Education and Social Stratification Processes in Comparative Perspective

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This article describes three characteristics of educational systems that have been used to explain social stratification processes: stratification, standardization, and vocational specificity. These characteristics have been viewed as the basis for educational systems' varied "capacity to structure" students' entry into the labor force. Another important characteristic that has received less systematic attention is also suggested: student choice. The ways in which these characteristics affect the movement of students through school and into the labor force are described for France, Germany, Great Britain, and the United States. The discussion emphasizes the need to examine the trajectories that young people follow during a full "transition period," rather than a single move from school to work. The author suggests that more information is needed about the ways in which both formal institutional structures and informal social processes generate regularities in the trajectories followed during the transition period.

This article reviews recent research and theorizing that have been concerned with the relationship between education and social stratification processes in advanced societies and suggests some directions in which future work could take social scientists to build on this foundation. Social stratification is a term that is used to describe both a condition and a process. Social stratification as a condition refers to the fact that members of a population have characteristics that differentiate them into levels or strata. Social stratification as a process refers to the ways in which members of a population become stratified. Most of the literature linking education and social stratification has viewed education as a major contributor to the process that differentiates the society's population into strata. Young people pass through a society's educational institutions and obtain varied educational credentials. These credentials have lasting effects on their adult lives. In particular, occupational attainment depends heavily on educational attainment, and occupational attainment is the primary dimension of social stratification in advanced societies.

A society's educational institutions can be described as its "sorting machine" (Spring 1976) because they are a major part of the society's institutional arrangements that serve to stratify its population. Educational institutions sort students into stratified levels of educational attainment, certified by socially recognized educational credentials. Each new generation passes through the society's educational institutions and emerges as a stratified student population whose adult prospects vary significantly according to the credentials they obtain in those institutions. It is difficult to
compare societies’ distributions of educational attainments, however, because the credentials awarded by the societies’ institutions are so different. Americans refer to high school graduation as an important level of educational attainment, but the British do not graduate from high school. Instead, a variety of attainments are possible during secondary school that have different levels of recognition in British society.

Educational attainment is different from other types of attainments used in social stratification research. Advanced societies all have highly comparable distributions of occupations, and there are well-established standards for the education that people need to get into certain educational systems. But advanced societies’ educational credentials (what I refer to as their indigenous credentials) are defined in different ways.

Besides these differences in educational credentials, differences in the organization of the educational systems of advanced societies also lead to variations in the processes by which these adult outcomes are produced. Not all “sorting machines” work in the same way. Not only do they sort their students into different indigenous credential categories, but the ways in which these credentials are produced and affect adult outcomes also differ in important ways.

Just within the past decade, many informative comparative studies have shown the great significance of the variations in educational systems in societies that are, in most other respects, very much alike. I review some of the more salient results from this body of research in the next section with particular focus on the different ways that educational systems distribute each new generation into adult strata defined in terms of occupational positions. In later sections, I focus on some of the more pressing questions this recent research has brought to light and suggest directions in which future research and theorizing can profitably take us.

**DIMENSIONS OF SYSTEM VARIATION**

Our understanding of the differences among educational systems has been increased by efforts to define dimensions that differentiate them. Three dimensions are generally emphasized: stratification, standardization, and occupational specificity. Combinations of these dimensions are thought to determine the educational systems’ “capacity to structure” the flow of young people out of educational institutions and into adult strata that are defined by occupational positions. To help emphasize the importance of the three dimensions of educational systems, I refer throughout to four major societies’ educational systems: those of France, Germany, Great Britain, and the United States. These four systems are remarkably varied on the three dimensions, and they differ greatly in the ways they “structure” the flow of students into adulthood.

**Stratification**

Stratification refers to the degree to which systems have clearly differentiated kinds of schools whose curricula are defined as “higher” and “lower.” The term most often refers to differences among secondary schools. The German system’s sorting of secondary school students into the Hauptschule, Realschule, and Gymnasium is a clear example of a stratified system. The British differentiation among Secondary Modern, Comprehensive, and Grammar schools is similar, although the Comprehensive school is not so much a separate part of a stratified system as a merging of the traditional Secondary Modern and Grammar schools.

Neither the French nor the American system is as stratified as the German and British systems. The American system has nothing comparable to the others’ stratified secondary schools. The French system had been nearly as highly stratified as the German system until the 1970s, but major changes have occurred since then (Lewis 1985) that have sharply reduced its degree of stratification. There are types of French secondary schools that specialize in general or technical studies, but they all award the baccalauréat.

In a stratified system, the program offerings in the types of secondary schools are associated with different degrees of access to opportunities for additional, more advanced schooling. So, the term stratification refers to both the kinds of programs offered and their links.
to future opportunities (Allmendinger 1989). That is clearly the case in the German system. The successful Gymnasium student obtains the Abitur, a certificate entitling him or her to attend a university. The successful Realschule student may qualify to attend an advanced vocational school (Fachobergschule), but Hauptschule students have few later options.

The British system gives students at Grammar schools and most Comprehensive schools the opportunity to study for A-level examinations that are a prerequisite to attending a university. Most Secondary Modern schools do not offer that program of study. Although the French school system is divided into two types of secondary schools, both award the baccalauréat, and a student with a baccalauréat from either of them has access to higher education. Those with a general (rather than a technical) secondary school background are more often successful in higher education, however (Goux and Maurin 1998).

The American educational system has an even lower degree of stratification than has any of these European systems. This lower stratification is reflected in the fact that virtually all secondary schools offer essentially the same curricula and award the same general credential: the high school diploma. In contrast, most European secondary schools award an array of credentials that reflect their varied program offerings. American students who finish secondary school but do not receive any postsecondary schooling all have the same credential, but German and British students without postsecondary schooling have a variety of credentials. And those varied credentials have significant effects on the students’ access to jobs.

In summary, then, the German system is the most stratified of the four. The British system is somewhat stratified, and the French and American systems have little stratification.

**Standardization**

Standardization refers to “the degree to which the quality of education meets the same standards nationwide. Variables such as teachers’ training, school budgets, curricula, and the uniformity of school-leaving examinations are relevant” (Allmendinger 1989:233). Standardization is generally higher the more the system is controlled by the central government. Of the four systems discussed here, the French is by far the most standardized. The Ministry of National Education oversees teacher training, provides the means to evaluate both teachers and students, and sets out the specifics of the national curricula.

There is less standardization in Germany than in France because the 16 states (Länder) are the main sources of financial support for education and have primary responsibility for organizing the educational programs. However, the Länder cooperate both with each other and with the federal government in ways that help to standardize programs. The local British districts have even more autonomy than those in Germany, although both funding and credential standards are more influenced by the national government and national certification agencies than is the case in the United States. The strong insistence on local control of education in the United States ensures that there is a low level of standardization.

In summary, then, standardization is the greatest in France, although it is a close second in Germany. Standardization is lower in Great Britain than in either France or Germany, and it is by far the lowest in the United States.

**Vocational Specificity**

Educational systems vary in the extent to which they offer curricula that are designed to prepare students for particular vocations and award credentials that are vocationally specific. The German system is the most extreme case of vocational specificity. The great majority of German students enter what is known as “the dual system” during their midteens (Müller, Steinmann, and Ell 1998). The dual system is an apprenticeship system that combines work experience in regular firms with schooling that is designed to improve students’ occupation-specific skills. Students who successfully complete a program are awarded credentials that certify their ability to perform the duties of that occupation. The training is highly specific to preparation for 498 occupations (Mortimer and Krüger 2000). Successful completion
may also open access to opportunities for postsecondary schooling.

The British system provides opportunities for secondary school students to take specialized examinations that certify skills that may be of interest to potential employers, but these credentials are generally less occupation specific than are the credentials the German students obtain in the dual system. Greater occupational specificity is associated with the postsecondary courses that British students take in colleges of further education or training centers. The credentials awarded for completing these courses are comparable to the certificates that some American students obtain from technical institutes or community colleges, but the British credentials are nationally standardized and are obtained by a much larger proportion of students than in the United States.

The French system is closest to the American in this respect. There is a division in secondary school between the general and technical tracks, and once students leave the general track, they do not return. However, the curricula in the technical track have few direct applications to positions in the labor force, and students in both tracks have access to postsecondary schooling (Goux and Maurin 1998). Most specific job skills are learned by French workers on the job, and the training does not as often lead to nationally recognized credentials as does the training in programs in either Great Britain or Germany.

Highly stratified educational systems tend to award more vocationally specific credentials (Müller and Shavit 1998). In fact, part of the reason for the stratification of the secondary schools in systems, such as Germany's, is to begin to identify groups of students who can be prepared to enter general divisions of the occupational hierarchy.

CAPACITY TO STRUCTURE

In a landmark volume, Maurice, Seiller, and Silvestre (1986) contrasted the ways in which the French and German educational systems affected the distribution of young people into the labor force. They referred to the German system's much greater "capacity to structure" that distribution. In the terms I used earlier, they pointed to the German system's greater efficiency as a "sorting machine." Once students had passed through the German educational system, especially the dual apprenticeship system, their future locations in the adult labor force were highly predictable, much more predictable than the locations of French students.

Of the dimensions of educational systems just reviewed, Maurice et al. (1986) emphasized stratification and vocational specificity as the reasons for the sharp German-French contrast they described. The German students were systematically sorted by the stratified secondary schools and the dual system into progressively more occupation-specific channels, whereas the French students generally obtained credentials that were primarily differentiated by attainment levels with little direct relevance to labor force locations. Thus, French students with any particular credential could end up in a variety of occupations.

Part of the value of Maurice et al.'s (1986) analysis is the emphasis on what happens to students after they leave the two educational systems, especially how they become established in the labor force. That is a core sociological question for those who are concerned with the role of education in the stratification process. Maurice et al. showed how German students more often fit smoothly into stable labor force locations and experience relatively orderly careers. In contrast, French students more often experience a period of "turbulence" during which they may move in and out of the labor force and change jobs with some frequency. Thus, the transition from school to work is different in the two societies, and the difference can be traced to the organization of the two educational systems and the credentials they award.

Using Maurice et al.'s (1986) analysis as a reference point and remembering the earlier discussion of the three dimensions of educational systems, one can estimate the British and American educational systems' capacity to structure the flow of students from school into the labor force. Clearly, the American system is similar to the French in this respect. The American credentials are also general, and students with the same credential can end up in a wide variety of occupations. If anything, the American system has even less capacity to structure the flow of students into
the labor force than the French system does because the credentials that French students obtain are highly standardized. Although the French credentials are not vocationally specific, employers at least know their general value on a national scale. Most American students obtain only general credentials (a high school diploma or a bachelor's degree) that seldom have vocational meaning, and they obtain them from educational institutions that are among the least standardized in the world.

The British system awards more differentiated credentials than either the French or American systems. Many British postsecondary vocational credentials are awarded by industry-based organizations (City and Guilds, Royal Society of Arts, Joint Industry Board), and they have direct vocational relevance. Credentials from both the British and the German systems direct their recipients toward positions in the labor force.

A special feature of the British system is relevant here, however. A large proportion of British students leave secondary school early (at age 16 or 17) before they obtain occupationally relevant credentials. Whatever vocationally relevant credentials they have as adults are obtained after they enter the labor force, usually from part-time courses in colleges of further education or training centers. A relatively strong association between British workers' credentials and the jobs the workers hold evolves during the early years in the labor force, but the association results from a different process than in Germany. Thus, the British system does have the capacity to structure the flow of students into the labor force because it awards credentials that have some occupational specificity, but the process through which that capacity becomes manifest is not the same as in the German system. I return to this difference in the next section.

Stratification, standardization, and vocational specificity are all valuable conceptual tools that help to differentiate educational systems in advanced societies, and they serve to show how the systems vary in their capacity to structure students' entry into the societies' stratification systems. However, I suggest another dimension that also differentiates these educational systems that has important effects on students' patterns of educational attainments and entry into the labor force but that has received almost no systematic attention in the literature. I refer to the degree to which the systems provide opportunities for students to choose among alternative paths to educational attainment.

**STUDENTS' CHOICE**

The contrast between the ways in which German and British students obtain their vocational credentials provides an example of the importance of choice in educational attainment. Both the German and British systems award a range of occupationally relevant credentials. However, the German system more actively sorts students into increasingly differentiated groups and directs them along established routes leading to a set of occupationally relevant credentials, whereas the British system makes greater allowance for students' initiative in obtaining them. This contrast suggests that another dimension on which educational systems vary is the importance of students' choice in the process of educational stratification.

One of the earliest and most influential analyses of the role of educational systems in the stratification process implied the distinction between the structure of systems and students' choice, although it was not stated in those terms. Turner's (1960) analysis of the British and American secondary school systems referred to them as providing "sponsored and contest" channels of mobility. By "sponsored mobility," Turner meant the British system's formal separation of students into two stratified kinds of schools at age 11. A minority were enrolled in Grammar schools that provided an enriched curriculum that fostered their academic and overall social success. The majority attended Secondary Modern schools that offered a more basic curriculum. In contrast, Turner noted, the essentially unstratified American high schools provided a continuing open contest among students who had equal access to educational opportunities. In the terms used here, the British system more actively imposed a structure, while the American system provided more room for choice.

The British system has changed in two important ways since Turner's analysis. First, the Comprehensive school has become the most common type of secondary school
(although some Grammar schools and Secondary Modern schools still exist). Comprehensive schools have diverse curricula that serve a full range of students, much like American high schools. Second, a much more elaborate postsecondary system has evolved that includes universities, polytechnics, colleges of further education, and training centers. University attendance is still highly restricted and requires students to complete demanding secondary school programs, but the colleges of further education and training centers offer courses that lead to an array of technical credentials. Even students who leave secondary school early can obtain more advanced credentials on a part-time basis after they enter the labor force.

The current British system is thus much less a system of sponsored mobility than it used to be. It provides many more alternative channels to educational attainment at both the secondary and postsecondary levels. British students now obtain a much wider variety of educational credentials than were recognized in 1960, and they have greater freedom of choice in seeking to obtain them. Whereas in 1960 it was reasonable to make the sharp sponsored-contest distinction that Turner made, it is a less appropriate distinction today.

Yet, important differences still exist between the American and British systems. One of the most obvious is reflected in their secondary school credentials. The American high school diploma is an all-or-nothing credential: No other credential can be obtained during secondary school. In sharp contrast, British secondary schools provide levels of examinations (CSEs, O-levels, A-levels) in different substantive areas that have meaning to prospective employers.

There is a similarly sharp contrast at the postsecondary level. Only a small proportion of American students obtain technical postsecondary credentials, and those credentials are not nationally standardized. For American high school graduates, the postsecondary choice tends to be college or nothing. Many fewer British than American students attend universities, but many Britons attend colleges of further education and training centers. Young Americans’ educational credentials are largely “high school diploma only” and “bachelor’s degree only,” whereas young Britons have a wide array of credentials. American students make choices within secondary or postsecondary schools, but these choices lead to a restricted set of credentials.

Despite the contrast between the British and American systems, however, they are both strikingly different from the German system. The clearly stratified German secondary and the tightly structured dual apprenticeship system appear to be the epitome of a well-designed and effective sorting machine that moves students through highly structured channels and provides few opportunities for changes of direction. The German and British systems are similar in that both offer a much wider array of educational credentials than does the American system. But the German system differs from both the British and American systems in providing fewer opportunities for students to make choices as they pass through school.

These comparisons among the American, British, and German systems suggest that in using the structure-choice comparison in analyzing educational systems, it is not a simple matter of a system providing structure or choice. The British and American systems both offer students greater freedom to make choices, but the British system offers more alternatives to choose from. The British and German systems have more complex structures and offer a wider array of credentials, but the German system offers students fewer opportunities to make choices as they move through secondary and postsecondary education.

The clearest index of an educational system’s allowance for choice is the flexibility of the linkages between structural locations at successive stages of attainment. There are more such linkages in the complex British and German systems than in the simpler American and French systems. However, Germany’s system has less flexibility than the other systems because the pathways leading to levels of educational attainment are more restricted. Where students are located in the structure at each stage limits their possible locations at the next stage. Attending the Gymnasium and obtaining the Abitur are prerequisites to attending a university. Realschule students can qualify for attendance at an advanced vocational school (Fachoberschule), but Hauptschule students cannot. And, which
apprenticeships are available to students depends on the type of secondary school they attended (Heinz 1999).

The British system has some of these same features. For instance, one must pass A-level secondary school examinations to be admitted to a university, and passing O-level examinations is a prerequisite to taking A-level examinations. Few of these kinds of restricted linkages are found for other kinds of British postsecondary schooling, however. France and the United States are even more flexible. All American high school graduates and all French holders of the baccalauréat can attend universities, and there are few restrictions on the use of the available American pathways to postsecondary vocational certification.

This comparison indicates that the four societies' educational sorting machines differ in two important ways that affect the role of choice in the system. First, they differ in the variety of differentiated units in the systems and in the diversity of credentials they award that have direct relevance to adult levels in the society's stratification system. That is, they differ in the number of structural locations through which students pass. More importantly, they differ in the flexibility of the linkages between structural locations at different stages in students' passage through the system. The German and British systems both have complex structures and offer a large variety of credentials, but the British system is much more flexible than the German. With this review of dimensions of educational systems as a background, I now shift the discussion to the ways in which these dimensions affect the education-occupation association in the four societies.

**ASSESSING THE EDUCATION- OCCUPATION ASSOCIATION**

Comparative analyses of the contributions of educational systems to the social stratification process have conventionally focused on some measure of educational attainment (defined in terms of the societies' indigenous credentials or a standard set of categories) and some measure of occupational position (defined in terms of class, status, or prestige). Shavit and Müller's (1998) edited volume is an excellent example of such comparative analyses, carried out in 13 societies. In each society, specialists in social stratification research conducted parallel analyses of the transition from school to work.

The strength of the education-occupation association varies in the 13 societies studied, and some of that variation is due to differences in stratification, standardization, and vocational specificity. However, differences in the forms of analysis used in the 13 societies show how difficult this kind of comparative research is. The difficulties can be made salient by considering two questions: What is a first job? and When does education end?

**What Is a First Job?** This question is especially relevant whenever the German system is compared with others. The great majority of young Germans enter the so-called dual system, which involves a combination of on-the-job experience and schooling designed to prepare students to carry out the duties of a particular occupation. In most scholarly analyses, the dual system is considered to be part of the German educational system. Thus, apprenticed Germans' "first jobs" are defined as the first jobs students obtain after they complete their apprenticeships, even though they have a great deal of work experience before they obtain those jobs.

That definition of "first job" cannot be used in the other societies discussed here because large proportions of students in those societies enter their first jobs before they obtain specific job skills. This is the case either because the educational systems provide little occupation-specific training or certification (as in France and the United States) or because most students obtain their occupation-specific training and certification after they enter the labor force (as in Great Britain). The unique German definition of a first job naturally produces a stronger education-first job association in Germany than elsewhere.

**When Does Education End?** Much of the discussion of the education-first job association implicitly assumes that there is a onetime transition from school to work: Students leave full-time school and enter full-time work. That is a particularly flawed assumption in societies
in which individuals commonly obtain schooling and additional credentials after they enter the labor force.

Among the four societies discussed here, obtaining new credentials through part-time schooling after labor force entry is especially common in Great Britain. It is so partly because so many young Britons leave school and enter the labor force at early ages and partly because they can obtain a wide range of vocationally relevant credentials on a part-time basis while they are employed. Among the four societies, a return to full-time schooling after initial entry into the labor force is most common in the United States. Arum and Hout (1998) reported that about one-fifth of their American sample left school, entered the labor force, returned to school, and reentered the labor force at least once by age 26. These societal differences present problems when making intersocietal comparisons of the education-first job association.

The contributors to Shavit and Müller’s volume dealt with these questions in different ways. In their British analysis, for instance, Heath and Cheung (1998) defined the first job as the job obtained after an individual first leaves full-time schooling. In contrast, in Arum and Hout’s (1998) American analysis, the first job was defined as the job obtained after an individual leaves full-time schooling for the last time. And Müller et al. (1998) followed scholarly convention and defined their German sample’s first jobs as those obtained after they completed their apprenticeships. All three of these different definitions of completing education and entering a first job are defensible, but they affect comparisons of the education-first job association in these societies.

Allmendinger (1989) recognized the difficulty presented by the apprenticeship period in Germany and referred to it as a “transition period” between full-time schooling and full-time work. I suggest that it would increase our understanding of the role of education in the social stratification process if we included the idea of a “transition period” in all comparative research. It is important to see that the transition from school to work is a process, not an event, and that the process varies across societies. Differences in systems become manifest during the transition period. In what follows, I consider how a careful examination of the transition period can help clarify the varied effects of educational systems on stratification processes.

THE TRANSITION FROM SCHOOL TO WORK

Following Allmendinger’s (1989) lead, one could define the beginning of the transition period as the time a student first leaves full-time school and enters the labor force (ignoring vacation or other short-term jobs). This definition could easily be applied in the four societies discussed here and in most other advanced societies. For German apprentices, that time is as early as age 15 or 16, but for those who attend a university, it is later. For most Britons, it is at an early age (16 or 17), but for those who complete the sixth form of secondary school and for those who enter higher education, it is later. The beginning of the transition period also varies for both American and French students, depending on their levels of educational attainment.

It is much more difficult to define the end of the transition period in such a way that it can be consistently applied both within and among societies. Allmendinger’s definition implies that there is a one-time change from a mix of schooling and work to a full-time commitment to work. Evidence presented here shows that that is not the case for many people in Great Britain and the United States. It is also not the case for many people in other societies.

I suggest that, at least tentatively, the transition period in advanced societies should be defined more simply and uniformly in terms of an age span. All advanced societies specify a compulsory period of schooling, and the minimum leaving age in most of them is 16. Also, in almost all advanced societies in recent years, most people complete their schooling and enter the labor force by age 25. I suggest, then, that we can learn a great deal about the effect of education on social stratification processes if we study what occurs in school and in the labor force between the ages of 16 and 25. This definition of the transition period has the advantage of examining the same life-course period for all cases in all societies, rather than adjusting the definition.
to fit different societies or educational levels.

What happens between those ages clearly varies a great deal both within and among societies. Within all societies, some leave school at the beginning of the transition period, and others remain in school during most or all of it. Most leave school during the early part of that period, however, and spend a significant part of the period in the labor force.

What happens after people leave full-time school also varies both within and among societies. In most societies, those who leave full-time school the earliest are the least likely to return for additional schooling (Arum and Hout 1998; Bynner and Fogelman 1993) and are the most likely to experience unstable employment. The analyses in Shavit and Müller’s (1998) volume show a consistent tendency for the risk of unemployment during the early years in the labor force to decrease as the level of educational attainment increases. Unemployment between leaving school and entering a first job is also more common in France and Great Britain than in Germany (Brauns, Gangl, and Scherer 1999). This is another result of the predictability of first-job placement in the German apprenticeship system.

Initial job placements also vary in other ways. A common feature of jobs obtained by young people in France is that they are specifically defined as temporary (referred to as involving “short-term contracts”). The lower the worker’s educational attainment, the more likely he or she will enter an early job of this type or one that is part time (Goux and Maurin 1998). Temporary and part-time jobs are becoming increasingly common in all advanced societies (Kalleberg 1996), and the lower the workers’ educational attainments, the more likely the workers are to have such jobs. These changes have led some analysts to see an increasing polarization of the labor force in advanced societies into a relatively small elite group of highly skilled workers and a larger group of disadvantaged workers (Coffield 1999). Whatever the validity of this view, it serves to remind us that the education-occupation association depends as much on the nature of the labor force as on the educational systems that prepare students to enter it.

What are the ramifications of systematically including a transition period in the analysis of the role of education in the stratification process? When the differences in the educational systems’ stratification, standardization, and vocational specificity, their capacity to structure; and their tolerance of choice are considered together, it suggests that students in the four societies follow different pathways as they pass through the transition period and into adult positions in the labor force. I refer to these pathways as “trajectories,” and I define a trajectory as a set of linked locations in a society’s differentiated educational and labor force structures. I use the term in much the same way that the term career line has been used previously in the analysis of labor force pathways (Spenner, Otto, and Call 1982).

**SOME EVIDENCE OF DIFFERENCES IN TRAJECTORIES**

Estimates of the trajectories in these four societies can be deduced from characteristics of the educational systems and patterns of early labor force experiences. However, there are few empirical analyses of the flows of young people through the educational systems and into the labor force. We do not have adequate information to chart these trajectories, but we should seek to obtain it. I present some fragments of the kinds of information that are needed. These fragments provide useful evidence, but they also show how much more needs to be done.

The primary bases on which educational trajectories in advanced societies can be differentiated are age and type of education. At what ages do people first leave school? What kinds of educational programs have they engaged in by the time they leave? Do some combine school and work? If they return to school, what kind of schooling do they return to, and at what age? When we attempt to link educational trajectories with the labor force, the picture becomes complex, and the available data are less adequate. In what follows, I review some limited evidence of the variety of trajectories that can be observed within and among societies. The available evidence is only suggestive of what more adequate evidence could tell us.

School-Leaving Age as a Division Point

Students are allowed to leave school at age
16 in France, Great Britain, and the United States (most states), but the proportion of students who leave at that time varies greatly. In a comparison of British and American cohorts, my colleagues and I (Kerckhoff, Haney, and Glennie forthcoming) found that between the ages of 16 and 18, 13.8 percent of the Americans left secondary school, compared to 69.6 percent of the British. About half the British "dropouts" were in postsecondary training programs at age 18, but they were no longer in secondary school. Few French students leave secondary school at the minimum leaving age of 16; only about one-fourth leave before they at least try to obtain the baccalauréat, normally completed by age 18 (Goux and Maurin 1998).

The German pattern is different from the other three. Compulsory education lasts until age 18. However, there is a division at about age 15 into the various programs that lead to higher education (via the Gymnasium), the dual apprenticeship system, or basic vocational schools. At least two-thirds enter apprenticeships in the dual system (Heinz 1999). If entering an apprenticeship in Germany is viewed as leaving full-time school, then two-thirds of the German students leave full-time school at about the same time that about two-thirds of the British students do. What happens after that, however, is markedly different in the two societies.

Most of those in the German dual system actually stay in that system continually past age 18, which is quite different from the pattern in Great Britain, where a combination of school and work is more likely to involve young workers taking part-time courses. Much depends on how one defines the combined activities. For instance, in their comparison of school and work patterns in Germany and the United States, Büchtemann, Schupp, and Soloff (1994) treated apprentices as having left school but as not having jobs. They thus concluded that many more American than German "school leavers" are employed a year after they leave school. Hence, it is apparent that, even by age 16 or 18, educational trajectories are highly varied both within and among societies. They are even more varied by older ages.

Continuing into Postsecondary Education Americans are by far the most likely to complete secondary school and move directly into higher education. In my and my colleagues' comparison of Great Britain and the United States (Kerckhoff et al. forthcoming), we found that 43.4 percent of the Americans had entered colleges or universities by age 22, but only 9.5 percent of the Britons had entered higher education by age 23. However, 51.9 percent of the British students had taken courses in colleges of further education or training centers, compared with 25.6 percent of the Americans who had attended vocational schools or community colleges.

Because so many German students take part in apprenticeship programs, only about one-fourth enter universities or polytechnical colleges (Heinz 1999). However, even some of those who take apprenticeships later go on to universities (Büchtemann et al. 1994). Postsecondary education has been undergoing a great deal of reorganization in France recently, but it is estimated that about one-fourth of French students engage in some kind of postsecondary education (Brauns and Steinmann 1997).

Education After Entering the Labor Force Among these four societies, part-time schooling after labor force entry is most common in Great Britain, and returning to school full time after labor force entry is most common in the United States. This variation in rates of return to school suggests that more Americans and Britons than French or Germans have some kinds of educational experiences at relatively late ages. That appears to be the case, but there is also a sharp British-American contrast. In my and my colleagues' comparison of British and American educational trajectories (Kerckhoff et al. forthcoming), 33.3 percent of the Americans attended some kind of educational institution between ages 22 and 28, but only 17.6 percent of the Britons did so between ages 23 and 28. Even more striking, 21.6 percent of the Americans attended colleges or universities during that period, compared with only 3.3 percent of the Britons. Most Britons' courses were taken at training centers or colleges of further education.

Employment Patterns in the Early Years Early employment is much more stable in
Germany than in the other three societies. Young Germans change jobs least often soon after they first enter the labor force, and even when they do change jobs, they are less likely to change occupations. In addition, job changing during the early years less often involves periods of unemployment in Germany (Brauns et al. 1999; Buchtemann et al. 1994).

In all the respects discussed here, the trajectories in the four societies are diverse. Many British students leave secondary school early, but few do so in the other societies. Some kind of postsecondary schooling is more common in Great Britain and the United States, but British and American students engage in different kinds of postsecondary schooling. Americans are the most likely to reenter full-time school after they enter the labor force. Germans are the least likely to change jobs in the early years after they enter the labor force. If we had more adequate comparative longitudinal data for the transition period, one would find that the most prominent trajectories would certainly be quite different in these four societies.

**STRUCTURES, CHOICES, AND TRAJECTORIES**

The limited evidence about trajectories just reviewed leaves unspecified the processes through which the steps in the trajectories occur. The earlier discussion of the systems suggests that the British and American trajectories are more influenced by students' choices, whereas the German trajectories are more influenced by forces within the German educational system that sort students into increasingly diverse but restricted trajectories. Relatively speaking, that is probably true, but recent detailed descriptions of some aspects of the processes in Germany and the United States suggest that some of these deductions about trajectories may be oversimplified.

The overviews of the systems suggest that German students are selected to attend one of three kinds of secondary school and that most of them are then selected into occupation-specific apprenticeships that move them into particular kinds of jobs. Mortimer and Krüger (2000) described how young Germans enter apprenticeships, and their description involves a mixture of system restrictions and students' choice. German secondary school students twice enter a six-week training program for an occupation of their choice. Many change their minds about their initial choice and choose another occupation the second time. Many are also unhappy with their second choice. Students submit apprenticeship applications during their last six months in secondary school. Some apply for dozens of different positions. A rigorous testing and interview period follows, and many students end up in different apprenticeships than they originally said they wished to enter. Many of the changes are due to rejection, but some are due to students changing their minds about what they want.

Heinz (1999) provided another image of a mix of system restrictions and students' choices in Germany. Studying samples of graduates of selected apprenticeship fields in two German cities, he found that five years after they completed their apprenticeships, the graduates were more scattered than would be expected, given the standard view of the German educational system. About one-fifth of the original sample had returned to school. It may be noteworthy, however, that the great majority of them had been in white-collar apprenticeships. Completing the apprenticeships may have given them sufficient future job security to permit them to invest in the more difficult university option. Of those who were employed, nearly one-third were in a different occupation than the one they had prepared for during their apprenticeship. There thus seems to be more flexibility in the German system than many discussions imply.

Recent research has also suggested a more mixed picture in the United States than the comparisons suggest. American high schools are not quite as "open" and unstructured as they are purported to be. It is true that, over the past 30 years, formal tracking has generally disappeared in American high schools, the variety of courses available has sharply increased, and students take many combinations of courses. However, there is more order in students' course sequences than these changes seem to suggest, and the pattern of courses taken affects students' later lives. Lucas's (1999) review of the historical decline
of formal tracking and analysis of recent patterns of course taking showed that the kinds of courses taken have continuity across the high school years and in different subjects (such as mathematics, English, and science). Lucas argued that the combinations of courses can be viewed as "tracks" despite the system's tolerance for students' course selection. He noted that several methods of defining track location in the 11th and 12th grades are significantly linked to academic achievement and college entry.

Other American research has also found more order than may be expected. Kerckhoff and Glennie (1999) used the same data that Lucas used to demonstrate that curricular linkages in mathematics, science, and foreign languages in the 9th through the 12th grade serve to separate students into stratified course-defined educational career lines across the period from age 16 to 28.\textsuperscript{12} They showed that as students proceed along these career lines, the differences in their academic achievement increase. That is, there is a cumulative dispersing effect of the curricular-based career lines. Arum and Haut (1998) also found that high school tracks are significantly associated with American students' later labor market placements.\textsuperscript{13}

These German and American findings add some fine-grained texture to the broad picture obtained from considering the structural features of the educational systems. They suggest that both systems provide structure and both allow for some choice by students, even though the balance between those two influences differs. They show that the structure of systems does not preclude choice, but they also show that patterned trajectories can emerge even within less structured systems. Regularity can be found even when no formal structure requires it. Locations in trajectories can be generated by informal social definitions and processes as well as by institutional structural constraints.

These regularities that are not institutionally imposed remind us that important processes occur within educational institutions that are not wholly determined by the formal institutional structures. Students relate to each other and families influence students' school experiences, creating informal clusters of like-minded students. In James Coleman's terms (see Schneider 2000), functional communities evolve within which educational norms emerge. Where educational systems permit students' choices, one can expect that there will be some consistent patterns of choices that have normative force and lead to differentiated educational attainment trajectories. The very existence of alternatives to choose from and the lack of structural constraints should increase the likelihood that functional communities will evolve and normative influences will emerge.\textsuperscript{14}

As additional analyses become available for these and other societies, it should be possible to chart with greater confidence the trajectories that young people follow through the transition period into positions in the labor force. The additional analyses should also make it possible to assess the degree to which the trajectories can be attributed to the systems' structural features, to patterns of individual choices, and to normative influences of functional communities. Undoubtedly, structure, choice, and normative influences affect the observed trajectories in all societies, but the nature, extent, and timing of their effects vary. Research that is designed to identify these contributions will increase our understanding of the role of education in the process of social stratification.

**OVERVIEW**

I have reviewed a recent body of literature that has presented a multidimensional picture of the role of educational institutions in the social stratification processes in advanced societies. Because these societies have such varied educational systems that award different kinds of credentials, the processes by which young people become sorted into categories of educational attainment differ. The three dimensions on which these educational systems are usually differentiated are stratification, standardization, and the degree of vocational specificity of the credentials they award. The combination of stratification and vocational specificity determines the degree to which the systems have "the capacity to structure" the flow of students into the labor force. I added another dimension of system differentiation to these three: the extent to which students have opportunities to make choices.
These differences in the educational systems shape the interface between the systems and the societies' labor forces. To understand the role of educational institutions in these societies' stratification processes, it is essential to examine carefully what Almendiger (1989) referred to as the transition period. The construction of the education-occupation association largely occurs during that period. Only after examining the transition period in many societies can we derive an adequate comparative picture of the role of education in the process of stratification and clearly conceptualize the education-occupation association.

Charting the passage of young people through the transition period in differently structured systems involves identifying the trajectories that students follow as they move through school and become established in the labor force. Mapping these trajectories more clearly is the primary challenge in this area of inquiry in the foreseeable future. The literature on structural variations of educational systems has provided a framework within which to conduct that mapping, but it is a broad framework that requires further specification. The further specification will necessarily take into account informal social processes as well as system structures. The locations that constitute the stages in trajectories can be generated by consistent patterns of students' choices and be imposed by structural constraints.

In specifying the trajectories, it will be important to maintain a balance between recognizing their diversity in all societies and maintaining a focus on regularities. To some extent, each person's pathway through school and into the labor force is unique. We need to look for patterned pathways that differentiate societies' methods of sorting young people into the stratified labor force.

NOTES

1. The diversity of educational credentials has led to the development of standardized classification schemes that can be used in multisocietal record keeping and research. The two most common schemes are the International Standard Classification of Education and the scheme developed at the University of Mannheim as part of a project called "Comparative Analysis of Social Mobility in Industrial Nations." See Kerckhoff and Dylan (1999) for a discussion of these two schemes and some of the difficulties faced when using them.

2. The literature on the education-stratification association provides useful information on many advanced societies. Most of this literature has dealt with European and North American educational systems, but Asian systems have also been studied, especially those of Japan and Taiwan. Because of space limitations and the special features of the Asian systems, I have narrowed my focus more than might be ideal. A comparative analysis of the Japanese system is presented by Ishida (1993), and the Taiwanese system is described by Tsai (1998).

3. As is discussed later in the article, regularities are also found in systems that are not highly standardized. That is why we must move the discussion beyond noting the significance of institutional structure, however important it may be.

4. It is likely that technical postsecondary credentials are more important in the lives of young Americans than is normally assumed. Although they are neither emphasized in most studies of American education nor recognized through national standards, they are obtained by many Americans, and many provide access to highly desirable jobs (Kerckhoff and Bell 1998).

5. In terms of the usually recorded levels of educational attainment, about 87 percent of young Americans graduate from high school or obtain a GED. About 33 percent go no further, about 8 percent obtain an associate's degree, and about 25 percent obtain a bachelor's or higher degree. The rest, about one-fifth of the total, have "some college" (National Center for Education Statistics 1996). In effect, these are college dropouts with no formal credential beyond a high school diploma. The college-or-nothing choice leaves many American students with nothing to show for their postsecondary efforts.

6. It was not possible in several societies to obtain data that included the levels of the respondents' first full-time jobs, although that was the goal. Thus, some analyses are based on data from relatively young workers about
their then-current, rather than their first, jobs.

7. Once attention is shifted from the general nature of the educational systems and their interface with the labor force to the specifics of young people's experiences, including the trajectories they follow during the transition period, it is necessary to recognize the many ways in which gender becomes a salient variable. Women's and men's trajectories differ in all four societies being discussed. Gender differences are probably greater in Germany than in the other societies, and fewer German women enter and remain in the labor force full time (Scherer 1999). It would exceed space limitations to attempt to deal with gender differences here, although detailed research of the type I recommend will have to take them into account.

8. The British data referred to here come from the National Child Development Study, which followed a birth cohort from 1958 until they were 33 years old in 1991; these people were in secondary school in the mid-1970s. Byner (1999) reported that by the 1990s, many more British students were staying in secondary school in an attempt to obtain useful qualifications before they entered the labor market. Changes in the educational systems and/or the labor markets in all four of these societies may have altered the trajectories referred to here.

9. Some German scholars with whom I have discussed these matters observed that a significant (but unknown) proportion of Gymnasium students who qualify for admission to universities first complete apprenticeships and then enter universities. Some employers even encourage this pattern, assuming they can rehire these skilled university graduates for managerial positions.

10. It is difficult to interpret Heinz's (1999) findings regarding changes in occupations with confidence because Heinz did not report the actual occupations of those he classified as having changed occupations.

11. Turner's (1960) contrast between American and British secondary schools stressed the greater stratification of the British schools. However, at the time he wrote about that contrast, there was more explicit internal tracking in American high schools than there is today.

12. The career lines are based on locations in the educational system in the 10th grade, 12th grade, 4 years later, and 10 years later. The 10th- and 12th-grade locations are defined by the sets of courses taken. There are three locations in the 10th grade, four in the 12th grade, four at 4 years later, and four at 10 years later. There are thus $3 \times 4 \times 4 = \underline{192}$ possible career lines. Four career lines account for 29.2 percent of the cases, 13 career lines account for 52.5 percent of the cases, and 26 career lines account for 72.1 percent of the cases.

13. Arum and Hout (1998) based their classification of high school tracks on the respondents' own statements. Such self-reports have been criticized as being highly fallible indicators of students' actual curricular locations in the high school structure (Lucas 1999). However, it is impressive that even such a fallible measure predicts labor force outcomes.

14. These comments refer to the process by which norms can be generated within a school. Broad societal norms undoubtedly also affect the trajectories, however. One societal-level normative pattern we observed is reflected in the finding that British women are nearly twice as likely as British men to leave school before age 18 (Kerckhoff et al. 1999).

REFERENCES


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