologization represents a useful point of departure. Hopper's approach makes recourse to Turner's classical distinction between "sponsorship" and "contest." Hopper attempts to expand this typology by breaking down its basic dimensions into smaller components in order to gain a more differentiated and *universally* valid theoretical instrument. His typology,

however, is conceived on a very general level and concentrates on selection criteria within the educational system. Thus, it is of only limited use for this paper.

[13] The selection criteria can, for example be exclusively achievement-oriented (according to previous school achievements), or they can also encompass non-educational factors such as occupational experience (in university entry in Sweden), or class of origin (as in Hungary and Poland after the Second World War). Implicitly this takes up Hopper's other two dimensions which concern the criteria and justifications of selection. According to Hopper, individuals can be selected primarily according to "universalistic" or "particularistic" abilities. In the universalistic system, more technical skills than "diffuse skills" (origin-specific behavioral patterns or knowledge) are required for success in the educational system and vice versa. Finally, the ideological justifications of selection can result from "individualistic" or "collectivistic" criteria.

[14] Comprehensive presentations of the German educational system are found in FÜHR 1979; BILDUNG IN DER BRD 1980, BAUMERT et al. 1984. A compact description of its historical development is given in D. MÜLLER (1987).

[15] FROESE (1968:263) names two further barriers to reform in the German educational system besides confessionalism and federalism: the traditionalism of the humanistic educational system and the protectionism of the universities.

[16] For example, of the 299 comprehensive schools existing in 1977/1978, 162 were in Hesse alone, whereas only one was in Saarland and six in the Rheinland-Palatinate. These different developments--largely conditioned by (educational) policies--have continued to produce substantial differences between states up until today. These differences are found in both educational structure and educational contents, for example, in reference to the transitions from primary school to the advanced schools; in the forms of the orientation level; and in the regulations and performance requirements for certificates, which are not always fully reciprocally recognized by the individual states of the federation.

[17] In Berlin, elementary school attendance lasts six years.

[18] These transfer percentages contain marked class-related differences. The highest transfer quotas to the *Hauptschule* are provided by the children of farmers (84%) and unskilled laborers (86%). (Figures from TROMMER-KRUG 1980:254, Table 3.)

[19] The establishment of an orientation level occurred in very different ways on the state level. In Berlin (West), for example, the fifth and sixth grades of elementary school fulfilled the function of the orientation level. In the other states, the orientation level was implemented either within the framework of the different school types of Secondary Level I or outside of it. (These two alternatives are termed "school type dependent" and "school type independent," respectively.)

Those orientation levels (the so-called "school type independent" ones) which were not incorporated into the Secondary Level I schools (and were thus part of the elementary school) in fact shortened these Secondary Level I schools by two years. They are the subject of intense controversies in educational policy.

[20] The technical colleges replaced the earlier engineering schools and other practically-oriented institutions of higher training. The technical upper schools (*Fachoberschulen*) build upon the Secondary Certificate I and provide strongly vocationally-oriented training in preparation for the attendance of a technical college. The vocational technical schools (*Berufsfachschulen*) start from the lowest school certificate (*Hauptschulabschluß*) and provide a certificate in two years which--equivalent to the final certificate of a *Realschule*--entitles the transfer to a Gymnasium.

[21] Our own calculation based upon data from the Federal Minister of Education and Science, 1983. On private schools, cf. BAUMERT et al., 1984. On the so-called Free Schools and Alternative Schools, cf. BORCHERT/KUNSTMANN 1979.

[22] For comprehensive presentations of the structure and development of the French educational system, cf. NIESER (1979); SCHNEIDER (1963); TROUILLET (1973).

[23] Decisive influence on the postwar development of the French educational system was exerted by the reform plan of the Languevin-Wallon-Commission of 1945, which explicitly pursued the goal of more "social justice" and the "democratization of education." Even though few pupils in fact attended the *classes nouvelles* established in accordance with this plan (RÖHRS 1971:63), its paradigmatic effect was considerable.

This plan envisioned a standard school without the previous separation between primary and secondary school. Both were to be unified within the *enseignement du premier degré*, which was divided into three phases: (1) the *premier cycle scolaire*, the primary school from seven to eleven years of age; (2) the *cycle d'orientation*, from eleven to fifteen years of age; and (3) the *cycle de détermination*, from fifteen to eighteen years of age. The third phase was to subdivided into: (a) a practical division--a *section des études pratiques* (*écoles pratiques d'apprentissage*), (b) a *section des études professionelles* (*Fachschule* for trade and industry) and (c) a theoretical branch (*section des études théoriques*), leading to the various *baccalauréats* (exit examinations in the natural sciences, literature or technical field). The various courses of study in higher education of the *ensignement du second degré* were to be based upon this theoretical branch.

A host of reform efforts--in 1948, 1949 and 1955--failed due to the weakness of the governing coalitions and the resistance of the teachers' unions, especially of the

gymnasia teachers. The latter saw their privileges threatened by the weakening of the boundaries between institutions of "higher" and "lower" education--with their respective "higher" and "lower" teachers (HANLEY 1979:261).

[24] There are a classical long branch, a modern long branch, a modern short branch and a practical branch.

[25] Though there are similar apprenticeship programs in France in the field of manual crafts as in the Federal Republic of Germany, they are quantitatively insignificant and cannot be put on the same level.

[26] The French educational sytem was further modified in the following years, on the one hand by Edgar FAURE'S *Loi d'Orientation* (1968; on higher education), and on the other by three 1971 laws (FONTANET) on technical and vocational education, as well as by the HABY Reform of 1975 (fully integrated two-year entrance phase to Secondary Level I; the *Program of Equal Oppurtunity*). Due to the point of time of the survey however, we will not consider these reforms any further.

[27] On the historical development of the educational systems in the Scandinavian countries, cf. FROESE 1968. On the structure of the educational system in Sweden, cf. JÜTTNER 1970, 1975; WILLMAN 1980. Presentations of the reforms can be found e.g., in BÖGLI et al. 1964; HUSEN et al. 1968; MARKLUND 1972.

[28] At the turn of the century, actual school attendance only averaged four years. Only in 1930, were schools so widely established that the average of the country as a whole reached six years (cf. MARKLUND/SÖDERBERG 1969:4).

[29] Only those youth were exempted from the "continuation school," who completed a voluntary eighth year of folk school (naturally as well as those who completed this year in a school of general education or an vocational school).

[30] From 1884 until 1927, this occurred after 3 years.

[31] The following presentation of the different types of *Realschulen* (intermediate schools) is based upon JÜTTNER 1975.

[32] The 5-year *Realschulen* were above all city schools with a higher percentage of pupils from the service classes, whereas the 4-year *Realschulen* were largely rural schools more heavily attended by pupils from lower classes.

[33] This high degree of differentiation and the accompanying low degree of "permeability" between the different school types was also one of the essential impulses for the initial reform efforts.

[34] The reasons for such reforms were located in both the ideological and the technocratic-economic field (JÜTTNER 1975:20ff.; on the course of the reforms cf. MARKLUND/SÖDERBERG 1969: 11; MARKLUND 1972; LIEGLE 1980: 138-141).

[35] A private school system was never able to establish itself in Sweden (JONSSON 1986: 157).

[36] A two-year technical track presupposed the completion of the more advanced course in mathematics; the three-year economics, humanities and social science tracks presuppose the completion of the more advanced course in English; and the three-year natural science track and the four-year technical tracks presuppose the completion of the more advanced in either English or mathematics.

[37] The transfer quotas established in 1964 that admission is permitted of: (a) a maximum of 30% of a given age group to three/four-year tracks corresponding to the former Gymnasiums; (b) a maximum of 20% of a given age group to the two-year tracks adopted from the former technical schools; and (c) a maximum of 35% of a given age group to the ten vocational tracks.

[38] On admissions conditions, cf. WILLMANN 1980: 177f.

[39] On the structure and development of the English educational system, see THOMAS (1975), HALSEY et al. (1980) and KUEBART (1980).

[40] Primary schools are themselves subdivided into a two-year "infant school" (ages five to six) and a four-year "junior school" (ages seven to eleven).

[41] Thus, in spite of a decrease in the total number of children of compulsory school age, the number of private pupils rose from 421,000 in 1985 to 430,000 in 1986. (Quoted as reported in "Die ZEIT," 28 (1987): 14.)

[42] Private schools are unequivocably class-bound in nature. Eton, Harrow, Rugby, Winchester, Charterhouse, Stowe and Ampleforth number amongst the most well-known.

[43] The direct grant schools are funded by the Education Ministry and are independent of the LEAs. Of the 179 direct grant schools existing in 1968 (with roughly 118,000 students), fifty-nine were members of the Headmasters Conference.

[44] Only between roughly 60-70% of all secondary school graduates go on to the university. Here, above all children from upper classes demonstrate higher continuance percentages. Even though background does play a role in the transition from secondary school to higher education, inequality in higher education attendance is above all a result of prior processes of selection. (See HALSEY et al. 1980.)

[45] Whereas in the Federal Republic of Germany for example, nine of ten of all those leaving school take up vocational training, at the end of the seventies the corresponding figure in England was only three in ten. (Cf. the *Frankfurter Allgemeine Zeitung* from Jan. 10, 1987.)

[46] Discussions are now under way in England especially of the principle of dual training--as it is widely practiced in West Germany--as an appropriate model for overcoming the wretched state of basic vocational training.

[47] These include City and Guild Qualifications, Ordinary national certificate (ONC), Higher national certificate (HNC) and Higher National Diploma (HND). Whereas the City and Guild qualifications can be considered as intermediate vocational degrees, the Higher National Diplomas can be viewed as the equivalents of lower-level higher education standards.

[48] Oxford and Cambridge continue to differ from the new universities in a variety of ways--even today. For example, differences can be found in admissions tests, the internal organization of colleges, the tutor system and in the still in part practiced separation of the sexes.

[49] Thus, the selection process takes place to a greater extent in England prior to rather than after entry into higher education. The process is realized by means of references, admissions exams and tuition fees. In addition, the elite universities have developed their own exams which test not only specialized knowledge but also 'general education.' The institutions of education make great efforts to secure the fact that those students admitted also successfully complete their course of studies.

[50] In terms of Scotland's self-image this distinctiveness has always played an important role, since it offered one of the few possibilities to grant expression to a distinctive national character and to maintain in part national autonomy. For comprehensive presentations of the structure and development of the Scottish educational system, cf. MACLEAN 1973; OSBORNE 1965; and ANDERSON 1985.

[51] There are, however, great regional differences. Thus, in Edinburgh and Glasgow, private schools have always played a greater role than in the countryside.

[52] Prior to World War II, the usage of the concept of secondary school was restricted to 'higher education,' i.e., to education qualifying one for university entry. It was only after World War II that every post-primary school type was termed a secondary school.

[53] From 1907 until 1924, it was a necessary prerequisite for the National Leaving Certificate. In 1923, it was replaced by the *Day School Exam Higher*, which was not, however, required for the National Leaving Certificate.

[54] A Junior Secondary Certificate was planned but never put into practice. Moreover, though the *Education Act of 1936* did make several reform recommendations, almost all of them were put into effect--if at all--after World War II.

[55] This was termed, since 1940: the Senior Leaving Certificate and since 1950: the Scottish Leaving Certificate. From 1962 onwards, it has been termed the Scottish Certificate of Education.

[56] After the 'group exam requirement' for the Scottish Leaving Certificate was dropped and the minimum number of Higher and Lower Grades was abolished in 1951, the number of students who registered for these exams increased. Up until the forties, it never surpassed 10% of a year's class. In 1962, it reached 15%, and in 1972, 30%. In the seventies, this percentage remained constant at this level. However, these figures only reflect the number of students taking the exam; they did not necessarily all pass.

[57] In 1964, 27% of all pupils possessed at least one O-Grade, by 1976, 65%. In England and Wales, the same figure even reached 83% by 1976. The high percentage of pupils with leaving certificates by the mid-seventies is also connected to the extension of compulsory education to the age of 16, in 1973. Thus, even after the introduction of the O-Grades, there are still more pupils without school degrees than in England. However, this is in part also the result of the fact that Certificate of Secondary Education, an exam administered within the individuals schools, was much more widespread in England than in Scotland.

[58] On the Northern Irish educational system, see SUTHERLAND 1973 and SPELMAN 1975.

[59] There are only a few schools which actually possess the character of comprehensive schools. They thank their existence to special local conditions.

[60] According to the regulations of 1918, for example, school could be left up to a half of a year prior to the end of the period of compulsory school attendance. This was possible, if compulsory school age was reached during the summer holidays between two school years. Thus, dependent upon one's date of birth, up to five months of compulsory schooling could be avoided. For this reason, in our differentiation of minimal educational length in different countries (cf. Chapter Four below), we were forced to choose one year before the end of the period of compulsory education as our cut-off point.

[61] The Eleven Plus is not, however, the equivalent of a primary school certificate such as the "Primary Certificate Examination" in the Republic of Ireland.

[62] Roughly 20% of the pupils in a Grammar School initially pay the school fees. Many pupils then pass a "Transfer Procedure" exam at the age of 14, whereafter the State meets their tuition costs.

[63] Northern Irish politicians classify these certificates from the Irish Republic as lower than the Northern Ireland degrees; this is debatable, however.

[64] One result of this emphasis on elite education is that in the 'poorer' of the Grammar Schools, pupils at the lower performance levels are often below comparable students in the 'better' Secondary Intermediate Schools.

[65] ONC: Ordinary National Certificate; OND: Ordinary National Diploma; HNC: Higher National Certificate; GCE: General Certificate of Education.

[66] The New University of Ulster and the Northern Ireland Polytechnic were first founded in 1966/1967, which means that few members of our sample probably attended either of these institutions.

[67] E.g., Ulster College (Art and Graphics), Belfast College of Technology, Magee College (in part, teacher training, otherwise continuing education; recognized as the first year of study of Trinity College in Dublin).

[68] On the development and structure of the Irish educational system, cf. HORGAN (1973), FARRY/MCMILLAN (1986), and CLANCY (1986).

[69] A distinctive and noteworthy feature of the Irish educational system into the 19th century was the payment of teachers according to their pupils' performance, termed the "Payment by Result System." The payment of teachers was not only governed by the performance of their pupils on state-administered exams, it was also dependent upon the pupils' choices of subjects. This affected above all the secondary school sector in program of subjects it offered, since the teaching staff especially supported "better-paying" subjects.

[70] In 1929, the "Primary Certificate Examination" was introduced, with the intention of requiring a standardized prerequisite for admission to all advanced schools. It first became mandatory in 1943, only to be dropped in 1967--replaced by a system of certificates for individual exams.

[71] On the structure and development of the Polish educational system, cf. ANWEILER 1975; HAMMETTER 1966; MAAS 1968.

[72] "Decree on Compulsory Education," 1919; "On the Establishment and Maintenence of Public Elementary Schools," 1922.

[73] "During the War, Polish schools existed only in the so-called 'Government General,' and here only in the form of elementary schools and vocational schools with very limited instructional contents. Gymnasia, lycea, universities and higher vocational schools were disbanded and prohibited" (MACH 1987:5).

[74] Thus, "the system of vocational training, as it developed in People's Poland, <is>... to a greater extent the result of urgent economic needs than a result of the consistent realization of a long-term educational policy." (PESCHERSKI 1973: 257, as quoted in ANWEILER 1975: 136).

[75] The long length of the primary level and the consequently late occurence of selection is a trait of all East European school systems (cf. ANWEILER 1975).

[76] These basic vocational schools also include the *agricultural preparatory schools* of two-year instruction and the *vocational preparatory schools* of five to eleven months of instruction, which train sixteen to nineteen year old youth without vocational training and with only four years of elementary school (First Level) to become semi-skilled workers. The number of these markedly decreased in the seventies as a result of the increasing realization of the eight year term of compulsory education.

[77] The vocational Technika are primarily reserved for the middle-level cadre of the various branches of economic life such as administrative and service sector employment.

[78] On the development and structure of the Hungarian educational system, cf. HUNGARIAN EDUCATION 1976; HEGEDÜS 1980.

[79] A further element of heterogeneity can be seen in the gender-split of the schools. Except in folk schools, there was no co-education. It was only in 1926, that girls were first admitted to advanced secondary education. At this time, three types of secondary school for girls were established.

[80] In the *Gymnasium*, through the experiments in introducing polytechnical instruction (1961-1972) to supplement the *Matura*, knowledge relevant to vocational skills was provided and given certification. Given the needed qualifications, students could take the skilled worker examination in addition to the *Matura*. Like in the old school system, the general *Matura* (without subsequent university studies) alone qualified its recipients for lower to middle-level administrative duties. Combined with the reduction of admissions to higher education and the re-evaluation of educational planning, this resulted in the decreased importance of the *Matura*.

In the *vocationally-oriented secondary school system*, Technika students has been able as early as 1946 to obtain the *Matura* on a voluntary basis. The next step in the integration of vocational and general education involved the vocationally-oriented secondary schools. The school legislation of 1961 brought it about. Some of the Technika were raised to the rank of a college (of higher education). The Technika were renamed technical intermediate schools; they gave the general maturity exam and trained skilled workers. However starting as early as in the middle of the sixties, a series of corrections were made, as the goal of double qualification proved to be unattainable. For this reason, starting in 1972, industrial and agricultural technical intermediate schools were transformed into vocational schools with a large share of theoretical subjects. These schools could only provide the qualification for higher education in specific subjects. Only the technical intermediate schools for commerce, services and administration provided the general maturity level alongside of intermediate vocational qualifications.

[81] In addition to Prussia, France and above all the USA demonstrate high enrollment rates in the primary school education in the second half of the 19th century: Germany: 74%; France: 82%; and the USA: 91% (RUBINSON 1986: 523).

[82] However, in all of the countries, these regulations were actually put into effect (fully realized), at a much later date.

[83] Especially in West Germany, the last few years has witnessed the stagnation, and in part, even a revision, in terms of the establishment of the comprehensive school as the standard school.

[84] The typical traits of European educational systems, however, also lead one to suspect that the construction of a certificate-oriented educational scale captures the decisive differentiations of educational systems in a way which is valid beyond the scope of the purposes of our analysis. For this reason, the classification developed could be useful for purposes lying outside our investigation.

[85] An extreme example of this is the USA. High schools offer numerous basic vocational training courses, whose completion however, in no way guarantees the allocation to the corresponding occupational positions. More than half of all high school graduates (after three years of study) take on positions of unskilled or semi-skilled workers (HALLER 1983).

[86] For example, in West Germany, the in fact important distinction between a commercial and an industrial apprenticeship (*kaufmännisher und gewerblicher Lehre*) could not be taken into account, since this distinction cannot be made in other countries.

[87] Defects found in the data available cannot be removed after the fact. The reasons for such defects are in part attributable to the statistical tradition of a given country, often lagging behind actual developments or providing no significant variable for education and thus rather undifferentiated.

[88] The City and Guild certificates on the highest level are roughly the equivalent of the former German engineering schools or the current German technical colleges.

[89] The surveys in the two Irelands are based on largely identical procedural methods.

Table 1: Indicators of the development of Educational Systems

	FRG	FRA	SWE	ENG	SCO	NIR	IRL	POL	HUN
Introduction of the Compulsory School	1763[1]	1882[2]	1842[3]	1880[4]	1872	1892	1892	1895[5]	1868
Abolition of School Fees	1920[6]	1882 1933[7]	1842	1918 1944[8]	1889 1918[9]	1947	1924?	1948	1961
Introduction of State-Established Secondary Schools	1834 1872	1880 1883	1905 1909	1902	1872 1898	1887[10]	1887[10]	--	1868[11]
Reforms after the Second World War	1964 1969	1959 1975	1961 1977	1944	1947 1965	1947		1948 1961	1948 1961
Reform of the Transition from the Primary to Secondary Level	1969	1959 1963	1927	1944	1947 1965	1947		1948	1948
Introduction of Comprehensive School	1969	1959 (1964)	1961	1964	1965	keine	1963	keine	1948

1) Compulsory education in 1717 in Prussia, if school available; 1763, general compulsory education (from the ages of 6-13/14).
2) Municipalities were obligated to establish elementary schools in 1833.
3) Length of compulsory education not fixed.
4) In 1870, the recommendation to introduce compulsory education; in 1880, the introduction of eight-year compulsory education (from the ages of 5-13).
5) Only in the area of Austrian partition(six yr. length); in the area of Prussian partition, eight-year compulsory education; in the Russian area, no compulsory education.
6) Private preparatory schools for Gymnasia abolished; uniform, obligatory, four-year elementary school.
7) In 1882, for elementary schools; in 1933, for 'einseignement secondaire'.
8) In 1918, for public primary schools, in 1944, for public secondary schools.
9) In 1889, for primary schools; in 1918, for secondary schools.
10) The Intermediate education act of 1878; state control of examinations in secondary school.
11) Establishment of Burgher schools.

Table 2: Structural Indicators of Educational Systems at the Beginning of the Seventies+

	FRG	FRA	SWE[1]	ENG	SCO	NIR	IRL	POL	HUN
Length of Pre-school Education (Ages)[2]	3 (3-5)	4 (2-5)	2 (5-6)	3 (2-4)	3 (3-5)	1 (5)	2 (4-5)	3 (4-6)	3 (3-5)
Length of Primary School	4(6)[3]	5	4	6	7	6	6/7	6	8
Length of Compulsory Education (Ages)	8/9[4] (6-15)	8[5] (6-14)	7 (7-14)	10 (5-15)	10 (5-15)	9-11 (5-15)	8 (6-14)	7/8 (7-15)	8[6] (6-14)
Age at Transition to Secondary School	10(12)[7]	11	11-13	11	12	12(13)[8]	12	13	14
Combined Length of Secondary Level I& II (Seperated:I/II)	6-9 (6/3)	7 (4/3)	7-8 (4/3)	7 (5/2)	5 (3/2)	6 (4/2)	6-7 (4-5/3)	6 (4/2)	4 -
Length of Schooling Up Until Maturity Exam<Leaving Certificate Exam> (Ages)	13 (6-19)	12 (6-18)	12-13 (7-19)	13 (5-18)	12 (5-17)	13 (5-18)	13/12 (6-19,18)	12/13 (7-19)	12 (6-18)
Length of Secondary Schooling: Short Form, Secondary Level I (Ages)	6(4) (10,12-16)	4 (11-15)	4-6 (11-16)	4(5) (11-15)	3 (12-15)	4 (12-16)	4 (3) (12-16,15)	4	4
Length of University Education	4-6	4-6	4-6	3	4	3-4	3-5	4-6	5-6

+) The length of the different school forms can often not be fixed for a given period or point of time; thus, the figure given represent 'standard values'.

1) The indicators make reference to the Swedish school system prior to the school reform of the sixties.

2) Not attended by all children.

3) In Berlin, elementary school is six years long.

4) Part-time compulsory education until the age of 18.

5) Since 1961, 10 years (ages 6-16).

6) Since 1967, 10 years (ages 6-16).

7) In 1918, 9 years in length (ages 5-14); in 1947, 10 years in length (ages 5-15); in 1972, 11 years in length (ages 5-16).

8) Starting in 1947, at the age of 13.

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