Huber and Stephens


25 Education and the Economy
Mary C. Brinton

It has now been over 25 years since Bowles and Gintis published their classic Schooling in Capitalist America (1976). In proposing that the relationship between education and the capitalist economy is best understood through the lens of Marxist analysis, the book engendered a series of far-reaching commentaries and debates. While Bowles and Gintis's conception of a "correspondence proposition" that links social relationships in schools to social relationships in the capitalist workplace may not have been fully embraced by any but the most ardent Marxists, their analysis nevertheless demonstrated the fundamental importance of understanding the relationship between schools and workplaces—between education and the economy. Most importantly, their work raised crucial questions about how the interaction of the educational system and employer behaviors affects the reproduction of social class inequalities.

Contemporary economic sociologists might take note, for research on the education-economy interface has not played a prominent role in the reinvigorated American economic sociology of the past 15 years. It is not immediately clear why this should be the case, but a number of reasons may be at work. As other chapters in this volume (e.g., Zelizer, England and Folbre) note, the new economic sociology has focused heavily on studies of private for-profit enterprise, especially in the financial sector of advanced industrial economies. Educational institutions do not easily fall under this rubric. Moreover, two groups of sociologists whose work bears strongly on issues concerning the education-economy link—educational sociologists and social stratification researchers—are rarely identified (or self-identified) as economic sociologists. Whether this is due more to the organization of the sociological discipline in the United States across an abundance of substantive specialties or to differences in scholars' intellectual proclivities across the areas of education, inequality, and economy, this chapter will argue that the richness of the questions raised by the education-economy interface merit their inclusion in the collective research agenda of American economic sociology. Moreover, along with Morris and Western (1999), I will argue that if sociologists do not take up the intellectual challenges of analyzing how the institutions of capitalist economies are related to labor market inequalities among social groups, we may soon cede this terrain to economists and to political scientists.

We can conceptualize two principal intersections between education and the economy: the reciprocal effects between economic structure and the expansion of schooling, especially at the level of secondary education (the macro-level interaction), and the translation of individuals' education into outcomes in the labor market (the intersection of education and the economy at the microlevel). There are of course many other areas that fall under the rubric of "education and the economy," including the politics of public education spending, the ways that educational systems develop in response to national politics and to international educational models, the role of education in enhancing not just individuals' human capital but also their cultural and social capital, and many additional areas that are generally considered part of the sociology of education subfield itself. Rather than attempting broad coverage of the varied themes that could be considered to fall under the umbrella of "education and the economy," this chapter will focus on a particular conceptualization of the education-economy link. This choice is based on the fact that many single themes receive chapter-length treatment in the Handbook of the Sociology of Education, a very useful resource, and that in the first edition of the Handbook of Economic Sociology, Robinson and Browne focused mainly on the macro-level connection between the economy and education, reviewing the main theories and bodies of empirical evidence on the effect of education on economic growth and, conversely, the effect of the economy on educational expansion (1994). The present chapter will follow this by turning to the micro-level interaction—the way that individuals' education is rewarded in the
labor market—and will do so in a comparative-institutional context.

While education and stratification researchers in sociology have devoted intensive efforts to document inequalities among social groups in educational attainment and in the labor market rewards to educational attainment, much less attention has been directed to the social-institutional underpinnings of inequality patterns—those features of educational systems and of labor markets that structure inequality among social groups. In the case of gender inequality, for example, this is partly a natural result of American stratification researchers' predominant emphasis on the United States rather than on comparisons among postindustrial societies. The concentration on one national case renders consideration of the institutions underlying patterns of inequality quite difficult, as many such institutions are in effect "held constant" (see also Almendinger 1989, Blau and Kahn 1986b; Kalleberg 1988; Müller and Scharl 1998). Yet the study of institutions arising from our state or transformation, and their effects on individual lives—is an important motivating force behind much of the sociological enterprise, especially economic sociology.

The present chapter is divided into two parts. The first half reviews recent comparative work in the sociology of education (not restricted to sociology) that bears on how the educational and economic institutions of capitalism affect patterns of inequality. I attempt to provide an overview of the varied theoretical approaches by sociologists, political scientists, and economists to link inequality patterns to the institutional variation across capitalist economies. As will be discussed, these attempts typically focus either on the structure of the educational system or on specific labor market institutions (e.g., collective bargaining arrangements, unionization, or types of labor markets). These two sociologists differ according to academic discipline and to disciplinary subfield, reflecting in a sometimes confusing mixture of research articles and books.

In the remaining half of the chapter I suggest a conceptualization of the education-economy interface based on the institutional arrangements in the educational and economic spheres that are responsible for the economic spheres that are responsible for the economic inequalities that are the object of study. These two parts are (1) individuals' human capital or skill development, and (2) the recruitment of individuals into jobs. I then explore the possible relationship between different types of education-economy regimes and the degree of inequalities among social groups, drawing on empirically work from the social sciences—particularly sociology and labor economics.

In proposing that economic sociologists study the linkage between the educational system and the workplace affects individuals, I locate human capital development and recruitment processes in the larger context of the institutions of advanced capitalism. While modern nation-states designate the formal educational system as the main locus of human capital development, education takes place in other sites as well, especially the workplace. Human capital development can thus be problematized as involving a division of labor between the educational and economic spheres (schools and firms). The division of labor for human capital development becomes institutionalized in every society, and the nature of this institutionalization generates implications for patterns of inequality.

Given that labor recruitment processes also take place within the context of existing educational and economic institutions, they too may differ in important ways across capitalist economies. The analysis of recruitment processes involves looking at how individuals are recruited into their first full-time job (or during) completion of education as well as how individuals are recruited from one job (or from the state of unemployment) into another; that is, we need to consider mechanisms operating in the school-work transition and those operating in moves of individuals across employers or firms. In societies with very loosely coupled schools and firms, these processes may be similar to each other. Societies with close coupling between school and work on the other hand, will have mechanisms of moving through the transition that may be significantly different from the mechanisms that become important at later career stages. What are the implications of the institutional factors for patterns of inequality?

One increasingly important way of thinking about the school-work transition in industrial societies has been the provision of rich descriptive information on variation in the institutions underlying school-work processes (Scharl and Müller 1998; Rosenbaum and Karr 1989; Ryan 2001), but with the possible implications for inequality patterns remaining largely unexplored. Given the scope of the questions raised in considering how the structure of educational and economic systems affects individuals through the mechanisms of skill development and labor recruitment, I further limit the scope of this chapter in two ways. First, I focus primarily on how training and human capital development are institutionalized and embedded within societies. Therefore the study of job search and recruitment processes. That literature is too large to consider here; moreover, only a portion of it is relevant to the present purpose of thinking through how recruitment processes are institutionally embedded. Second, I restrict the discussion of inequality to two years after wage gap by skill/education and by gender. Both are empirically important and vary considerably across capitalist economies with varied institutional configurations in education and the economy. American sociologists have on the one hand largely ceded the study of skill/education wage gap to their neighbors in other social science disciplines (especially labor economics) and on the other hand have focused a great deal of attention on the gender wage gap, albeit mainly within the United States. There is a big opening for economic sociologists' expertise in institutional analysis to inform the comparative study of both types of inequality.

In arguing that economic sociologists turn their attention to the institutional patterning of the education-economy interface and its relationship to inequality, I end up following not so much the lead of Marx (via Bowles and Gintis) but rather Weber, as I wish to make the case that we are well equipped to approach the subject using two tools of the Weberian approach: comparative institutional analysis and ideal types (see Hamilton's chapter in the first edition of this handbook, 1994; also Defleur and Bialkowski in the present handbook). In the second half of the chapter I use three ideal types of the education-economy interface that are similar to Barro and Black's education-production interface: the educational structure, the labor market, and the class structure. We may think of our threefold classification as analogous to Barro and Black's own framework for thinking about the connections between education and the economy.

Finally, I turn to "bringing the firms back in" (1988) in terms of reorienting us to the study of institutions and organizations. This text weaves together sociologists' work on the allocation of positions in markets between the education-economy interface in the United States and Japan, and has important implications for understanding wage inequality. These three aspects of education and the relations that are created and sustained by these systems of education and the economy. Each of these three organizational theories, as well as their implications for the labor market, are important and neglected subjects for analysis by economic sociologists.

**The Education-Economy Interface: Comparative Analysis**

Scholarship on the institutional context governing human capital as well as inequality is widely scattered across the disciplines of sociology, political science, and economics, and cross-references are unusually sparse. This first half of the chapter reviews key pieces in each field.

**Sociological Perspectives**

Within economic sociology, Fligstein has recently argued for the importance of understanding the emergence of distinct employment systems—defined as the rules that structure careers—in different capitalist economies (2001). Employment systems specify the nature of the relationship between workers and employers and how control over training, compensation, and other aspects of employment is shared among different parties. Fligstein uses the United States, Japan, France, and Germany to illustrate variants of the three ideal-typical employment systems he identifies: professionalism, managerialism, and vocationism.

While skill development and recruitment are a part of what Fligstein discusses under the rubric of "organizational routines," they are not an end in themselves. Rather, his principal concern is to conceptualize an employment system and to explore how variations in employment systems are produced by the interaction among groups vying for control over the rules of employment. These groups include employers, workers, the state, professionals, and their associations, and educators. Fligstein's exploration of how the educational system and the organization of the labor market in different capitalist economies interact to produce distinctive types of employment trajectories for individuals is an important contribution to our understanding of the "firms back in" (1988) in terms of reorienting us to the study of institutions and organizations. This text weaves together sociologists' work on the allocation of positions in markets between the education-economy interface in the United States and Japan, and has important implications for understanding wage inequality. These three aspects of education and the relations that are created and sustained by these systems of education and the economy. Each of these three organizational theories, as well as their implications for the labor market, are important and neglected subjects for analysis by economic sociologists.
first half of their life cycle, when American stratification researchers pay attention to institutions, they tend to focus mostly into those who specialize in an educational study of educational institutions and those who specialize on workplace institutions and labor markets. The reason for this distinction between education and labor markets is that educational stratification studies tend to focus on individuals' mobility in labor markets as the attributes of the individual who makes career in these markets. The two are closely related, and it is important to note that educational stratification studies also examine the role of educational qualifications in labor markets and future occupational outcomes. Therefore, it is important to note that the relationship between educational qualifications and labor market outcomes is complex and nuanced.

Three dimensions of educational systems that have been particularly emphasized by sociologists of education are stratification, stratum, and stratum-in-stratification. Stratification is the degree of central decision-making over programs and curricular content, and stratification refers to the degree to which institutions are separate from one another in terms of their educational programs and labor market outcomes. Both Allmendinger and Kerckhoff followed a strategy of examining variation in educational systems in the United States and several European countries, and generating hypotheses about how that variation contributed to labor market outcomes and labor force participation and occupational status. Ishida's three-country (United States, Japan, Great Britain) study of intergenerational social mobility is informative in this regard, as are the two other studies of social mobility within Great Britain, where the differences among these categories of analysis can be found in terms of status and occupational differences. The study of educational qualifications and labor market outcomes is a complex and nuanced process that requires careful analysis and understanding.

Sociology of Education

Educational sociologists have generally considered educational attainment to be the principal dimension of social stratification in advanced capitalist societies. Kerckhoff (2001). The effects of educational attainment on individual labor market outcomes have thus largely been studied in terms of occupational status attainment. The most ambitious comparative research agenda linking educational institutions to inequality outcomes are those presented by Allmendinger (1989), Kerckhoff (1999, 2000), and Slavit and Muller (1995). All have emphasized the considerable variation in educational systems across advanced industrial societies and the likely implications of this for individual labor market outcomes. In Allmendinger's words, "Educational opportunities, and the specific educational qualifications required for entry into the labor market, may be a significant factor in determining the skills and occupational mobility of individuals in both educational and labor market institutions. The two are closely related, and it is important to note that educational qualifications in labor markets and future occupational outcomes.

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up the gauntlet thrown down by the classic France-Germany comparison to develop an integrated theory of national institutional systems. The latter have largely concentrated on the comparative-institutional approach that "systematic cross-national statistical analyses of the earnings gap are rare" (1999, 70). Unfortunately, this statement is still true. As has been recognized, even though most sociologists would agree with the conclusion reached even earlier by Treiman and Roos and cited by Rosenberg and Kalberg; income determination processes seem to indicate "deeply entrenched institutional arrangements that limit women's opportunities and achievements" (Rosenfeld and Kelberg 1990, 70).

Why have stratification researchers neglected the "big picture" of labor market structures' effect on the gender wage gap? Part of the answer lies undoubtedly in the fact that micro-level data on wage determination are hard to come by for many countries. But as I discuss below, this has not deterred labor economists from producing comparative research on the extent to which gender as well as by education labor economics at the beginning of the twenty-first century boasted a much larger comparative literature on social stratification research on the role of institutions in exacerbating or compressing wage gaps. Many of these analyses have been carried out with aggregate data, so perhaps sociologists' preoccupation with individual-level data partly explains the collective reticence. Another reason may have been the occupational segregation of labor market stratification research since the 1980s with occupational sex segregation and its contribution to the gender wage gap. There may be a need to reorient our comparative studies of gender inequality, as occupational sex segregation is not necessarily predictive of changes in the gender earnings gap (Brinton 1993; Brinton and Nigo 1993; see also OECD 2002, table 2.17; and Rosenberg and Kale v. 1990). Focusing instead on the gender stratification gap and on the institutional arrangements that appear to widen it—such as internal labor markets—may be more in line with the "new institutional strategy." Sociological labor market researchers neglect to study the institutional determinants of the skill gap in wages in industrial societies is also rather remarkable given the empirical importance of this gap and the dubious distinction of the United States in exhibiting wide wage differentials compared to all of its industrial counterparts save the United Kingdom. As with gender inequality, a major reason is that the institutional context of choices American researchers have made vis-à-vis dependent variables: just as sociology of education researchers have concentrated on occupational status and intergen-

Such statements in the literature. In their study of the gender wage gap four women, Roseneid and Kalberg: income determination processes seem to indicate "deeply entrenched institutional arrangements that limit women's opportunities and achievements" (Rosenfeld and Kalberg 1990, 70).

Labor Market Segmentation

The sociological literature on labor market inequality has developed orthogonally to the literature on the structure of educational systems and inequality. This is ironic given the shared emphasis of the two literatures on institutions and structure. Labor market stratification theorists have developed a structuralist critique of the neoclassical paradigm in the late 1970s and 1980s that emphasized the segmentation of the labor market. Doeringer and Piore's work on internal labor markets (1971) is usually referred to as the early forerunner of these studies, which proceeded in sociology along two lines: theoretical attempts to develop a labor market typology that could capture the various types of labor market segmentation and empirical attempts to link the structure of labor markets to the wages of individuals, especially race and gender. It is not necessary to attempt to summarize here these two voluminous literatures, as excellent summaries exist elsewhere (see Brinton and Piore 1988). Instead I will note some of the characteristics of the sociological labor market literatures that have perhaps made it less informative than it might be for our understanding of the relationships between the education-economy interface and patterns of inequality.

First, education in the form of on-the-job training played an important role both in Doeringer and Piore's work and in many of the subsequent attempts to construct labor market typologies, with firm-specific training being an important identifying characteristic of the prototypical firm-internal labor market. But the relationship between the organization of training systems in firms to the nature of labor market stratification systems is a focus of sociological theory in education, as in the sociology of education literature, the education-economy link was undertheorized. This may be partly attributable to the fact that the labor market segmentation literature mainly grew up in the American context and did not proceed to the point that "systematic cross-national statistical analyses of the earnings gap are rare" (1990, 70). Unfortunately, this statement is still true. As has been recognized, even though most sociologists would agree with the conclusion reached even earlier by Treiman and Roos and cited by Rosenberg and Kalberg; income determination processes seem to indicate "deeply entrenched institutional arrangements that limit women's opportunities and achievements" (Rosenfeld and Kalberg 1990, 70).

Exploring the "big picture" of labor market structures' effect on the gender wage gap Part of the answer lies undoubtedly in the fact that micro-level data on wage determination are hard to come by for many countries. But as I discuss below, this has not deterred labor economists from producing comparative research on the extent to which gender as well as by education labor economics at the beginning of the twenty-first century boasted a much larger comparative literature on social stratification research on the role of institutions in exacerbating or compressing wage gaps. Many of these analyses have been carried out with aggregate data, so perhaps sociologists' preoccupation with individual-level data partly explains the collective reticence. Another reason may have been the occupational segregation of labor market stratification research since the 1980s with occupational sex segregation and its contribution to the gender wage gap. There may be a need to reorient our comparative studies of gender inequality, as occupational sex segregation is not necessarily predictive of changes in the gender earnings gap (Brinton 1993; Brinton and Nigo 1993; see also OECD 2002, table 2.17; and Rosenberg and Kalberg 1990). Focusing instead on the gender stratification gap and on the institutional arrangements that appear to widen it—such as internal labor markets—may be more in line with the "new institutional strategy." Sociological labor market researchers neglect to study the institutional determinants of the skill gap in wages in industrial societies is also rather remarkable given the empirical importance of this gap and the dubious distinction of the United States in exhibiting wide wage differentials compared to all of its industrial counterparts save the United Kingdom. As with gender inequality, a major reason is that the institutional context of choices American researchers have made vis-à-vis dependent variables: just as sociology of education researchers have concentrated on occupational status and intergen-

The Welfare State and "Varieties of Capitalism" At reviewed by Huber and Stephens in chapter 4 of this handbook, Esping-Andersen conceptualized three ideal-typical welfare regimes in his seminal 1990 volume The Three Worlds of Welfare Capitalism—the social democratic, conservative, and liberal—based on the types and sources of welfare provision. Esping-Andersen (1990) his typology spawned a very extensive literature, some of which looks at the distributive implications of different welfare-regime types. Gender inequality is one such distributive implication (Gornick, Meyers, and Ross 1998; Orlof 1993), as is the poverty rate (see Huber and Stephens, especially their table 1, in this volume). Save a few related efforts such as Chang's develop the varieties of capitalism approach toward understanding the burgeoning welfare-state literature in political science and sociology. But the recent "varieties of capitalism" discussion has focused less on the institutional context of political science, is particularly relevant to theorizing how the education-economy interface affects stratification outcomes. Proponents of the varieties of capitalism approach share the concern of other welfare state theories that the labor market system's orientation (e.g. employment, unemployment, and wage protection) varies across advanced industrial democracies. Their main focus is on production regimes and their complementarities with social policies (Abecro-Avez, Jensen, and Solskje 2001; Hall and Soskice 2001; Hollisworth and Beverd 1997). Production regimes are conceptualized as the institutional configurations that lead to an economy that is organized and functions under the international market. An important aspect of such strategies is the development and maintenance of labor force skills. For instance, economies that de
velop high-quality products for niche markets requires that they are highly skilled in specific industries. In contrast, many of the economies that trade mass-produced goods require a labor force with basic literacy but fewer industry- or firm-specific skills. In some cases, such distinctions may reflect differences in the socialization and economic integration of working-class citizens who are not in a position to earn sufficient income to purchase goods from mass-market producers.

In the United States, for example, the work life of most people is characterized by unemployment, underemployment, and lack of opportunities for advancement. This leads to a situation where a large number of people are forced to work in jobs that do not pay a living wage. This is especially true for those who are not skilled in a specific industry, such as those who work in the service sector or in low-skilled jobs.

The labor economics literature has produced broad agreement over the facts of increased wage inequality as skill level, as well as a dominant orthodoxy about some of the major causes. For example, the view that skill shortages are a major cause of wage inequality is widely accepted. However, there is also a growing body of evidence that suggests that other factors, such as changes in the structure of the labor market, may also be playing a role in the increase in wage inequality.

In the post-World War II period, the United States experienced a decline in the overall level of wage inequality. This decline was primarily due to the increase in the minimum wage and the expansion of the labor market. In recent years, however, wage inequality has increased significantly, with the top 1% of earners now receiving a larger share of the nation's income than ever before.

One factor contributing to this increase in wage inequality is the growth of the service sector. The service sector has grown significantly in recent years, and this growth has been accompanied by a decline in the number of manufacturing jobs. This has led to a situation where a large number of people are forced to work in low-skilled jobs, which pay less than those in the service sector.

Another factor contributing to wage inequality is the decline in the bargaining power of labor unions. In the past, labor unions were able to negotiate higher wages for their members, but in recent years this has become more difficult. This is because the number of unionized workers has declined, and those who remain unionized are often facing a declining bargaining position.

In addition to these factors, there is also a growing body of evidence that suggests that changes in the structure of the labor market, such as the increasing reliance on part-time and temporary workers, may also be contributing to the increase in wage inequality.

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of the institutional explanations in the labor economics literature, far surpassed by the focus on wage-setting institutions. At the end of the 1990s, Freeman and Katz note the following:

Germany and Japan appeared fairly successful through much of the 1980s in maintaining the continuity of employment and employment of non-college-educated workers. Ger-

man institutions constrain wage setting, but they also offer apprenticeships and further training opportunities that try to make supply consistent with wage policies. The Japanese have succeeded with basic education and much informal firm-based training. . . international differences in recent labor market experiences strongly suggest that policies to buffer the earnings of the low educated by institutional wage setting work best when accompanied by institutions that augment these workers' skills as well. (1995, 20-21, emphasis added)

The suggestion that training policies may aug-

ment wage-setting institutions' compression of the skill wage gap is connected with the variety of institutional and political-economy literature that discuss skill formation and the status attainment tradition and concentrating on intergenerational mobility. This part of the literature reviewed literature in four areas—two subdisciplines of sociology (so-

ciology of education and sociology of labor mar-

kets), political science, and labor economics—to identify the dominant conceptualizations of in-

stitutions as they relate to inequality patterns. While a few scholars have attempted to conceptualize the education-economy link as it bears on inequality, these attempts have been scattered and there has been little cross-fertilization on the theoretical front, especially across disciplinary boundaries. The dom-

inant mode has been for researchers to choose features of either the educational system or the economy and theorize about the implications for inequality. Each subfield or discipline has also privi-

ileged certain outcomes or dependent variables over others. Table 1 summarizes the institutions

in which each discipline or subdiscipline emphasizes or the inequality outcomes to which it pays the greatest attention. In the remainder of the chapter I explore a for-

mulation of the education-economy link that can be termed an economy's human capital develop-

ment system, and I suggest that it may have poten-

tial explanatory power for inequality patterns. I do not mean to argue that this is a panacea for the ca-

bability of partial conceptualization of the educa-

tion-economy interface. But I do argue that aco-

nomic sociologists have a comparative advantage (to make an unfortunate pun) in making compara-

tive analysis of how societies organize in tandem their educational systems and labor mar-

kets. Among the fields surveyed in this chapter, the ones that come closest to doing this are labor econ-

omists and the variety of capitalism approach in political science. But both underemphasize the im-

portance of how the education system operates in conjunction with the institutional factors that develop and maintain the social institutions that concentrate in education, and training, and recruiting workers. This is due to the very different types of education-economy inter-


course in core industrialized settings and to the fact that the institutional arrangements have concentrated a relatively small proportion of countries exhibiting different human capital deve-


dopment systems. These systems are defined by the way the division of labor for human capital deve-


dopment differs across countries. This division of labor may have implications for the degree of gender inequality in an economy because it affects who is responsible for human capital development decisions and how the timing of these decisions is distributed across the life cycle. For the purposes of this chapter, the most important characteristics of a human capital development system are the relative role played by employers versus schools, and the way that recruitment into work is structured. The human capital development systems epitomized by the United States, Germany, and Japan demonstrate varied implications for gender wage inequality and for the education wage gap.

Table 1 presents the three ideal-typical institu-

tional arrangements governing skill development that are represented by the United States, Ger-


man, and Japan; alongside these are the relevant 

dominant forms of human capital in each econo-

my. As developed by Becker, human capital theory presents a general analysis of how societi-


s and institutions in tandem their educational systems and labor mar-

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omists and the variety of capitalism approach in

<table>
<thead>
<tr>
<th>Discipline or subdisciplinary group</th>
<th>Institutions Used as Independent variables</th>
<th>Dependent Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sociology of education researchers</td>
<td>Characteristics of educational systems</td>
<td>Occupational status, skilled vs. unskilled work, \textit{intergenerational mobility}</td>
</tr>
<tr>
<td>Labor market sociologists</td>
<td>Types of labor markets</td>
<td>Wage inequality by race and gender, \textit{job mobility}, occupational sex segregation</td>
</tr>
<tr>
<td>Welfare-state and \textit{&quot;laboratories of capitalism&quot;} researchers</td>
<td>Wage-setting institutions, \textit{production regimes} and \textit{skill development regimes}</td>
<td>Distribution of income inequality, gender wage inequality</td>
</tr>
<tr>
<td>Labor economists</td>
<td>Wage-setting institutions, unions</td>
<td>Distribution of income inequality, gender wage inequality</td>
</tr>
</tbody>
</table>
least portable among general, occupational, and firm-specific skills.

It can be hypothesized that human capital develop-
ment systems that involve employers as central actors in human capital investment decisions will tend to produce contradictory effects on educa-
tional wage inequality and gender wage inequality. Employer-directed training (as in Japan and Ger-
many) will tend to narrow the wage differential be-
 tween high- and low-skilled workers compared to the differential produced under human capital de-
velopment systems where workers receive most of their training in the educational system (the Unit-
ed States).

Conversely, employer-directed training will tend to widen the wage differential between men and women compared to what it would be in a system where educational credentials have greater importance than employer-based training. This is because a human capital development system in which employers are important actors will have a wage determination process that tends to disadvantage women and recruitment patterns that also tend to distinguish between male and female appli-
cants either through selection into internal labor markets (Japan) or through sex-stereotyping in oc-
cupational training (Germany). Based on this, we would predict that the United States, Germany, and Japan are on a continuum in terms of the edu-
cation wage gap, with the United States an extreme case of a large education or skill differential and Germany and Japan as cases that have much smaller wage differentials based on skill. In contrast, Japan will be the outlier demonstrating severe gender wage inequality, with Germany and the United States exhibiting less. These predictions are included in table 2.

Table 3 shows the concomitant recruitment pat-
terns that go along with the dominant type of skill development in each economy. The lack of em-
ployer involvement in training is connected in the United States to a highly unstructured recruitment process, with personal connections being the most common job search method. I postulate that the absence of systematic recruitment processes, par-
ticularly from school to work, is highly disadva-

geneous to less-educated workers and contributes to the discrepancy in wages between those workers and their highly educated counterparts. The gen-
der effects are neutral to the extent that women are in networks that facilitate their job search (Pet-

The United States: General Human Capital

The United States stands out in its marked lack of a systematic approach to workforce training. As

Table 3. Recruitment Mechanisms and Inequality

<table>
<thead>
<tr>
<th>Country</th>
<th>Dominant Recruitment Mechanism</th>
<th>Effect on Education Wage Gap</th>
<th>Effect on Gender Wage Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>Personal networks</td>
<td>Positive (widening)</td>
<td>Neutral</td>
</tr>
<tr>
<td>Germany</td>
<td>School-firm partnerships (through apprenticeships)</td>
<td>Positive (widening)</td>
<td>Negative (narrowing)</td>
</tr>
<tr>
<td>Japan</td>
<td>School-firm implicit recruitment contracts</td>
<td>Negative (narrowing)</td>
<td>Positive (widening)</td>
</tr>
</tbody>
</table>

Table 2. Comparative Human Capital Development Systems and Inequality

<table>
<thead>
<tr>
<th>Country</th>
<th>Dominant Site of Human Capital Development</th>
<th>Dominant Form of Human Capital</th>
<th>Effect on Education Wage Gap</th>
<th>Effect on Gender Wage Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>School</td>
<td>General</td>
<td>Positive (widening)</td>
<td>Negative (narrowing)</td>
</tr>
<tr>
<td>Germany</td>
<td>School plus firm</td>
<td>General plus occupation-specific</td>
<td>Negative (narrowing)</td>
<td>Positive (widening), through occupational sex segregation</td>
</tr>
<tr>
<td>Japan</td>
<td>School plus firm</td>
<td>General plus firm-specific</td>
<td>Negative (narrowing)</td>
<td>Positive (widening), through firm-internal labor markets</td>
</tr>
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stated starkly by Crouch, Finegold, and Sako, "The most obvious characteristic of skill creation in the United States is the absence of any ghettoizable sys-
tem... Indeed, the very concept of the improve-
ment of workforce skills as a national project is dif-
ficult to envisage in the USA, where it is not clear that there can be national projects for what are es-
entially seen as matters for individual persons and individual companies, with possibly some contri-
bution from local or state governments" (1999, 205).

The main locus of human capital development in the United States is the school, and the majori-
y of American students receive general as opposed to vocationally specific training through the high school level. The United States made an early commit-
ment to mass secondary education and, to a consid-
erable degree, higher education as well. It led the rest of the world in the extension of sec-
condary school education to "ordinary citizens" in the late twentieth century, in contrast to most European countries, where secondary educa-
tion was reserved for those who would continue on to college (Goddin and Katz 2001). Between 1900 and 1960 the rate of high school enrollment in the United States increased from just over 10 percent to nearly 90 percent, and the graduation rate increased from about 7 percent to 70 percent (Goddin 1999).

Among American educational expansion have emphasized its "demand driven" character (Walters 2000). Educational consumers in the United States could probably adjust their supply of schooling in part be-
cause there were thousands of fiscally independent school districts that could make their own decisions about the size and content of the educational system in contrast to the centralized 
fiscal situation in many European countries (Goddin and Katz 2001). The extension of the vote was also very important, as it gave citizens the ability to pressure the state to provide educational opportu-
nities (Walters 2000)."
a general high school diploma, an associate's degree, or a bachelor's degree provide evidence that such skills can result in a higher earnings status and are more valuable in the U.S. labor market, at least in grad- uates' early careers. Arum and Hoult show that the earnings advantages of high school graduates over non-graduates are greater in the United States than in other industrialized countries (OECD). These findings are consistent with the view that education has become a prerequisite for successful labor market participation in the United States.

Employer-Provided Training in the United States

Once American students leave school, through what means do they receive further training? A substantial proportion of youth cycle in and out of the classroom and school during their first 10 years of their worklife, thereby seeking additional skills from formal educational institutions even after they have entered their first full-time job (Arum and Hoult 1998). Systematic evidence on the inci- dence of employer-based training in the United States is surprisingly limited. As late as 1984, Kalleberg and Krueger (1984), and OECD estimates indicate that formal workplace training is considerably less prevalent in the United States than in Japan and a number of European countries. In their work on this issue, Acemoglu and Pischke cite OECD figures indicating that formal employer-sponsored training is provided to 72 percent of young workers in Germany and 67 percent of new hires in Japan, whereas 10 percent of U.S. workers receive any formal training over the course of their first seven years in the labor market (Acemoglu and Pischke 1999, 542). Lynch also points out that most employer-provided formal training in the United States is given to college graduates, especially those employed in the fi- nancial sector. In contrast, Schmitz (2000) asks whether the recipients of employer-based training are concentrat- ed in professional, technical, and managerial jobs? Lynch (1999a, 2000) argues that the skills of such employees are sometimes criticized for investing little in either the recruitment or training of non-college gradu- ates in particular, and very few large American cor- porations hire new high school graduates into jobs with career potential (Rosenbaum 2001).

Implications for the Education Wage Gap

How might the institutional division of labor for human capital development in the United States be related to the large wage gap between low- and high-skilled workers? The United States began the 1980s with a larger skill wage gap than most indus- trial countries. Freeman and Katz (1995) re- port a figure of 3.23 for the log of the ratio of wages for those that have left college and those in the top decile (the 90-10 ratio), compared to figures of just 0.78 in Germany and 0.95 in Japan. In the ensuing decade the United States and United Kingdom experienced the greatest increases in wage inequality, with the U.S. figure rising to 2.9 by 1990. Meanwhile, Germany experi- enced no noticeable change in wage differentials, and the wage gap in Japan increased only slightly.

Are these patterns linked to institutional arrange- ments, particularly the division of labor between schools and workplaces for human capital develop- ment? The answer seems to be yes, and the evidence points to differences in the way that institutions and work mechanisms, especially for the less educated (high school graduates) the most marked aspect of the institutional arrangement as to whether early full- time or on-the-job training are the more common. A survey of employers in the United States and in Germany in 1991 showed that workers in the top decile are paid par- ticularly large at the bottom of the wage distribu- tion; the 50-10 wage gap ratio of workers' wages in the United States was significantly higher than in other countries, whereas the 90-50 wage gap ratio was significantly lower than in other countries. For example, in the United States, the pay gap between workers in the top and bottom deciles is much larger than in other countries. In a similar vein, the 10-50 wage gap ratio of workers' wages in the United States is significantly lower than in other countries. The pay gap between workers in the top and bottom deciles is much larger than in other countries. In a similar vein, the 10-50 wage gap ratio of workers' wages in the United States is significantly lower than in other countries.

This suggests that the two types of institutional differences might be more important than the differences in earnings that exist between the United States and other countries. A significant portion of the pay gap between workers in the top and bottom deciles is due to differences in earnings that exist between the United States and other countries. The pay gap between workers in the top and bottom deciles is much larger in the United States than in other countries. This is partly due to the fact that the United States has a larger pay gap between workers in the top and bottom deciles than other countries, and partly due to the fact that workers in the top decile of the United States have higher earnings than workers in the bottom decile. The pay gap between workers in the top and bottom deciles is much larger in the United States than in other countries. This is partly due to the fact that the United States has a larger pay gap between workers in the top and bottom deciles than other countries, and partly due to the fact that workers in the top decile of the United States have higher earnings than workers in the bottom decile.
pean countries are associated with compressed wage structures. This suggests a positive relationship between the gender wage gap and the skill wage gap, which is opposite to the prediction I suggested earlier. Their logic is based on the fact that women may be disproportionately concentrated in low-paying jobs, raising the wage floor therefore should especially benefit women. While this is theoretically appealing, it does not necessarily hold across countries. When adjustments are made for the effect of wage structure, the gender wage gap does decline in the United States and the Kingdom, the two countries with the most unequal wage distribution across skill levels. But it increases in a number of other countries including the Netherlands and Austria, and remains nearly the same in Germany (OECD 2002). It is important to note that Blau and Kahn focus on the presence of collective bargaining agreements as the institutional reason for a compressed wage structure. But wages at the bottom of the distribution for union workers and sometimes extend to nonunion workers as well. As I have discussed in this chapter, a human capital development system that is more oriented to imparting skills to less-educated workers may be another institutional mechanism influencing lower wage inequality. Therefore, it is worth exploring how the source of wage compression affect gender inequality. If the focus is on the compression of employer-organized training, this may exacerbate rather than lessen gender wage inequality. There are two principal mechanisms through which this may occur: vocational training that tends to reproduce existing occupational sex-sterotypes (the German case), and female labor force participation that employers tend to reserve for men, in the expectation that women have less continuous work histories and less commitment to the firm (the Japanese case). In the latter instance, female workers may experience consider- able discouragement as they observe that more continuous work is being given to men, and this may prompt married women to exit the labor force in higher numbers than they would otherwise (Oguruma 1998). Even in the United States, where rates of employer provided formal training are much lower in Japan, women are signifi- cantly less likely to receive such training or to par- ticipate in apprenticeships. When they are provided company-based training, the duration is consider- ably lower than the training periods for men (Alt- eron and Spletzer 1992; Barron, Black, and Loe- cke, 1987; Lynch 1993). In terms of the cross-sectional gender wage gap, the distinction among the United States, Germany, and Japan is clearest between the first two coun- tries and Japan. The comparable figures in the United States and Germany were 76.3 percent and 78.5 percent respectively (Blau and Kahn 2002). The issue of selectivity into the labor force is of course very substantial in the case of women, and has important implications for the wage gap. There is not enough space to discuss this here, but it bears noting that American women demonstrate very different work patterns by marital and child-child bearing status than women in Germany and Japan. The proportion of women who exit the labor force at the time of childbirth is lowest in the United States (16 percent), compared to 25 percent in Germany (OECD 2002) and an astounding 75 percent in Japan, a figure that has not changed in the past two decades (Japan Women’s Foundation 2003). An additional 21 percent of working women in Germany reduce their working hours upon the birth of a child, compared to 10 percent of Amer- ican working women (OECD 2002). Overall, Ger- man and Japanese working women are much more likely to participate in the labor force part-time than American women. Nineteen percent of Ameri- can female labor force participants are part-time workers, compared to 34 percent of German women and 39 percent of Japanese women (OECD 2002, table 2.1). But the most striking feature of the gender pay gap in the United States is that it declined dramat- ically in the past 20 years after having been relatively stable for most of the twentieth century. This decline outpaced that in other OECD countries by a wide margin. The United States showed a per- centage change of 22 between 1979 and 1998, compared to a figure of 8 percent for Japan and 5 percent for Germany over the same period (Blau and Kahn 2002). Blau and Kahn argue that the narrow U.S. gap indicates that American women have been "swimming upstream" against the simultaneous widening of the wage gap by skill over the same period (1997). In a decomposition of the nar- rowed gender wage gap in the 1980s, they show that increases in full-time labor force experience and changes in occupational affiliation accounted for about three-quarters of the gains for men (Alt- en’s relative wages), followed by a small boost from women’s increased educational attainment. They argue that it is fortunate that women did experi-ence increases in human capital and changes in their occupational locations, as the rewards to skill were increasing at the same time, and women would have been increasingly left behind had they not been able to make these gains (1997, forthcoming). Although American women’s years of education did not increase dramatically during this period, their chosen fields of study demonstrated signifi- cant change. Gender segregation in field of study at college dropped dramatically between 1965 and 1985 and continued to decline in the late 1980s. There was also a decline in segregation by field for master’s degrees in the 1980s (Jacobs 1995). Women’s participation in professional degree pro- grams such as law, business, and medicine also in- creased substantially, affording them credentials that were largely portable across employers. American women’s wage gains since 1970 coinci- ded with the first major decline in occupational sex segregation in the twentieth century (England and Ferrie 2001; 27 in this handbook; Jacobs 1989). The fact that changes in occupational afliliation and workforce experience account for so much of the narrowed gender pay gap may be re- lated to women’s increased entry into previously male-dominated majors and into professional schools. In this regard it is well worth considering how the shape of the human capital development system in the United States and the permeability of the segmental labor market training systems (generally located in the educational institution) may have sped women’s wage progress. In short, women in par- ticular benefit from systems that in principle allow people to return to school to obtain educa- tional credentials—particularly professional degrees at the expense of employers, in contrast to systems where there are strong barriers to entry. As I show below, Japan provides a strong contrast to the United States. Japanese universities have tradi- tionally had age barriers to entry. Moreover, there has been no institutional equivalent to American law school, and attempts to create business schools in Japan have met with mixed success.

Human Capital Development in Germany: Gender and Occupationally Specific

Germany is characterized by dual apprenticeship coun- ties (Austria, Denmark, Germany, Luxembourg, and Switzerland) represent a radical departure from the uniformity of the American educational system to produce individuals with high levels of general human capital and little occupation-specific capital. Following four years of primary school, students are tracked into lower secondary school (Hauptschule), middle secondary school (Realschule), or upper secondary school (Gymna- sium). All of these constitute general education, but students who continue their education after Hauptschule or Realschule participate in Germany’s famed "dual system" that combines part-time vocational school and apprenticeship with an employer (Bloss- feld 1993; Mortimer and Krüger 2000; Witte and Kalleberg 1995). The certificates awarded upon completion of vocational training correspond to about 400 officially recognized occupations, the ma- jority of which require apprenticeship experience. In an international comparison of the types of training youth receive, Croush, Finegold, and Sako (1999) report that nearly 80 percent of Ger- many secondary school students compared to just over 25 percent of Japanese students were enrolled in vocational or technical education rather than general education. (It is not possible to calculate an exactly comparable figure for the United States, since many students take a few vocational courses or a major in the process of obtaining their general high school diploma.) Of the 80 percent in Germany, more than two-thirds of students were in the dual system, and the remainder participated in school- based vocational training. Not surprisingly, Ger- many ranked first in providing opportunities for 18-year-olds and the United States and Japan ranked at the bottom. (A distinct minority of Japanese students choose the vocational high school option.) Conversely, the United States and Japan ranked first and third respectively in the proportions of 18-year-olds who had access to training that was linked to vocational higher education, and Germany ranked twelfth out of the 14 countries in the study. The German dual system steers young people to very different history of employer involvement in educa- tion than in either the United States or Japan. The- len and Kaufmann provide a comparative view of how training systems developed in Germany and Japan (1999). In the early industrial period, the German government instituted policies that allocated the highly organized and progressive artisanal sector to coordinate skill formation and certification. Unions later joined to maintain the quality rather than the supply of skills, unlike in Britain. The result was a collective solution to the problem of training skilled laborers. Individual employers played a key role in providing apprenticeships and paying low wages during the training period, and since workers’ skills were occupational rather than firm-specific, em- ployers also benefited from being able to hire experi- enced workers from other firms. 

Education and Economy
The contrast is great between the American system of general (and, for a minority of youth, occupational) capital development and the German system that combines general and occupation-specific human capital development for a majority of youth. Although German firms provide training, it is unusual for workers to go beyond the occupational level for which formal education qualifies them (Morin and Krüger 2000). Moreover, the high level of standardization in apprenticeship programs and the existence of national certification for occupational skills means that employers recognize the credentials workers have obtained while working as apprentices for other firms (Witte and Kalleberg 1995). Credentials are, in short, portable.

Consistent with Maurice, Sellier, and Silvestre’s argument about “qualification space” in Germany, Blößfeldt and Mayer found in their research on job mobility that only 16 percent of all job transitions were from social institutions (occupational and institutional structure of an internal labor market”) (1988, 138). Hanani, Schömann, and Blößfeldt (1990) found German labor markets to correspond poorly to sociological labor market theorists’ textbook version of a privileged primary sector characterized by internal labor markets where workers experience wage growth versus a secondary sector characterized by wage stagnation. As they reported: “Male and female workers in the primary sector that can reasonably be characterized as having internal labor markets did not experience higher average wage growth within the labor market sector in which they were employed.” There are many important differences in employment relations between the FBG (Federal Republic of Germany) and the U.S. over the period studied. Perhaps most notable, labor market segmentation has implied assimilated structures that are unique to Germany and have not held in other industrialized, capitalist economies” (1990, 709-10).

Moreover, Hanani and colleagues found that, in a statistically significant difference between men’s and women’s first-job earnings and either firm size or job skill level.

The school-work transition for the approximately 70 percent of youth who do apprenticeships is also markedly different from the transition to work for American non-college graduates. In contrast to the radical disconnect American youth often perceive between what happens in school and in the workforce in later life, German youth are purportedly motivated to achieve in school in order to enter a de-

sirable apprenticeship (Lynch 1995; Mortimer and Krüger 2000). Implications for the Education Wage Gap Wage differentials by level of education in Germany are consistently reported to be much less than in the United States. The difference is especially marked in the lower half of the income distribution; the 50-10 wage differential in Germany is less than half that in the United States (Blau and Kahn 1996a). In comparison of the wage determination process in 13 European countries, the wage penalty for completing less than upper secondary education was low in Germany relative to other countries (OECD 2002). In terms of change across time in the skill wage gap, Hanani et al. found that the relative advantage of higher education for first job earnings declined sharply for both men and women between cohorts who entered the labor market between 1950 and 1980, the period in which the gender wage gap is found. In contrast to the United States, there is little evidence of significant wage stagnation in recent years in Germany (OECD 2002).

Implications for the Gender Wage Gap The traditional sociological focus on occupations rather than wages, contrary to labor economics, has led researchers to describe the German labor market as a systems in occupational closure. The institution of apprenticeships sets up entry barriers to occupations, whereas promoton to higher positions in the United States is based more on general educational credentials and on work experience in a specific enterprise (Haller et al. 1985). It is intriguing to surmise that occupational closure may have contradictory effects on the skill wage gap and the gender wage gap, helping to maintain a relatively low gap in the former case and a wider one in the latter. As discussed in the preceding sections on the United States, the gender wage gap is not as low as in Germany. Women in the United States, and the rate of labor force participation among married women is considerably lower in Germany, demonstrating less overall labor force attachment on the part of women. The “occupational space” of Germany, operating through the mechanism of occupational closure, may lead to the maintenance of a sizable wage gap through occupational sex segregation. I will discuss below how the strategy of the labor market system and to the role of the state in shaping employer-employee relations. Research on the origin of the Japanese employ-

ment system is extensive. Following Abergeln’s assertion that the postwar Japanese employment system could be traced to “traditional practices of the nineteenth century,” the origins of the system during and after the World War II period became an area of study on the part of occupational sex segregation in the labor force (Anker 1998; Blößfeldt 1987; Witte and Kalleberg 1995). Similarly, Hanani, Schömann, and Blößfeldt suggest that occupational sex segregation seems to account for more of the difference in German men’s and women’s wages than differences in the amount of education per se; women’s concentration in the professional service sector (including health and education) in particular disadvantages them in wage terms (1990). As mentioned earlier, they found virtually no support for the idea that firm-internal labor markets are crucial for wage determination in Germany and that women’s exclusion from such markets is a mechanism that translates to the disadvantage of women in the transition to the United States, there is little evidence that occupational sex segregation has declined in recent years in Germany (OECD 2002).

Human Capital Development in Japan: General and Firm-Specific Japan has a markedly different type of human capital system than either the United States or Germany, and a radically different institutional configuration governing the school-work transition that Japan represents the quintessential “occupational space,” then Japan on the other hand represents the quintessential “organizational space.” Japanese high school and university graduates typically construct their goals not in terms of the occupation in which they wish to be employed but in terms of the company for which they wish to work. The fixation on workplace rather than occupation arose out of historical circumstances that gave pride of place to the firm rather than to the occupation as a central determinant of workers’ identity as well as work rewards. Central to this phenomenon is the way that Japanese employers shaped the wage determination process during industrialization; this privileged job tenure is an important basis for compensation. The strategies of Japanese employers were related to the qualifications of labor supplied by the nascent occupational system. Their need to encourage the modernization of the artisan sector through means such as the standardization of apprenticeships. Facing a shortage of skilled labor, employers in the early twentieth century had to be creative in their hiring criteria and then attempt to keep their workers from being bid away by competing firms. This spurred the development of training and compensation systems.

Witte and Kalleberg report extreme sex segregation in the most common 16 apprenticeships fields in Germany. In five of the 16 areas, women comprised more than 50 percent of apprentices, and in another seven areas, women comprised less than 10 percent. This presents a relatively high degree of occupational sex segregation in the labor force (Anker 1998; Blößfeldt 1987; Witte and Kalleberg 1995). Similarly, Hanani, Schömann, and Blößfeldt suggest that occupational sex segregation seems to account for more of the difference in German men’s and women’s wages than differences in the amount of education per se; women’s concentration in the professional service sector (including health and education) in particular disadvantages them in wage terms (1990). As mentioned earlier, they found virtually no support for the idea that firm-internal labor markets are crucial for wage determination in Germany and that women’s exclusion from such markets is a mechanism that translates to the disadvantage of women in the transition to the United States, there is little evidence that occupational sex segregation has declined in recent years in Germany (OECD 2002).

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Japanese employers' pattern of recruiting work- 
ers with general human capital directly from school is a highly variable one that has been evolved over a long period and is surprising robust form. The Japanese edu-
cational system prior to World War II was relatively
tightly controlled and greatly influenced by the needs of European systems than to the American. Compara-
tory education ran for six years, after which stu-
dents were separated into tracks; only a small ma-
nority of students eventually attended university.
The post-World II reforms undertaken by the 
U.S. occupation simplified the system along the 
"6-3-3" American model, making six years of pri-
mary education and three years of junior high school 
compulsory for all students (Kohli 1983). This 
system has remained in place for the past 50 
years, although secondary schooling has nearly as-
tained the status of de facto compulsory educa-
tion, with more than 90 percent of Japanese stu-
dents completing it (a rate that exceeds that of 
the United States).

Significant stratification occurs at two points in 
Japanese students' careers: during ninth grade and 
during the senior year in high school. Ninth-grade 
students take practice high school entrance exams 
and receive intensive in-school counseling regard-
ing which high school in their district to apply to 
(LeTendre 1996). Public high schools, attended 
by the majority of students, are ranked on a scale 
A vocational education alternative also ex-
ar amounts of important differences in the quality 
of educational experience between students and in 
highly ranked high school—every prefecture has several 
public vocational high schools, most of which 
of which offer either industrial or commercial train-
ing. The second sorting point in Japanese stu-
dents' educational trajectories occurs at the com-
tenion of high school. A majority of graduates enter 
the labor force; most aim instead for some form 
of postsecondary education. Chief among 
choices was the national civil service exam and 
the entrance to the university (Kohli 1983). The 
third alternative, aonemon gakkki (specialized two-year training schools), was con-
siderable growth in the past 20 years and has 
become a popular postsecondary alternative for 
those students who want further education but 
are not yet ready for the challenges of prestigious university or junior college (Slaats 
2002). The content of the vocational training of 
offered by aonemon gakkki is not regulated by the gov-
ernment, and its utility is highly variable across 
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The Japanese educational system bears consider-
able surface similarity to the American. Both coun-
tries have an educational system with a 6-3-3 struc-
ture, a societal norm of high school attendance, a 
reputation for producing students who graduate from 
high school with general rather than occupation-
ally specific human capital, and a relatively high pro-
portion of students who receive postsecondary 
education (between 50 and 60 percent in each 
country), again of a highly general rather than voca-
tional specific nature. Compared to the Ger-
man and American educational systems, Japan 
stands closer to the German in terms of instruc-
tional standardization, in-between the German 
and American in terms of the degree to which stu-
dents are stratified across curricula as they move 
through the system, and much more similar to 
the American in terms of the lack of vocational spec-
ificity in postsecondary education.

But despite considerable surface similarity be-
 tween the American and Japanese educational sys-
tems, the interface between the educational system 
and the workplace is very different in Japan in two 
ways: (1) the institutionalized nature of the school-
work transition process, (2) the extent to which 
educational training continues in the workplace, 
as implemented by individual employers. These, 
I argue, have profound ramifications for the skill-
weight gap and the gender wage gap.

Implications for the Education Wage Gap

Unlike the United States and similar to Ger-
many, the Japanese transition from school to work 
is an explicit process. Workers are not unemployed 
from full-time education to full-time labor force 
participation has undergone change along with 
the turbulence of the Japanese economy since the 
early 1990s, and it is possible that the diversification 
of early life course transitions will evidence itself 
in Japan that will more closely resemble career 
paths in the United States. The linkages between prestigious Japanese 
universities and large firms bear some resemblance to 
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portion of students who receive postsecondary 
education (between 50 and 60 percent in each 
country), again of a highly general rather than voca-
tional specific nature. Compared to the Ger-
man and American educational systems, Japan 
stands closer to the German in terms of instruc-
tional standardization, in-between the German 
and American in terms of the degree to which stu-
dents are stratified across curricula as they move 
through the system, and much more similar to 
the American in terms of the lack of vocational spec-
ificity in postsecondary education.
skill wage gap is considerably smaller in Japan than in the United States (Brown et al. 1997; Freeman and Katz 1995; Katz 1990; and Krueger and Summers 1989; Kolle 1994; Nakata and Mosk 1987; Sperl-
ernand and Ishida 1996). Furthermore, the gap be-
tween female and male returns to education at
those of university graduates declined in the 1960-
80 period and rose very slightly in the 1980s
(Nakata and Mosk 1987), while the gap in the U.S.
rose sharply.

Implications for the Gender Wage Gap

Japan exhibits perhaps the clearest case of how compensation systems rooted in firms internal labor markets disadvantage women. I have written ex-
tensively on this elsewhere (1993, 2001) and so will only briefly summarize the arguments here.

In comparisons of wage determination across countries, researchers have consistently found that a high premium is attached to job tenure in Japan (in particular, in the large bokken, eg.
Kalleberg and Lincolin 1988; Sperl and Ishida 1996). Cross-sectional data on male employees average length of stay in a firm verify that Japanese men tend to exhibit longer spells with one em-
ployer than men in Germany or the United States.

Female employees average 13.2, 9.7, and 7.4 years.
Likewise, the proportion of male employees who have spent less than one year in their current firm is lower than three times as high in the United States (26 percent) as in Japan (7.6 percent). The corresponding figure in Germany stands in between, at 16 percent.

Japanese employers investment in on-the-job training and their commitment to seniority wages may be viewed as directed toward male workers. Women are as likely as men to enter large firms upon gradua-
tion, but they are much less likely to receive on-the-job training (Brinton 1989, 1991, 1993). Across the life cycle, Japanese women are much more likely than men to move into the classic "sec-
tor--a major sector of the economy (Brinto-
1989; Brinton, Nyo, and Shubayu 1991). Em-
ployers practice of producing women to quit the firm upon marriage, often with the examination of a "retirement payment," has been formally illegal since the enactment of an Equal Opportunity Em-
ployment Law in 1986. But the practice persists.

This reinforces a vicious cycle wherein employers assume that women have low work commitment and thus low "loyalty," and in an effort to "examine" the division of labor between schools and firms for individuals human capital development, and the recruitment mechanisms structuring indi-
viduals movement out of school and into the work-
place as well as those structuring movement across
firms. We know that the direction of the relation-
ship of their claim to originality on the careful analysis of how institutional arrangements form the context within which individual economic behaviors take place. Given these strengths, the expansion of eco-

nomic sociological inquiry into the study of comparative economic systems has been extremely promising.

Much of the theoretical and empirical work to date on the relationship between institutional ar-
rangements and inequality patterns across industri-
al societies has been done outside of sociology. The neighboring disciplines of political science and labor economics have focused considerable atten-
tion on cross-national variation in wage compres-
sion across skill boundaries. In closing I would suggest that economic sociologists can profitably draw on the extensive empirical work by labor economists and the theoretical exploration of wage-
setting arrangements by both labor economists and proponents of the varieties of capitalism ap-
proach. Building upon the theoretical formu-
lations of educational and stratification researchers, economic sociologists can fashion a comparative research agenda designed to further specify how skill and earnings inequality gaps are influenced by the varied institutional arrangements of capitalism.

Many of these institutional arrangements stand precisely at the intersection of education and the economy.

CONCLUSION: THE COMPARATIVE-

Institutional Analysis of Education-

Linkages and Economic Inequality

In this chapter I have argued for the idea that economic sociologists could profitably see as one of their research agendas the theoretical articula-
tion of how education--economy have biased and reproduce patterns of inequality across postin-
dustrial societies. I have conceptualized two edu-
cation policies as the key political organization of sections in the American Sociological Association. The Education and the Occupations and Work sectors are both
relatively large in terms of membership and solidarity, there is no Social Strati
cation section in the ASA that would bridge the shapes of education and work. The recent creation of a section on Labor and Labor Movements has drawn togeth-
er scholars interested in labor politics and policies.

6. What then is the causal connection between the system of wage determination and the structure of the educational system?
Muller and Sivard suggest that Mauritie and col-
egues (1989) have pointed out that employers and employees face and unemployment and re-

enrollment policies to the educational system. I would more cautiously suggest that the direction of the relation-
ship may be historically contingent, dependent on the rela-
ture of any particular country of the development of the educational system on the one hand and employers re-

11. Differences and Similarities (1991) found that women were less

likely than men to be promoted from lower-to-upper

 בכוחות us in the U.S. federal bureauacy; several other studies looked at men's and women's promotion patterns in hi-

nters in specific firms. Sperlman and Ishida (1996) ex-

eluded that some women from the study of career advancement in a large Japanese financial firm. Only 1 percent of managerial positions in the company was held by the women. These positions were female; there was no mobility between the clerical and managerial ranks.


9. Witness Freeman's statement in the introductory chap-

er of his Working Under Different Rules: "In Economies 2,

the invisible hand of market forces sets wages, prices, and quan-
tities, ad absurdum perhaps by a Winfred of Os "transactions" who calibrates prices and wages until they settle in a

manner impossible in real labor markets, however; markets are more complicated and interesting. Every country has its own labor market institutions--unions, management, organizations, govern-
ment agencies--and rules that help determine outcomes" (1994, 14-15).

10. But there is also a sense in the literarure to the fact that

strong unions and centralized wage-bargaining do not necessarily go hand in hand, making it necessary to consid-
er them separately.

11. Increased international trade, varying across coun-

ci, has also been investigated as a potential causal vari-

e in the variation of skill premium. In real labor markets, however, matters are more complicated and inter-

re, every country has its own labor market institutions--unions, management, organizations, govern-

12. Acemoglu further points out that under this scenario, job

creation would be less desirable and unemployment would increase across skill levels, and that this is consistent with European trends and with the wide garget between the United States and continental Europe.

13. As Dobrinsky notes in this chapter, an impor-

ant issue for economic sociologists is the demise of economic systems that operate effectively. He notes, "The question of what kinds of economic system patterns are actually enshrined by their ineffectiveness is an important one, but it is remarkable how little the literature on po-

havior patterns are not extinguished, or have not yet been" (Dobbins, xx).

14. Both political scientists and economists also consider

poverty rates cross-nationally. This is beyond the scope of this chapter, as we have formalized it. A considerable amount of empirical research has been done using the Luxembourg Income Study, although there are some important excep-
tions (such as Japan) in the coverage of the data sets (see Gotschalk and Strobel 1997).

15. Issues of ethnic inequality are also embedded in analysis of the first type of inequality that I propose. The empiri-

ical educational differences persist across ethnic groups.

16. I originally intended to include additional discussion of in-

stitutionalization as a third type of inequality that may be linked to na-

tional institutional variation in the education sector. How-

ever, the literature on social class reproduction is vast and involves a number of issues that go beyond the boundaries of a chapter on education and the economy. Of particular importance for intergenerational class inter-

et, of course, is the issue of who gets educated and in what order. It is impor-

bly prior to the issue of how different amounts of education translate into labor market returns. These in turn may differ by ascriptive characteristics (gender and ethnicity). It is the latter issue that I focus on here and in the translation of education into labor market rewards for different groups may depend in part on the institutional arrangements go-

erning human capital development and reproduction.
As is evident from Geenower's classic study (1995), the job search literature has consistently documented the importance of social ties in American workers’ job searches. More recent literature specific to the school-to-work transition notes the finding that social networks are particularly important at this stage of the job search (see both Geenower, 2005, for a review of the research). A study by Weiland et al. (2010) participated in a number of the collaborative efforts to obtain data about the school-to-work transition that constitutes the Longitudinal data in some case is a point in case.


28. A smaller number of vocational high school special- ists in training for agriculture, fabrics, home economics, and nursing.

29. He expanded their enrollments exponentially in the post-World War II period, with junior college becoming a more central female track and remaining so.

30. A sizable proportion of each year’s entering co- hort at the nation’s most prestigious universities are students who “sat out” for a year to rein in the post- univer- sity group of students admitted to graduate school. This area would definitely continue to be of heated debate within the sociology of education.

31. To date the Social Stratification and Mobility Survey, conducted every 10 years in Japan since 1955, has always con- sidered work history information that began after completion of high school. Unlike the United States, data analysis problem based on individuals’ subsequent entry to school and reentry to the labor force, is generally a critical initial step debate over whether to review the questionnaire.

References


26 New Directions in the Study of Religion and Economic Life

Robert Wallman

A generation ago, studies of the relationships between religion and economic life were often framed within a view of modern society that emphasized institutional differentiation and secularization. As a result, studies of economic behavior seldom paid attention to religion, and studies of religious behavior dealt with economic activities (Beckford 1985). In recent years, more borrowing across the subdisciplines is evident. Studies of religion incorporate insights from economic sociology about economic preferences, markets, and organizational structure, while research in economic sociology sometimes draws on ideas about ritual and ceremonial, symbolism, ethnographic, and religious communities, and socialization. Beyond these multiple influences, there has been a more important shift in thinking about the nature of religion itself. The new directions resulting from this shift converge in significant ways with current thinking in economic sociology (Swedberg 1991).

There has, however, been a more general reorient-