

How Institutions Evolve

THE POLITICAL ECONOMY
OF SKILLS IN GERMANY,
BRITAIN, THE UNITED
STATES, AND JAPAN

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The Political Economy of Skills in Comparative-Historical Perspective

The past two decades have witnessed an enormous outpouring of literature on the putative effects of “globalization” on the political economies of the advanced industrial countries. A good deal of this literature was inspired by early, sometimes rather breathless predictions of a trend toward convergence in the institutional arrangements governing these political economies. Such convergence, it was argued by some, would result from the pressures imposed by footloose firms engaged in “regime shopping” which would in turn drive competitive deregulation among the advanced countries (see, for example, Kapstein 1996; Kurzer 1993).¹ These prospects were especially worrisome to students of Europe’s “corporatist” political economies, which had long been admired as models of economic efficiency *and* social equality.

In the meantime, however, a good deal of evidence has accumulated that calls into question arguments about a convergence among the institutional arrangements that characterize different political economies (Berger and Dore 1996; Brown, Green, and Lauder 2001; Ferner and Hyman 1998; Garrett 1998; Iversen, Pontusson, and Soskice 2000; Kitschelt et al. 1999; Streeck and Yamamura 2002; Vogel 2001; Wallerstein and Golden 1997). Although there are certainly changes afoot in all countries, a number of scholars have pointed to systematic and apparently enduring differences in the organization of capitalism across the advanced industrial countries. Different authors characterize these differences each in his or her own way, but the consensus that has emerged is truly striking. Boyer and Hollingsworth write of distinctive national “production regimes” which are defined by a

¹ Harry Katz and Owen Darbishire make a more nuanced argument about the pace and scope of common trends (Katz and Darbishire 1999; see also Martin and Ross 1999).

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set a mutually reinforcing institutional arrangements that together support different types of firm strategies in international markets – situating the United States and the United Kingdom at one end of a continuum and Germany and Japan at the other (Boyer and Hollingsworth 1997; see also King and Wood 1999).² This work resonates with Streeck's analysis, which distinguishes between "liberal" market economies such as the United States and Britain and "socially embedded" political economies such as Japan and Germany (Streeck 2001). Michel Albert's popular book draws a distinction between what he calls the "Anglo Saxon" and the "Rhineland" versions of capitalism, which, as Streeck has pointed out, also situates "not just Stockholm but also Tokyo" on the banks of the Rhine (Albert 1993). All this, in turn, maps well onto the analysis of David Soskice, who has characterized cross-national differences in advanced capitalism in terms of a broad distinction between "coordinated" and "non-coordinated" market economies, and more recently, in collaboration with Peter Hall, of "coordinated" versus "liberal" market economies (Hall and Soskice 2001; Soskice 1991).

What all these works share in common is a perspective on national models of capitalism that are characterized by distinctive institutional arrangements which in turn support specific kinds of strategies on the part of firms in international markets. These authors all point to more or less the same set of institutional arrangements that have traditionally been defined as central to the functioning of these political economies – financial institutions, industrial relations institutions, vocational training systems, bank–industry links, and more recently, welfare state institutions and policies (Ebbinghaus and Manow 2001; Estevez-Abe, Iversen, and Soskice 2001). For all their differences, these authors make very similar distinctions across countries, and draw an especially sharp line between "organized" (or "embedded") capitalist economies such as Germany and Japan on the one hand, and "liberal" market economies such as the United States and the United Kingdom on the other.³ The former are characterized by "patient capital," coordinated

² The literature on the political economy of advanced capitalism from the 1970s and 1980s similarly focused on distinctive national models (for example, Hall 1986, Zysman 1983, and corporatism theorists of the 1970s). The newer literature on "varieties of capitalism" is an outgrowth of that earlier work, though with some important theoretical innovations. For an extended discussion, see Thelen (2002b).

³ In fact, all these various categorization schemes also have trouble sorting the same set of "intermediate" or hard to classify countries, including France and Italy.

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employers, and various forms of labor-management cooperation. The latter, by contrast, are defined by short-term financing arrangements, fragmented employers, and more adversarial industrial relations systems.

What these characterizations also share is a view of these systems as more or less integrated wholes, in which the various parts work together in ways that are mutually reinforcing. But what brought these systems into being? And what holds them together today? And, since no one would argue that these systems are not changing in fundamental ways, how should we characterize the dynamics of change and weigh these against the forces of institutional reproduction? These questions are at the top of the agenda in the context of current globalization pressures, and yet on these issues the consensus begins to break down.

Hall and Soskice's characterization of the ideal-typical "organized" and "liberal" market economies emphasizes tight coupling and multiple functional interconnections among the various institutional arrangements that make up a national economic "system" (Hall and Soskice 2001). For these authors, the existence of institutional complementarities across various arenas contributes to the robustness of the system as a whole, for two reasons. One is that institutional frameworks provide the foundation on which (nationally distinctive) competitive advantage rests, so that key actors (especially employers) who have organized their strategies around these institutions will be loath to part with them. The other is that, even if they wanted to change some aspects of the system, shifting rules in one arena would require adjustments in other, neighboring realms, which both increases the costs of change for them and also multiplies the political obstacles to such change. That said, however, and despite the fact that Hall and Soskice overall see the systems as very robust, tight coupling and strong institutional complementarities also seem to suggest that a major disruption in one realm (for example, financial institutions) would immediately "radiate" and translate into significant strains and change in neighboring realms (for example, collective bargaining).

Streeck's historical-sociological account also stresses institutional complementarities but it downplays the functional and economic logic in favor of a more singularly political view. Streeck views national "systems" as the product of past and ongoing political intervention and tinkering, of active maintenance and re-setting. Whatever structural or functional coherence we may now observe in these systems, he argues, "had to be continuously established, restored, redefined and defended against all sorts of disorganizing

forces” (Streeck 2001: 31). He emphasizes how national models are not the product of a grand design, and “Ex post accommodation . . . seems to have been at least as important . . . as a priori calculations of the advantages of compatibility and complementarity under conditions of interdependence” (Streeck 2001: 31). Unlike Hall and Soskice’s equilibrium-based view of institutions, Streeck sees these arrangements as inherently less coherent and therefore also not at all self-equilibrating, which leads to a picture that is overall less sanguine about the robustness of such systems. At the same time, however, and for many of the same reasons, this alternative view would not necessarily see such systems as vulnerable to the kind of “unraveling” mentioned above in the event of strong perturbations in one realm.

The premise of this book is that in order to understand the likely future of the institutions that make up the different “varieties of capitalism” we need a better sense of where these institutions came from, what has sustained them, and what are the ways in which they have changed over time. This is not the first time these systems have experienced strain, and understanding how they evolved in the past can yield new insights into the modes and mechanisms of change through which they continue to develop today. My analysis focuses on the institutions of skill formation because they constitute a key element in the institutional constellations identified by all the authors cited above. In fact, one recent strand of scholarship sees skills and skill formation systems as causally central to the development and articulation of social policy preferences generally, and thus foundational for the development and maintenance of different systems of social protection across the developed democracies (see, especially, Iversen and Soskice 2001; also Iversen 2003).

I approach the politics of skill formation from two angles, pursuing both a cross-national and a longitudinal dimension. First, the *cross-national component* of the study traces the origins of different skill formation regimes, focusing especially on Britain and Germany, and with only slightly less detailed treatments as well of Japan and the United States. This part of the book asks the questions: Why did different countries pursue such different trajectories in terms of plant-based training? And: how did the evolution of training institutions interact with the development of “collateral” organizations and institutions – especially labor unions and employer associations, and industrial relations institutions?

One of the most widely cited differences between “coordinated” market economies (such as Germany and Japan) and “liberal” market economies (such as the United States and United Kingdom) is that the former

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support more and better plant-based training.⁴ My comparative historical-institutional analysis traces the origins of these contemporary differences back to the nineteenth century. Contemporary differences in skill formation go back to important differences in the character of the settlement between employers in skill-based industries, artisans, and early trade unions. I show how the development of skill formation in the early industrial period interacted with the development of collective bargaining institutions and nascent labor unions and employer organizations in ways that set countries on different national trajectories. The present analysis identifies some similarities between Germany and Japan (both as “coordinated” market economies), and between Britain and the United States (as “liberal” market economies). However, it also underscores the substantial differences between these cases in how training is organized – with enormous implications for the type of skill formation that each country institutionalized and for labor’s role within it.⁵

The cross-national component of the analysis draws on an excellent secondary literature on the histories of unions, employer organizations, and skill formation, as well as on primary documents where these were needed to address the specific questions around which this research was organized. The main goal is to situate a number of country experiences

⁴ Mine is not the first study to draw attention to these particular cases. As mentioned above, the different literatures on varieties of capitalism tend to focus on the same basic clusters of countries. Likewise, in the literature on skills in particular, it is not uncommon to draw a broad distinction between Germany and Japan on one hand (as “high-skill” economies) and the United States and United Kingdom on the other (as “low-skill” or strongly skill bifurcated economies) (for example, Ashton and Green 1996; Brown, Green, and Lauder 2001). This convention follows pioneering work by Finegold and Soskice (1988), who draw a sharp line between “high-skill” and “low-skill” equilibrium countries, though in the meantime this somewhat simplified distinction has been superseded by a more differentiated view that emphasizes the different types and mixes of skills produced within any one country. This is also why I adopt the somewhat less normatively inflected language of “coordinated” versus “liberal” training regimes, which are characterized by different mixes of strengths and weaknesses in skill formation. See the discussion below.

⁵ Ashton and Green (1996) propose an explanation of these outcomes that is broadly compatible with mine. However their historical analysis is very fleeting (five to ten pages per country, and in each case covering both plant-based and school-based training). Their explanation of these outcomes hinges on the behavior of highly aggregated actors (“the ruling class,” the “bourgeoisie,” the “aristocracy”), and the conclusions – although not wrong – are highly simplified. Many of their assertions (for example, the idea that the Handwerk sector was “undermined” by industrialization or the implication that unions pushed for skill standardization against employer opposition) are not consistent with the results of the historical-empirical research presented here (Ashton and Green 1996: 142–3).

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within a theoretical framework that can illuminate causal mechanisms at work across a number of cases. Each of the countries included in the broader study can be – has been – characterized as unique in the literature on political economy and labor development – Britain as the first industrializer; the German “*Sonderweg*”; American and Japanese “exceptionalism.” Without taking away from the fundamental uniqueness of each case, this project attempts to put their experiences with skill formation and labor incorporation side by side to shed light on systematic parallels and differences among them.

Second, the *longitudinal dimension* of the research tracks the development of the German vocational training system over a longer time frame than the other cases – indeed, up to the present. This aspect of the study tackles the question of how institutions evolve and is organized around a somewhat different puzzle. Germany’s vocational training system has been held up as an exemplary solution to a number of knotty coordination problems that plague most private sector training regimes. The German system encourages firms to invest in worker skills, and it provides mechanisms to assure that apprentices will receive high quality training. More generally, vocational training institutions in Germany are typically seen as part of a larger institutional package which, along with centralized collective bargaining, strong bank–industry links, and encompassing employer associations and labor unions, are seen as underpinning the country’s high skill, high wage, high value-added (“high everything”) economy. The vocational training system is viewed as a key element in a larger institutional complex that actively supports a production regime organized around a kind of “diversified quality production” that reconciles Germany’s comparatively strong unions with strong performance in world manufacturing markets (Streeck 1991).

Scholars coming out of different theoretical perspectives have offered different views of the German system. From a functional–utilitarian perspective, German vocational training institutions have been seen as part of a complex institutional configuration that, among other things, supports employer coordination around a “high skill equilibrium” (Soskice 1991). From a power–resource perspective, the German vocational training system has been assumed to be a reflection of working class strength (for example, Gillingham 1985). From a sociological–cultural perspective, these institutions have been seen as a prime example of a more general, and distinctively German, mode of self-governance, which operates through the country’s social partners and without much direct intervention from the state (see, for example, Lehmruch 2001).

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There is a way in which, looking at these institutions today, all these characterizations contain an element of truth. After an examination of the historical evolution of this system, however, they all seem rather puzzling. The core institutional innovation around which the German system came to be built was legislation passed in 1897 by an authoritarian government motivated politically by a desire to shore up and support a conservative class of independent artisanal or handicraft producers that could serve as a bulwark against the surging and radical working class movement. The 1897 legislation proved to be very important to stabilizing a certain type of plant-based apprenticeship that in other countries was rapidly deteriorating into cheap child labor. Against prominent utilitarian-functionalist characterizations focusing on current effects, however, these institutions were not originally designed with the economic interests of the industrial sector in mind (industry was excluded in fact) and they were certainly not meant to reconcile strong unions with anything. Against perspectives that assume that these institutions must have been the creation of unions, we find that organized labor played no role in promoting the original legislation, and in fact, the Social Democratic party opposed it. Finally, against the cultural-sociological perspective mentioned above, it becomes clear that the particular type of social partnership of which these institutions are (now) seen to be a part was really nowhere on the horizon.

How did we get from there to here? Not through a wholesale breakdown of the old institutions and their replacement with new ones. One of the striking features of the system is the resiliency of core elements even in the face of enormous disruptions over the twentieth century, which of course in Germany include several regime changes, the incorporation of the working class, defeat in not one but two world wars, occupation, and transitions both into and out of fascism. Although changes certainly occurred at these junctures, what is remarkable and in need of explanation are some striking continuities in key features of this system despite these disjunctures. This case, in short, calls for an analysis both of the mechanisms of reproduction that sustained these institutions *and* the mechanisms behind their functional and distributional transformation over time.

An examination of the evolution of German vocational training institutions can provide a window on larger questions of institutional evolution and change. I argue that this case illustrates the way in which institutional reproduction is often inextricably linked to elements of institutional transformation of the sort that brings institutions inherited from the past into synch with changes in the political and economic context. In the case of

German vocational training institutions, I analyze how the emergence and incorporation of new groups whose participation was not anticipated at the time the system was created drove the development of these institutions forward in ways that, over time, produced a system whose political-distributional effects are completely different from those envisioned by the original designers.

While emphasizing and explaining the disjuncture between original intent and ultimate effects, the analysis of the evolution of German vocational training institutions also speaks to the issue of institutional reproduction – a more problematic concept than typically recognized (for a discussion, see Thelen 1999). A point of departure for my analysis is that we need to pay more attention to how institutions created at critical junctures in the sometimes quite distant past actually make it to the present, given the magnitude of some of the intervening events and developments. I argue that it is not sufficient to view institutions as frozen residue of critical junctures, or even as “locked in” in the straightforward sense that path dependence arguments adapted from the economics literature often suggest. In politics, institutional reproduction can be partly understood in terms of the increasing returns effects to which this literature has drawn our attention – but only partly. Only partly because as one observes the development of the German system over a long stretch of time, it becomes clear that institutional survival often involves active political renegotiation and heavy doses of institutional adaptation, in order to bring institutions inherited from the past into line with changes in the social and political context. The question of the mechanisms of institutional reproduction and institutional change is thus the second major theme explored in the pages below.

Skills and Skill Formation

Vocational training institutions occupy a central role in most characterizations of the various political-economic systems cited above – and for good reason. Skills are associated with a variety of outcomes of interest to political economists. The acquisition of skills and investment in human capital are seen by many economists as “an engine of growth” (Acemoglu and Pischke 1999a: F112), and deemed to be “absolutely central to countries’ growth performance” (Booth and Snower 1996: 1). Several studies point to a strong link between skills and productivity (Acemoglu 1996; Black and Lynch 1996; Bishop 1994; Lynch 1994: 21–2). In addition, growth and human capital development also figure prominently in “endogenous

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growth theory,” which argues that a country’s knowledge base is an important resource for innovation and which has linked cross-national differences in education to persistent disparities in per capita income across national economies (Romer 1990).

Political scientists and sociologists are as interested in the social consequences of various skill development systems as they are in the economic impact (for example, Brown, Green, and Lauder 2001). As mentioned above, analysts have begun pointing to the consequences of different skill formation regimes for broad social and institutional outcomes, including gender inequality and divergent social policy regimes (Estevez-Abe, Iversen, and Soskice 2001; Mares 2000; Iversen and Soskice 2001; Lauder 2001). Different training systems have also been linked to a range of more specific political and social effects. For example, training regimes in what Hall and Soskice call “liberal market economies” tend to be associated with rather wide gaps in the opportunities available to different types of workers, with implications for, among other things, income inequality (also Crouch, Finegold, and Sako 1999: 3). In general, less skilled workers have more opportunities for advancement in what Hall and Soskice call “organized market economies” which are, in turn, also characterized by greater income and wage equality.⁶ Wage inequalities based on skill have been rising as a result of changing technology, which increases the skill premium as well as the overall skill intensity of production (Levy and Murnane 1992; Katz and Murphy 1992; Gottschalk and Smeeding 1997).

Sustained attention to vocational training institutions in the literature on the political economy of the advanced industrial countries can be traced back largely to Streeck’s pioneering work in this area (Streeck 1992b). Based on an analysis of the German case, Streeck showed how strong private sector training within the context of a standardized and uniform national system for vocational education supported firm strategies based on what he called diversified quality production (Streeck 1991). For Streeck, vocational skills (broad-based and widely available) constitute a crucial competitive advantage for firms operating in “technologically and economically volatile markets” (1992b: 166). But despite the benefits of training, Streeck noted, firms operating according to strict economic rationality will systematically under-invest in the kind of broad and transferable skills necessary

⁶ For example, Acemoglu and Pischke note that low education entry-level workers are more likely to get training in Germany than in the United States (Acemoglu and Pischke 1999a: F129).

to compete in these markets. As he puts it: “firms that create only those skills that they need may well end up with less than they need. Cost- and profit-consciousness are more part of the problem than of the solution” (Streeck 1992b: 17). In Streeck’s view, cultural or political constraints that bend the logic of individual market incentives – in this case encouraging firms to “over invest” in skills – may turn out “to be more conducive to economic performance under given technological and market conditions than others” (Streeck 1992b: vii).

Given this posing of the problem, Germany was long considered a model of successful vocational training and skill formation for the advanced industrial countries generally. The comparisons to other countries were mostly invidious (see, for example, Berg 1994; Oulton and Steedman 1994; Finegold 1993). In one important contribution, for example, David Finegold and David Soskice examined the institutional bases of Germany’s “high skill” and the United Kingdom’s “low skill” equilibria (Finegold and Soskice 1988). In particular, they argued that Britain’s chronic undersupply of training went back to public good or free rider problems, and the resulting dearth of skills in the economy encouraged firms to pursue product strategies premised on low skills, which in turn discouraged investment in skills, and so on. This dynamic provided the backdrop to their analysis of the inability and/or unwillingness of the British government to take action to break the cycle (Finegold and Soskice 1988: 25ff).

In the meantime, the literature has begun to paint a somewhat more differentiated pattern of strengths and weaknesses (see, for example, Crouch, Finegold, and Sako 1999; Culpepper 2003; Culpepper and Finegold 1999; Hall and Soskice 2001; Green and Sakamoto 2001). Thus, for example, Finegold’s more recent work highlights Germany’s continued high investment in initial manufacturing skills (apprenticeship) but notes deficits in the commitment of firms to further training – now arguably more important than ever in the context of rapidly changing production technology – (see Pichler 1993), as well as the overall scarcity of certain high-end (information technology and engineering) skills (Crouch, Finegold, and Sako 1999; Atkins 2000). Conversely, the United States, long viewed as a skills “laggard,” is now getting more credit for producing an abundance of high-end skills – having become a net exporter of skills in information technologies, for example – despite continued worries about the country’s under-investment in traditional manufacturing skills (Hall and Soskice 2001; Smith 2000). In a way, the emphasis in the political economy literature has shifted from an effort to identify overall differences in the *quantity*

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of training cross-nationally,⁷ toward a more fine-grained analysis of cross-national differences in the particular *mix of jobs and qualifications* that characterize different political economies (Estevez-Abe, Iversen, and Soskice 2001; Crouch, Finegold, and Sako 1999).

Economists on Skills

As a first step in situating this literature and in mapping the empirical cases, it is useful to summarize briefly the way in which economists have approached the issue of skill formation. A point of departure for the political economy literature cited above is training market failures going back to poaching externalities, a view which for most of the first half of the twentieth century was widely accepted among economists (see, for example, Pigou 1912; Stevens 1996). The crux of the problem was seen to consist of a collective action dilemma. Specifically, firms that need skills face a choice: whether to provide their own training (at some cost to themselves), or attempt to secure skilled labor on the labor market (in effect, to attract workers from other firms that have invested in training). Since firms are themselves competitors in labor and product markets, each individual company will be tempted to poach workers from other firms, thus avoiding the costs associated with skill formation and in fact making off with the investment of its competitors. The more firms that choose this strategy, the greater will be the costs to those firms that do train; they incur both the costs of training itself and the costs of competing with non-training firms which – free of these costs – can offer these workers a wage premium. If all firms pursue non-training strategies, then of course all are worse off since this would diminish the overall stock of skills on which all rely.

In a widely cited contribution, Gary Becker called into question this posing of the problem (1964). Becker distinguished between general skills and specific skills and argued that poaching externalities would not be a problem in either case. For *general skills* – defined as those skills that are fully transportable and hold value to many employers – it is quite true that firms have no incentive to invest in training. But even if firms do not invest, workers will, or in Becker's words, "it is the trainees, not the firms who would bear the cost of general training and profit from the return" (1993: 34).⁸

⁷ The available, mostly OECD, data are anyway notorious for their lack of comparability (for example, OECD 1998: 10–11). For a discussion see also Lynch (1994).

⁸ Note that this formulation does not address the question of the *supply* of training, however.

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Assuming perfectly competitive labor markets, skilled workers who possess general skills will be paid a wage equal to their marginal product, which means that even though the firm has no incentive to pay for training (being unable to capture returns on that investment), the workers themselves would do so (in the interest of their future higher wages). Becker's argument thus turns the poaching issue on its head: In a completely competitive labor market, poaching is not a cause of under-investment in general skills, but rather a mechanism assuring that a worker's skill is valued at full marginal product, thus providing an incentive for the workers themselves to acquire training.

Specific skills, according to Becker, are completely non-transportable and have value only to the particular firm in which the worker is employed (Becker 1993: 40). Poaching again is not a problem, in this case because firm-specific skills by definition are valuable only to the present employer. Here the equilibrium outcome is for the firm and the worker to share the costs of training. Facing no external competitors for the skills they are imparting, firms can pay workers a wage below marginal product in order to realize a return on the training investment. Workers will be willing to share the costs since the resulting wage will lie above the external market wage but below marginal productivity wage after training (Becker 1993: 42).

The problems that Becker identifies as sources of possible market failure resulting in under investment in skills go back not, as in the previous literature, to poaching externalities, but rather mostly to capital market constraints and especially credit constraints on the trainees. Although willing to invest in their own general training, trainees may find it hard to secure credit to do so because of the high risk of default on a loan and/or the uncertainty of the return on training (Becker 1993: 39–40 fn12). As Stevens (1999: 20) points out, the expected returns on training are the highest for workers at the beginning of their careers, precisely the time at which their accumulated resources are lowest (also Acemoglu 1996; Acemoglu and Pischke 1999a).

Public policies that ease trainees' credit constraints – for example, loans or subsidies for training – could alleviate the sources of market failure identified by Becker. The logic of the argument suggests, however, that any mechanism that effectively helps the worker defer or pay the costs of training will do. In traditional apprenticeship in many countries, for example, fees paid by an apprentice's family to the training firm and/or long periods of apprentice indenture (in which firms continued to pay apprentices very low wages even after they had acquired substantial skills) serve such a function. The logic of the argument points additionally to the benefits of some

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regulatory framework or system of accreditation that would ensure quality training and therefore reduce the uncertainty of return on the trainee's side. As we will see, the decline of the British system of apprenticeship training (for example) can be traced back to the failure to solve problems of uncertain returns for either employers or trainees.

Beyond Becker

In the meantime a number of studies have emerged which take us “beyond Becker” (Acemoglu and Pischke 1999a) but also, paradoxically, back to some of the training–market problems identified by the earlier literature. This work responds in part to empirical anomalies that point to sources of under investment in skills that appear not to be captured by the logic of Becker's model (Acemoglu and Pischke 1999a; Finegold and Soskice 1988). Most of this more recent scholarship does not take issue directly with Becker's analysis of the two ideal-typical models of training markets characterized by perfect competition (general skills) and non-competitive labor markets (specific skills), but research has focused on the provision of training in the intermediate case of imperfectly competitive labor markets for certain kinds of skills. Specifically, analysts have reacted to two aspects of Becker's argument: (1) the sharp distinction he draws between general and specific skills (Estevez-Abe, Iversen, and Soskice 2001; Stevens 1996; Stevens 1999),⁹ and (2) his implicit assumption that the market for general skills will always be perfectly competitive (Acemoglu and Pischke 1998; Acemoglu and Pischke 1999a; Acemoglu and Pischke 1999b).

First, Margaret Stevens attacks the problem by questioning Becker's stark categorization of skills as either general or specific. She focuses on an intermediate category of skills, what she calls transferable skills.¹⁰ Such skills “are of value to more than one firm, and there is competition between firms to employ the worker, but competition is not sufficiently fierce that the wage is driven up to the marginal product” (Stevens 1999: 19). Stevens and others imply that very many skills fall into some kind of intermediate category. In a similar vein, Finegold and Soskice note that a given firm may need a particular mix of skills, and that while each one may be general the mix

⁹ Although Becker does recognize that most training is neither purely general nor purely specific (Becker 1993: 40).

¹⁰ This seems similar to the category “industry skills” identified by Estevez-Abe, Iversen, and Soskice (2001).

itself is specific (Finegold and Soskice 1988; Acemoglu and Pischke 1999a: F124). Moreover, Franz and Soskice (1995) argue that the acquisition of general and specific skills is complementary, that is, teaching firm-specific skills reduces the costs of teaching general skills and vice versa.

The introduction of this intermediate category of transferable skills (portable but not really “general” in Becker’s sense) re-introduces the problem of poaching externalities since in an imperfectly competitive labor market the value of the skill (= wage) will not necessarily be driven up fully to marginal product, and some of the training accrues to the firm that employs the skilled worker (Stevens 1999: 20). This situation reduces the employee’s incentive to acquire skills (since he will not be able to capture the full return on his training investment in the form of wages), but for the very same reason, it also increases the employer’s incentive to assume a part of the costs of training. But this, in turn, raises again the possibility that one firm’s investment in training might accrue to some other firm – that is, a poaching externality – leading to under investment in skills of this type (Stevens 1999: 27).

Acemoglu and Pischke argue similarly for the possibility of imperfect labor market competition and associated implications for training (Acemoglu and Pischke 1999a: F127). Whereas Stevens and others (for example, Estevez-Abe, Iversen, and Soskice 2001) attack the Becker thesis by drawing out more fine-grained distinctions among types of skills, however, Acemoglu and Pischke focus instead on the structure of the labor market. Against Becker’s thesis that firms will never pay for general training, they note empirical examples (German apprenticeship is one) where firms do bear a significant fraction of the cost of general training (Acemoglu and Pischke 1999a: F113–4). By way of explanation they cite labor market imperfections that prevent skilled workers from claiming wages equal to their full marginal productivity and that thus allow employers to earn rents on their training (Acemoglu and Pischke 1999a: F120; Acemoglu and Pischke 1998: 80).

Acemoglu and Pischke consider various sources of labor market imperfections. Institutions or situations that result in low labor turnover, for example, distort the competitiveness of labor markets, making it possible for employers to retain a worker after training at a wage lower than marginal product. One source of low labor turnover is monopsony power exercised by large firms that may dominate a local economy. Firms in such a situation could pay a wage above the local rate but still below the marginal productivity of its trained workers (Acemoglu and Pischke 1998: 80–1). Japanese

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training is frequently coded as involving “specific” skills in Becker’s sense, but as the historical analysis below shows, it may be more properly understood as a case in which imperfectly competitive labor markets stemming from monopsony power (and coordination among monopsonists) allow firms to invest in transferable skills.¹¹

Another source of labor market imperfections that figures prominently in Acemoglu’s and Pischke’s analysis involves labor market institutions that compress wages, thus holding back skilled workers’ wages. Wage compression encourages firms to invest in general training, because, by holding wages below marginal productivity, it again allows the firm to capture some of the returns from the investment. This is at odds with a core assumption in Becker’s theory, that wages for workers possessing general skills will grow at the same rate as their marginal productivity. Acemoglu and Pischke point out, however, that labor market institutions may prevent this, with implications for firm investment in training: “With competitive labor markets, firms never pay for investments in general training, whereas when labor markets are imperfect, firm-sponsored training arises as an equilibrium phenomenon” (Acemoglu and Pischke 1999a: F112).¹² As we will see below, union policies in Germany that encouraged wage compression in the Weimar years were indeed associated with substantial advances in firm-based training.¹³

Back to Politics

The analytic move made by Acemoglu and Pischke – from the assumption of perfectly competitive labor markets to the observation that the degree

¹¹ Blinder and Krueger (1996) show that labor turnover in Japan is less than half the U.S. level. Japanese management policies, including seniority-based wages, company-level social policy, and reluctance to recruit experienced workers from other firms, contribute to this outcome.

¹² Acemoglu and Pischke also note other sources of labor market imperfections that have similar effects to low labor turnover and wage compression. These include matching and search frictions, which make it difficult for workers to quit their jobs and find new ones, and asymmetric information about how much training workers have (that is, a firm which trains its workers has an advantage over competitors because it has better information about the workers’ skill levels) (Acemoglu and Pischke 1999a).

¹³ Additionally, the typical argument about compression is that this creates incentives for employers to replace relatively expensive unskilled workers with machines. Together with the skills argument I am making, this points toward a high-skill, higher technology trajectory (supporting what Streeck has called “diversified quality production”) (see also Moene and Wallerstein 1995; Streeck 1991).

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of competitiveness in the labor market can vary (with implications for the incentives facing both firms and trainees) – is crucial to the present analysis because, as the case studies elaborated below show, training regimes developed historically in tandem and in interaction with the development of other labor-market institutions and organizations. In Britain, as we will see, union structures and collective bargaining institutions developed in ways that intensified and in some ways distorted competition among employers in both skilled labor and product markets. By contrast, in Germany and Japan, developments with respect to union structures and collective bargaining introduced labor-market imperfections that provided some incentives for firms to train while at the same time (re-)introducing collective action problems associated with poaching.¹⁴

The point is that the structure and operation of skilled labor markets can be significantly influenced by politics, and historically, the interaction of the development of training regimes and of labor-market institutions had a profound effect on *what kind of skilled labor market* employers (and trainees) faced, as well as the kinds of solutions available for redressing the particular (different) market failures that emerged in different contexts. The problems (and solutions) that emerged historically are what lie behind some of the striking contemporary national differences in training regimes (Acemoglu and Pischke 1999a: F132).

In terms of outcomes, Peter Hall and David Soskice note that in liberal market economies, the incentives are for young people to acquire skills that are generally marketable rather than firm- or even industry-specific. Companies may upgrade this education with some company training but typically attempt to add only non-transferable (firm-specific) skills whose full benefit they and only they can recoup (Hall and Soskice 2001). The U.S. training regime thus does not favor strong firm-based investment in private sector vocational training. It appears, however, to support very well the production of a plentiful supply of “high-end” skills – for example, engineering and programming – that thrive in a context that rewards strong general (especially university) education and where demand for training on the part of young people is driven by intense competition among firms.

¹⁴ Acemoglu and Pischke do not do the historical analysis, but they do stress the complementarities between training systems and labor market regulations (1999a: F136) and suggest that “the more frictional and regulated labor markets [in Europe and Japan] may encourage more firm-sponsored training” (Acemoglu and Pischke 1999b: 567). See also Peter Hall and David Soskice who discuss institutional complementarities between training systems and other political-economic institutions (Hall and Soskice 2001).