How Institutions Evolve

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

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Conclusions, Empirical and Theoretical

This chapter summarizes the main empirical findings of the analysis, both the cross-national and the longitudinal dimensions, and relates these findings to several major theoretical debates in the literature. The analysis of cross-national differences in the institutions governing in-plant training and the over-time analysis tracking the evolution of the German system over a longer period speak to debates in the political–economic literature on "varieties of capitalism" concerning institutional origins and institutional complementarities. Moreover, the analysis here provides insights into a broader literature in political science concerning issues of institutional reproduction, institutional change, and path dependence in politics.

Cross-National Comparisons: The Origins of Divergent Skill Regimes

The single variable that mattered most crucially to the divergent trajectories of skill formation documented here was the behavior and strategies of leading firms in skill-intensive industries, particularly the machine and metalworking industries.[1] Around the turn of the century, large machine and metalworking firms across all four countries shared similar interests and were pursuing roughly similar strategies with respect to skill formation. Circa 1895 firms like M.A.N., Mather and Platt, Yokosuka, and General

[1] Note well that these firms by no means always got what they initially wanted. As we have seen, they mostly could not achieve their goals on their own steam. The extent to which their preferred options prevailed was a matter of the coalitions they did (or did not) forge with other groups with complementary interests. In many cases, the strategies to which I refer here are compensatory strategies to deal with failure to achieve a first preferred option.

Electric were all engaged in efforts to develop their own in-plant capacities for skill formation and combining these with various policies designed to co-opt workers and exclude unions. From then on, however, trajectories diverged as these firms adapted their strategies to the particular constellation of incentives and constraints they faced in their separate countries.

They looked out on very different political and economic landscapes. Of crucial importance to "modern" industry, it turns out, was the fate of "traditional" associations of skilled craftsmen, customary guardians of apprenticeship and holders of the skills these firms needed. In Germany and Japan, state policy toward the artisanal sector sharpened the line between independent master artisans and skilled workers in industry. Economic and political conditions in Britain and the United States, by contrast, if anything contributed to blurring the boundaries between these two groups (Kocka 1986a: 307–16; Kocka 1986b). These differences were important in determining whether early unions were drawn to or prevented from organizing around craft-control strategies – and by extension affecting whether apprenticeship would be contested across the class divide in industry. The fate of the traditional artisanal sector determined what sorts of problems (and opportunities) the leading firms in skill-dependent industries faced, influencing the strategies they developed to deal with them.

In Germany, the state actively organized the artisanal sector and granted it monopoly rights to certify skills. This framework for certification and monitoring stabilized a system of in-plant training that had been sliding toward exploitation of cheap child labor. The stabilization of apprenticeship in the artisanal sector meant that dominant producers in skill-intensive industries like machine building could count on a relatively steady stream of certified skilled workers, since small artisanal shops were not necessarily interested in holding on to the workers they had trained. Over time, however, and as the deficits of a system not under their own control became apparent, the large firms most dependent on skill became obsessed with *securing the right to certify skills*, a right that the Handwerk sector monopolized.

The situation in Britain was wholly different because here traditional corporate artisanal associations had been destroyed through liberalization. Skilled craftsmen still presided over the training of the next generation, but they did so from a very different base and vantage point – from within craft unions whose goals with respect to apprenticeship were bound up in broader strategies to control the market in their trade. In Britain, apprenticeship was contested not – as in Germany – between an independent artisanal sector and emerging industrial sector, but rather between craft unions and employers in skill-dependent industries. Thus, as metalworking firms in Germany were mobilizing to fight for certification powers for their own in-plant training programs, their British counterparts were mobilizing around a quite different project, *beating back union controls and reasserting managerial discretion* on the shop floor.

In Japan, state policy in the early industrial period liberalized labor markets by actively disbanding traditional corporate artisanal associations and repressing nascent craft unions. Thus neither organized artisans nor craft unions were in a position to (attempt to) regulate apprenticeship at a corporate level. Here too traditional artisans played a key role in providing skills for industry, but in a very different way, as individual entrepreneurs. Firms in skill-dependent industries used them as subcontractors who brought their own retinue of skilled workers and trained their own apprentices. This so-called *oyakata* system was useful to industry because these independent craftsmen performed similar training and certification functions as the handicraft chambers (Germany) and unions of skilled workers (Britain). *Oyakata* were highly mobile, however, so the system was associated with very high levels of job hopping and poaching. Thus, at the same historical juncture in which machine and metalworking firms in Germany were becoming adamant about achieving rights to certify skills and in Britain were becoming obsessed with reasserting managerial control, their Japanese counterparts were completely consumed with the task of *controlling labor mobility* by stabilizing internal labor markets.

In the United States, as in Britain, craft unions emerged among skilled workers in key trades, which meant that here too apprenticeship would be substantially contested across the class divide. Craft unions in key industries like metalworking were, however, much weaker, having emerged much later than in Britain, and at a time when craft controls had already been substantially eroded through the introduction of standardized production and new technologies. As in Britain, so too in the United States, there were pitched battles between employers and craft unions at the end of the nineteenth century, but with the difference that in the wake of their victories American employers went much further than the British to crush and marginalize unions and reorganize production. To put the U.S. case in comparative perspective: Whereas in Germany, metalworking firms at century's end were concerned to certify skills, in Britain to reassert managerial control, and in Japan to dampen labor mobility, in the United States

the goal was above all to rationalize production and *reduce dependence on skilled labor altogether* through technological change, work reorganization, and product standardization.

Coalitions and the Further Evolution of the System

In each case, the strategic choices of machine and metalworking firms around the turn of the century set the scene for coalitions and dynamics in the 1920s that would begin to consolidate different trajectories. In Germany, social democratic unions organized significant numbers of skilled workers who had received their credentials in the traditional handicraft system, so despite the Social Democrats' opposition to the original 1897 legislation, unions came around to strategies aimed at democratizing and co-managing, rather than demolishing, that system. In the Weimar years newly incorporated labor unions thus emerged as potential allies for industry against the Handwerk monopoly and in support of a more expansive (covering industry) collectivist system for plant-based skill formation. Although a national-level consensus behind reforms along these lines did not materialize in the 1920s, significant progress was achieved on a voluntary basis, spearheaded above all by the efforts of key trade associations that tirelessly advanced the cause of uniform, standardized skills. Collectivism competed with alternative segmentalist models of skill formation until the Nazi era, but the development of a solidaristic approach to skill formation pioneered in the Weimar period preserved a model of plant-based training with overarching oversight and supervision into which organized labor could later (1969) be incorporated.

The possibility of a cross-class coalition for some form of collectivist skill formation also appeared possible in Britain in the early interwar years. Segments of capital that relied heavily on skill were if anything more willing to work with unions on this than were their counterparts in Germany. However, unlike in Germany, the policies of Britain's craft unions toward apprenticeship were bound up in broader shop floor control strategies. A durable accommodation would therefore have required a much broader settlement across a whole range of knotty control issues. British apprenticeship survived because British industry remained dependent on skills, but apprenticeship training was fragile because it rested less on a stable cross-class alliance than it did on a precarious balance of power between employers and skilled unions that could be (and was) repeatedly upset by shifting macro-economic and political developments. Notable advances in training achieved under favorable conditions (periods of skilled labor shortages or strong government support for training) were thus repeatedly rolled back when the political and/or market context shifted.

In Japan, the *oyakata* system involved massive contradictions from the perspective of firms in skill-intensive industries, providing necessary skills but also generating disruptive labor mobility. Firms responded with intensified efforts to reduce their dependence on independent *oyakata* bosses and to link internal training to a series of complementary measures (seniority wages, elaborate internal career ladders, and long-term employment guarantees) to stabilize the situation. The growing complexity of the skill needs of firms in the 1920s, along with the increasing threat of trade union influence at the plant level, produced a critical realignment (management with young, company-trained workers against the *oyakata*) that consolidated and deepened a segmentalist model of skill formation. Emerging unions, which had their own reasons to oppose the arbitrary *oyakata* system, formulated their goals and strategies within the logic of the system that employers were constructing, and in so doing helped to consolidate a segmentalist system for skill formation.

In the United States, industry went further than in Britain to rationalize production and to marginalize (control-seeking) craft unions around the turn of the century. However, key branches (especially, metals, machines, and electrical machinery) still relied on a fair amount of skill. This they dealt with in much the same way as their Japanese counterparts, through a system of subcontracting (to independent craftsmen) to handle the recruitment and training of skilled workers. Unlike the system in Japan, however, these salaried skilled workmen were enlisted in the continuing fight against organized labor, and together with management presided over the rationalization of production designed to reduce dependence on skills. Rather than serving as intermediaries in skilled labor markets or as trainers of the next generation of skilled workers, salaried foremen in American firms served as the "drivers" and supervisors of (increasingly) semi-skilled labor (Jacoby 1985). By the time American unions were stabilized and collective bargaining rights were secured (1930s and 1940s), organized labor in the United States was maneuvering in a more thoroughly rationalized shop floor environment, and as a result their strategies revolved around a narrower form of job control in highly bureaucratized internal labor markets (Brody 1993).

Youth and Apprenticeship

All these developments shaped the landscape that youth faced as they made choices about training. The behavior and strategies of prospective apprentices was also decisive to the trajectory of vocational training institutions in these countries. In Germany, where certification and monitoring were established early on, apprenticeship was a more transparent and attractive option for youth. The motives of handicraft producers in taking apprentices were clearly not altruistic; they paid them very little (in the early years, as we have seen, actually received a fee from them), and they used apprentices as a source of cheap labor. Artisanal producers in Germany, however, faced incentives to train well because if they did not, they would lose their license to train and, with it, the cheap extra hand in production. Going back to the theoretical discussion in the first chapter, certification helped shore up apprenticeship by mitigating credible commitment problems between learners and training firms. Apprentices contributed to the costs of their training through reduced wages, but after three or four years earned a certificate that had real value in the labor market at large. The extension of this system of certification to industry stabilized it further, rendering the content of skills (through standardization) increasingly transparent and because training became a portal to promising careers in top industrial firms.

Apprenticeship in Britain, by contrast, was entangled in conflicts between employers and craft unions, and their failure to reach a settlement left in-plant training utterly lacking in comparable monitoring devices. Nothing prevented British employers from using apprentices as cheap laborers and/or specializing them on particular machines to the detriment of their training. This generated rampant credible commitment problems, since training was extremely uncertain in quality and its duration very long (five to seven years for most). From the perspective of British youth, the value of formal apprenticeship was dubious to say the least, and even less attractive since the absence of certification meant that there were many other avenues through which ambitious youth could advance and achieve "skilled" status. Firms that trained well subjected themselves to massive poaching problems, and beyond (mostly unsuccessful) lobbying to socialize the costs of training through increases in compulsory public school attendance, they quite rationally sought to minimize "irrecoverable" investments by focusing their efforts on a relatively small number of youth who came to them with above-average (public) educational backgrounds. We thus see the beginning of the consolidation of a liberal regime in which (à la Becker 1993) the costs were shifted increasingly to youth, with firms playing a decidedly secondary role.

In Japan, training was central to the consolidation of managerial practices based on strong internal labor markets, complementary personnel policies, seniority wages, and so-called lifetime employment guarantees. Contrary to some popular conceptions, however, the logic of advancement in firm-based career ladders (as early as in the 1920s) was based on the steady acquisition of skills, not on job tenure per se (Levine and Kawada 1980: 174). Since the best (among other things, most secure) jobs were to be had in the large firms of the industrial sector, Japanese youth had an incentive to work hard in school to do well in the initial selection process. Once in the firm, they found that the structure of incentives encouraged ongoing investment in skills. The embedding of training in a broader network of complementary social policies provided incentives for firms to train and for workers to submit to training that was heavily biased toward the needs of the company. Firms could count on workers staying on after training (and on increasing productivity as well, due to ongoing skill acquisition), and trainees could count on their investment in skills being rewarded through ongoing advancement in the internal labor markets of the country's premier firms.

In the United States, prominent welfare capitalists similarly pursued strategies to internalize training and stabilize firm-based labor markets even as they continued to rationalize production and introduce skilled-labor-saving technologies. But after the First World War, these firms mostly abandoned the more ambitious broad-based training programs they had developed for blue collar workers, shifting attention to training for supervisory staff in "human relations management." Firms continued to offer all manner of company-based benefits in order to cultivate worker loyalty and reduce turnover, but (unlike Japan) wages continued to be attached to jobs not workers and managers resisted the introduction of transparent company-wide job classification schemes (and associated career ladders), concerned that these would encourage unionization and collective bargaining (Jacoby 1985). Moreover, and again in contrast to Japan, the route to supervisory positions within the firm was mostly not by rising in the ranks, since U.S. managers were much more likely to privilege college graduates for such positions. The incentives facing ambitious young workers were clear, and led them to avoid vocational training (of all varieties) like the plague in favor of an academically oriented education that opened many

more diverse opportunities for advancement in the labor market (Hansen 1997).

Institutional Complementarities

As pointed out in Chapter 1, the literature on the political economy of the developed democracies features a view of distinctive "varieties of capitalism" that sees political economies as more or less integrated systems in which various institutional arenas (industrial relations systems, financial systems, vocational education and training systems, and systems of corporate governance) cohere in important ways, characterized as they are by what political economists call "institutional complementarities." Peter Hall and Daniel Gingerich have provided very compelling evidence of the existence of such complementarities among a number of realms based on quantitative data drawn from across the developed democracies (Hall and Gingerich 2001, 2004).

Other authors have documented synergies and mutually supportive interactions between specific institutional realms, for example, industrial relations and key financial arrangements (Hall 1994; Iversen, Pontusson, and Soskice 2000). Such studies show that systems that give labor a strong voice in plant decision making are underwritten by complementary financial arrangements that provide the "patient capital" necessary for firms to take a longer perspective on personnel policy. Others have drawn attention to the ways in which the institutions governing industrial relations and/or skill formation have "elective affinities" to specific social policy regimes (Mares 2000; Estevez-Abe, Iversen, and Soskice 2001; Iversen and Soskice 2001; Manow 2001; Iversen 2003). So, for instance, skill formation regimes that encourage long-term investment in skills seem to "go with" systems of unemployment insurance that support unemployed workers at higher levels (thus preserving skills by removing the pressure for skilled workers to take jobs that do not tap and sustain their training) (Mares 2000).

The existence of these kinds of complementarities must be seen as an historic achievement of considerable significance, since it is clear that the various institutional arrangements that comprise any national polity or political economy were not created in a single "big bang." Individual components were forged at different historical junctures, brought into being through the actions of different political actors and coalitions. There is no reason to think that the various "pieces" will necessarily fit together into a coherent, self-reinforcing, let alone functional, whole. Indeed, Karen Orren and Stephen Skowronek have argued forcefully that the divergent "temporal underpinnings" of various institutional arrangements should generate contradictions and tensions as institutions representing different political "logics" clash, or as they put it, "collide and abrade" (Orren and Skowronek 2002: 747). These arguments raise important questions about the sources of apparent complementarities or why it is that the kinds of collisions and contradictions Orren and Skowronek's view predicts are not so pervasive and debilitating as one might suppose.

Historically speaking it would be somewhat empty to argue that the existence of a particular set of institutions in one realm "increases the returns" to the existence of a compatible or complementary set of institutions in neighboring realms. Although in some cases, such formulations provide a very apt characterization of the current functioning of particular constellations, as causal claims they leave much to be desired. Since typically there is no real "market" for political institutions, agent-less versions of the argument that rely on the logic of selection through market competition are unpersuasive.[2] Such arguments can be made compelling, however, when one embeds them in an historical account that attaches the outcomes to agents pursuing specific interests. In this more political version, "powerful actors" (and these must be specified) may be influential in, perhaps even decisive to, the genesis of particular institutional arrangements (say, industrial relations) and may therefore also have a strong interest and role in creating complementary institutions in neighboring realms (say, social policy).

This is the gist of Peter Swenson's account of the construction and elaboration of the "Swedish model," which features highly centralized industrial relations institutions and a universalistic welfare state – institutional arrangements that turn out to be mutually supportive in important ways. Swenson (1991, 2002) traced the centralization of collective bargaining institutions back to a cross-class alliance forged in the 1930s between employers in industries exposed to international competition and workers in low-pay sectors. Centralization served the interests of these particular employers because it brought under control disruptive behavior of employers and unions in high-pay sectors (for example, construction) that were sheltered from international competition. The success with which centralized bargaining operated in institutionalizing wage restraint had some nasty side effects, however, above all chronic labor market scarcity, which became

[2] Some economists (for example, Aoki 2001) therefore invoke culture as a unifying causal variable.

especially severe in times of buoyant demand and growth. Labor scarcity created new problems – unleashing "disloyal" competition among firms that existing institutions (governing wages) were unable to control. By the 1950s, therefore, important segments of Swedish capital were quietly rallying behind initiatives for the introduction of comprehensive health insurance, generous sick pay, and an active labor market policy since these provided solutions to the specific pathologies that had developed in the Swedish labor market.

This kind of interest-based account is important, and it is certainly congruent with the conventional wisdom that institutions are designed by strategic actors with their own interests very much in mind. The actions of "powerful agents" would produce strong complementarities across various realms if there were a high degree of continuity in who these powerful agents are, both across various institutional arenas and over time. One question, therefore, would be whether we can, a priori, identify a set of actors whose interests will systematically prevail over time.

Since we are dealing in this literature with capitalist countries, a prime suspect would be employers and one of the points that Swenson's analysis persuasively makes is that political–economic institutions with any kind of staying power are precisely those achieved not against capital but in collaboration with some segments of capital.[3] Swenson's account of the "fit" between industrial relations institutions created in the 1930s and social policy in the 1950s hinges on an argument about how capitalist interests evolved over time. In the case just discussed, for example, he shows how previous rounds of institutional innovation (centralization of wage bargaining) produced effects (labor scarcity) that interacted with changes in the broader market context in ways that, over time, re-shaped capitalist interests in other, neighboring realms (social policy) (Swenson 2002 and forthcoming).

Other authors, by contrast, have been more inclined to emphasize the structural constraints within which capitalists are maneuvering. Hacker and Pierson, for instance, do not deny the importance of employer interests, but they insist that in order to understand outcomes it is important to analyze the structural conditions that establish the *menu of options* from which actors (including employers) are forced to choose (Hacker and Pierson 2002). Invoking insights from studies of agenda setting, they point out that the crucial issue in most situations is not the final choice between the two or

[3] A finding, by the way, confirmed in this study as well (see especially the concluding discussion in Chapter 5).

three (or x) specific policy options on the table at any given moment, but rather the prior question of whose preferred range of options forms the "choice set" from which the actors are allowed to select (Hacker 2002; Hacker and Pierson 2002). Hacker and Pierson attach their critique to an analysis of the genesis of the Social Security Act in the United States, highlighting the way in which the broader political context had already removed certain previously viable options (options earlier embraced by very powerful business interests) from the agenda (Hacker and Pierson 2002: 12).[4]

Huber and Stephens (Huber and Stephens 2001) also draw attention to structural and political constraints, emphasizing how previous policies have powerfully reshaped the *distribution of preferences*, by which they mean the universe of actors who are around to express their interests in particular (later) policy debates. So, for example, while acknowledging (with Swenson) that some Swedish employers supported universalistic welfare policies in the 1950s, Huber and Stephens put a different spin on this observation by drawing attention to the fact that twenty years of uninterrupted Social Democratic rule had largely eliminated low-wage producers and in so doing eliminated as well an important source of potential opposition to policy initiatives at that time. Huber and Stephens argue that analyses emphasizing capitalist interests need to make sure they do not "lose sight" of the way in which the preferences and strategies of these actors have been shaped by the prevailing structural and political context (Huber and Stephens 2001: 33).

Whether emphasizing especially the evolving interests of capital (Swenson) or the structural and political constraints within which employers define and defend their interests (Hacker and Pierson, Huber and Stephens), these analyses all highlight the need to situate the interpretation of specific choice points within a broader temporal framework that takes account of the feedback effects that have defined the conditions within which specific policy and institutional choices are being made. They highlight the way that policies initiated at one point affect which actors are around to fight the next battle, how they define their interests, and how and

[4] Dobbin (Dobbin 1994) has made a similar point from a more sociological perspective. He argues that in order to understand cross-national differences in outcomes, it is necessary to consider not just a particular decision node (even the final one) but rather the range of options entertained in the first place, often completely different cross-nationally.

with whom they are likely to ally themselves subsequently (Skocpol 1992; Pierson 2003a; Weir 2003). Attention to such feedback effects is crucial for understanding how institutional complementarities are forged historically because they alone provide the necessary *causal links* between the specific episodes – across different periods and often involving different political actors and coalitions – in which successive rounds of institutional innovation occur. Such feedback effects establish the raw materials (constellation of players, definitions of interests) with which policy entrepreneurs, as well as defenders and challengers of existing institutions have to work.

How do such feedback effects operate? The present analysis confirms some of the insights from previous scholarship, but also contains new leads and insights. In some cases, and in line with contemporary theorizing on "path dependence" in politics, we can observe a traditional logic of "increasing returns to power" – that is, situations in which the victors at one stage impose institutional solutions that reflect and entrench their interests, thus biasing outcomes in the next round. An example from the present study is the case of the United States, where employers – already less dependent on skilled labor than their counterparts elsewhere – were in a position to decisively defeat the control strategies of organized labor (and crush craft unions) at the end of the nineteenth century. This set the scene for more innovations in production technology and personnel management that further reduced their dependence on skilled labor – which in turn rendered the possibility (indeed the necessity) of joint (union-employer) regulation of training, and of skilled labor markets generally, more remote over time. This line of argument mirrors Huber and Stephens's account of Sweden sketched out above, in which the victory of the proponents of centralization in struggles over industrial relations institutions in the 1930s created an environment (a wage environment, above all) in which low-wage producers could not survive. This tilted the playing field for subsequent institutional and policy choices, in their case, discussions in the 1950s over social policy.

Beyond arguments based on a logic of increasing returns to power, however, the present analysis highlights the way in which institutions created by one set of actors and for one set of purposes can sometimes be embraced and "carried forward" on the shoulders of another coalition altogether. As we saw in the German case, for example, neither organized labor nor the machine industry was part of the original coalition behind the crucial legislation of 1897, yet both would eventually become hugely important carriers of the system that evolved subsequently. The existence of this handicraft-based system of training had important feedback effects – crucial above all in shaping the way that unions defined their interests with respect to skill formation. As the ranks of Germany's social democratic unions filled up with skilled workers who had received their credentials under the system, the unions developed a strong interest not in dismantling the system but rather in controlling or co-managing (codetermining) the system of firm-based training that it represented.[5] The important point is that from quite early on German unions were themselves invested in a system of plant-based training, and therefore pursuing strategies that were very different from those of social democratic unions elsewhere (for example, Swedish unions), which were more skeptical of all forms of firm-based training and spent their time pushing instead for publicly managed, school-based vocational education for blue collar workers.

The machine industry was the other key actor in Germany in the early industrial period, not part of the original coalition but one whose strategies with respect to the handicraft system were also vitally important to its evolution. The machine industry, heavily dependent on skills, was therefore a major consumer of the skills generated by these small handicraft producers. As elaborated in Chapter 2, large machine companies tried to pursue a completely different model of skill formation based on training for internal labor markets – very similar to practices emerging in the United States and Japan at around the same time. But these firms could not escape the logic of the pre-existing handicraft system altogether. Skill-intensive industries in Germany were pushed toward a more coordinated approach to training through their competition with the artisanal sector whose methods they abhorred and whose power to certify skills they coveted.

Saying that labor unions and the machine industry framed their interests in relation to the existing handicraft system, however, is not the same as saying that these groups were invested in those institutions *as originally constituted.* Here I part ways with some path-dependence theorizing that emphasizes "lock in" as actors adapt their strategies to conform to the logic of prevailing institutions. Once in place, institutions do indeed affect the interests and strategic options available to various groups. Against the determinism of some lines of argument, however, institutions continue to

[5] Employing Greif and Laitin's terms (Greif and Laitin 2003), this could be characterized as a situation in which the operation of these institutions produced behavioral effects that expanded the "quasi parameters" within which the institution was self-enforcing.

be the object of ongoing political contestation, and changes in the political coalitions on which they rest hold the key to understanding significant shifts over time in the form the institutions take and the functions they perform in politics and society.

The issue becomes the extent to which institutions generate only self-enforcing feedback or whether their operation also generates dynamics that complicate rather than contribute to the "*reliable* reproduction" of these arrangements (Clemens and Cook 1999: 449; on this point, see also Orren and Skowronek 1994). The increasing interest of both the machine industry and organized labor in the system of training if anything unleashed new conflicts, particularly over the governance of that system. The resulting renegotiation of the governance structures over time drove changes in the content of training toward greater standardization and uniformity, and culminated in the political-distributional transformation of the system as a whole.

This case can be seen as an instance of institutional development and change that combines elements of positive feedback with new developments that did not necessarily always push in the same direction but altered the overall trajectory. It thus takes us beyond increasing returns and positive feedback arguments (associated with the path-dependence literature) by demonstrating how actors on the periphery ("losers" in one round) can become invested in prevailing institutions in certain ways, such that shifts in the balance of power that go their way may result in institutional conversion rather than either straight reproduction or breakdown (see also Thelen 2002).

The key to understanding institutional complementarities is to think in terms of institutional co-evolution and feedback effects as processes through which coherence does not emerge so much as it is constructed, as institutions inherited from the past get adapted – in this case through political incorporation and associated renegotiation – to changes in the political, market, and social context. To the extent that things "fit" together, it may be partly because one group or coalition is always winning, or because new institutions are selected for their compatibility with those that already exist. However, it may well also be due to processes through which inherited institutions are actively "fitted" or adapted to new circumstances, new interests, and new power constellations. These considerations bring me to the broad question of institutional origins, evolution, and change to which the foregoing analysis speaks.

Institutional Evolution and Change

The analysis above thus also provides insights into general processes of institutional reproduction and change. Whereas earlier generations of institutional analysis focused primarily on the effects of different institutional configurations on policies and other outcomes, a growing number of studies have turned their attention to the question of how institutions themselves originate and evolve over time (for example, among others, Clemens and Cook 1999; Pierson 2004; Greif and Laitin 2003). Current work in this area has been largely driven by dissatisfaction with existing treatments of the subject, particularly those that draw a sharp line between the analysis of institutional reproduction and that of institutional change. As pointed out in Chapter 1, a common understanding in the literature sees institutional change in highly discontinuous terms, as the consequence of exogenous shocks that wipe the slate clean (Mancur Olson's [1982] theory of postwar economic growth) or that open new possibilities for agency and innovation (Katznelson's "unsettled moments of uncommon choice" [2003: 277, 282–3]).

Without denying that such critical junctures are possible, the present analysis offers a somewhat different angle on institutional reproduction and change. Contrary to strong punctuated equilibrium models that lead us to expect big changes in the context of big historic breaks, we often find significant continuities through historically "unsettled" times, and ongoing contestation and renegotiation in "settled" periods that nonetheless over time add up to significant change. As the case of Germany vividly demonstrates, institutional arrangements often turn out to be incredibly resilient in the face of huge exogenous shocks of the sort we might well expect to disrupt previous patterns and prompt dramatic institutional innovation. As events in the immediate post-World War II period (Chapter 5) make clear, in times of crisis or deep uncertainty, political actors often specifically eschew experimentation and instead fall back on familiar formulas – resulting in institutional reproduction not change.

As the German case has also shown, however, more subtle and smaller scale changes in "settled" rather than "unsettled" times are also worthy of our attention, as, over time, they can cumulate into significant institutional transformation (see also Djelic and Quack 2003: 309). Chapters 2 and 5 of this book traced the evolution of the German system from a core framework aimed mostly at defeating unions to a pillar of social partnership between

labor and capital one hundred years later. This process was defined not so much by massive renegotiations at historic "breakpoints" (of which in Germany over the twentieth century there were certainly plenty), but rather through processes of layering and conversion (Chapter 1), as the incorporation of new groups into pre-existing institutions resulted in the *addition* of new elements that altered the overall trajectory and *renegotiations* based on changing coalitional foundations that redirected the institutions toward goals and functions completely unanticipated by the original founders.

Much of the early literature on diverse national trajectories tended to obscure these issues by conceiving of institutions as the "frozen" residue of critical junctures, or as the "sticky" legacies of previous political battles (see, for example, Lipset and Rokkan 1968: 3, 50, 54, which employs the language of "freezing"). More recent literature on path dependence and increasing returns effects has, however, pushed the debate forward by specifying the *dynamic* processes that sustain institutions over long periods of time (Pierson 2000a). Increasing returns arguments tell an important part of the story, but they are mostly designed to capture the logic of institutional reproduction, not institutional change. Moreover, in many cases, explaining institutional persistence will require that we go beyond positive feedback arguments. As we scan the political and political–economic landscapes, we find that institutional survival is often strongly laced with elements of institutional adaptation and even sometimes transformation of the sort that brings inherited institutions in line with changing social, political, and economic conditions.

The general argument I have made is that institutional reproduction and institutional change, which are often treated as completely distinct analytic problems, have to be studied together and are in some important ways quite closely linked (see also Thelen 1999). Formal institutions do not survive long stretches of time by standing still. The language of stasis and inertia is particularly unhappy because as the world around institutions is changing their survival will not necessarily rest on the faithful reproduction of those institutions as originally constituted, but rather on their ongoing active adaptation to changes in the political and economic environment in which they are embedded.

An obvious and general lesson that emerges from the foregoing analysis is to underscore Robert Bates's cautionary note not to "confound the analysis of the role of institutions with a theory of their causes" (Bates 1988; see also Knight 1999:33–4). The present study serves as a strong warning against varieties of what Pierson calls actor-centered functionalism that engage in a kind of backward deduction and in which "the effects of the institutions [are taken to] explain the presence of those institutions" (Pierson 2000b: 475). Looking at German vocational training institutions from today's vantage point, analysts quite reasonably portray this system as part of a high-wage, high-quality production regime that reconciles the existence of strong unions with strong performance in export markets. As the history shows, however, this was not the obvious endpoint of a trajectory that could have been foreseen in the late nineteenth century.

As Pierson notes, the point is not that institutions are not designed by purposive actors with particular interests; clearly they are.[6] The point is that "changes in the broader social environment and/or in the character of the actors themselves" (among other things) can, over time, produce a significant and unintended "gap" between the goals of the designers and the way institutions operate (Pierson 2004: 108–9). Cases where such "gaps" can be observed may be particularly fruitful ones to mine for insights into the way in which institutions evolve over time. The perspective on institutional development elaborated in this book has emphasized the political contestedness of institutions, and argued that shifts in the coalitions on which institutions rest are what drive changes in the form they take and the functions they serve in politics and society.

In line with some current theorizing about path dependence in politics, the present analysis shows that we need to be sensitive to the possibility of what Stinchcombe has termed "historicist explanations," that is, the idea that the "processes responsible for the genesis of an institution are different from the processes responsible for the reproduction of the institution" (Mahoney 2000: 4; Stinchcombe 1968; Pierson 2000a). Against functionalist accounts that read the origins of institutions off their current functions, a somewhat longer time frame will often be necessary for us to see how institutions created for one set of purposes can be redirected to serve quite different ends. Alongside power-distributional accounts that stress how powerful actors design institutions to anchor their position, we often need a longer time frame to see how institutions created by one configuration of power or coalition of interests can be "carried forward" on the shoulders of some other coalition entirely. And beyond some

6 Although as Schickler (Schickler 2001), Palier (Palier forthcoming), Pierson (Pierson 2004), and others have pointed out, institutions also often represent compromises among groups with very different and even contradictory interests. In the present study, the 1897 Handicraft Protection Law is a perfect example of this (see the analysis in Chapter 2).

cultural accounts that see institutions as faithfully reflecting shared cultural scripts, a longer time frame may allow us to see more clearly how institutions created at one juncture can be constitutive and not just reflective of a particular social or cultural orientation. The point in each case is that the creation and existence of the institution at one juncture can have a formative impact on actor strategies, interests, identities, and orientations subsequently.

Positive feedback is clearly part of the story but what also emerges from the present analysis is the way in which such feedback effects are not necessarily associated with the faithful reproduction of the system as originally conceived. In terms of the sources of (or pressures for) change, the present study underscores the insight of Clemens and others that analyses of institutional development need to be attuned to processes unfolding on the periphery (Clemens 1993; Orren and Skowronek 1994; Weir 1992). This is because institutions do not just generate positive feedback, they also "generate grievance . . . [and] actors who are aggrieved but not co-opted are an important source of pressure for institutional change" (Schneiberg and Clemens forthcoming: 35). Here it is important to remember that, in politics, unlike the marketplace, the "losers" at one juncture do not necessarily disappear and their "adaptation" can mean something very different from "embracing and reproducing" the institution, as in increasing returns arguments from economics. Where the institutions that prevail do not generate significant positive feedback effects among the aggrieved, their later empowerment is likely to spell institutional breakdown. This is the case for Britain, where union-enforced apprenticeship was actively destroyed by employers when changing market conditions shifted the balance of power sharply away from skilled unions.

As the German case highlights, however, it is also important to look at whether actors who are on the periphery themselves become invested in the prevailing institutions and if so, in what ways. In the present analysis the most important initiators of change were those that were "outside" the vocational training system as originally constituted (that is, for the handicraft sector), above all, the organized machine industry and organized labor. In both cases, the strategies these groups pursued in some ways adapted to the logic of the existing system while in other ways putting intense pressure on those institutions to accommodate their different agendas. In cases such as this, shifts in the balance of power between "insiders" and previous "outsiders" may result in institutional conversion rather than breakdown. Such cases combine elements of increasing returns and positive feedback with new developments that do not necessarily always push in the same direction but rather can alter the overall trajectory.

The kind of analysis articulated here helps us get beyond blunt models of discontinuous change based on a strong juxtaposition of periods of institutional "stasis" versus "innovation." It does so not just by identifying modes and mechanisms of gradual change, but also – this is important – by forcing us to specify *which aspects* of the system are getting stably reproduced over time and which are subject to renegotiation and why. What is incredibly stable through the many truly massive breakpoints in Germany (from 1897 to the present) has been the idea of a collectively managed system for monitoring how firms train their workers (a quite unusual historical achievement). On the other hand, what was not at all stable, and subject to intense contestation and periodic renegotiation was the governance structure through which this system would be administered. That is what was periodically renegotiated in ways that on the one hand allowed the system to survive – by bringing it into line with changes in the societal balance of power – while at the same time putting on these institutions an entirely different and unanticipated spin compared with the political and functional logic of the system created in 1897. This case makes clear that one can often make sense of the form and functions that institutions have assumed only by viewing them, as Pierson and Skocpol (2002) recommend, in the context of a larger temporal framework that includes the sequences of events and processes that shaped their development over time.

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