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Politics Society 2001; 29; 173

DOI: 10.1177/0032329201029002002

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Labor As an Imagined Commodity

RICHARD BIERNACKI

In the transition from the feudal-corporate order to industrial capitalism, German and British producers adopted contrasting definitions of the workers' conveyance of labor as an abstract, quantifiable substance. These definitions of labor as a commodity structured techniques of manufacture and discipline in the early factory systems of Germany and Britain. The contrasting understandings of labor also shaped the dynamics of capital investment and workers' understandings of exploitation in each country before the First World War. Recast as an analysis of the cultural assumptions of capitalist practice, Marx's theory of labor values offers powerful, empirically demonstrable predictions.

For more than a century social analysts have assessed Marx's discovery of the extraction of surplus value from labor power principally as a creative act of intellection rather than as a historically determined process. "Marx's theory of surplus value," Engels wrote in 1885, "struck like a thunderbolt out of a clear blue sky."¹ In this essay I will show how German social conventions for identifying labor as a commodity guided Marx's critique and transformation of the political economy that had been bequeathed to him by British thinkers. Returning to the earthly origins of Marx's innovations in *Capital* reveals his theory's political and explanatory significance in these "post-Marxist" times. Most concretely, it shows how Marx's category of abstract labor may be recast as a key principle for explaining cross-national differences in capitalist manufacture and in workers' movements of resistance. In Marx's lifetime abstract labor was not only a speculative postulate of intellectuals. It was also a category of everyday practice on the ground that varied between Germany and Britain, the two countries whose economic histories imprinted themselves most firmly on Marx. In each land nineteenth-century producers used nationally distinctive principles to grasp their labor as an object of

value and to organize the conveyance or withholding of this quantifiable but intangible ware.

I will develop in four stages the origins and implications of this cultural construction of labor. First I sketch the historical origins of the contrasts between the predominant assumptions about abstract labor in Britain versus Germany. This is preliminary to showing, second, how these assumptions about labor shaped correspondingly different factory regimes in nineteenth-century Britain and Germany. Then I can outline, third, the culturally circumscribed path Marx followed to reach his principal discoveries in *Capital*. I conclude by suggesting how this historicization of Marx's reflections rescues his value theory from becoming a self-contained, empirically peripheral game and reinvigorates it as a tool of cultural discovery and political commentary. In a prior work, *The Fabrication of Labor*, I attempted to show how the producers' understanding of labor value in each land mediated their correspondingly different uses of technology, how it guided their understanding of class and exploitation, and how it shaped the nationally distinctive institutions of conflict and compromise.² Here I go on to show how treating abstract labor as "nothing more" than a culturally enacted principle uncovers new differences in long-term macroeconomic development in Germany and Britain; further, I clarify how analysis of the commodification of labor, rather than of legal traditions or political discourse alone, offers a preferable explanation of differences in capitalist institutions and movements of resistance.

A return to Marx's theory of labor value may sound, of course, like a regression to the least convincing and most arcane part of Marx's corpus. In the 1970s mathematical analysts forged a series of distinguished critiques that dismantled inherited Marxist interpretations of how the category of labor value controls capitalist exchanges and the dynamic of development.³ What had to be jettisoned from Marx, John Roemer summed up by 1981, was "the notion that labor value in some way regulates the exchange of equivalents."⁴ Once Marxists abandoned that premise, however, they and their critics found it difficult to define the empirical significance of value theorems. "The *theory* of labour value fails," Jon Elster concluded in 1985, "because there is no use to which the concept can be put."⁵ We need not accept Elster's pronouncement in full to acknowledge that Marxian economists became concerned more with modeling preconditions of exploitation, less with explaining differences among real-world institutions. For Roemer, for instance, labor values became units in game-theoretic models of distributive justice.⁶ To be sure, Marxist analysts who have abandoned the labor theory of value as a quantitatively verifiable hypothesis, such as Erik Wright, continue to theorize economic transactions between members of different classes as transfers of labor. And they still define some transfers as exploitative of labor effort.⁷ Yet it must be said that few researchers derive distinctive empirical hypotheses from the notion that productive agents traffic in labor effort or labor time. Wright concludes from his latest data on class consciousness that no improvement in explanation obtains

from viewing employment and market intercourse as mechanisms for transferring labor rather than accepting them at face value as commercial strategies for income, as Max Weber did. “The empirical categories themselves can be interpreted in a Weberian or hybrid manner,” Wright summed up in his recent landmark, *Class Counts*.⁸

When Marxists nonetheless retain the vocabulary of “labor value” as a qualitative assessment of the constitution of social relations, they generally conceive the receipt of labor as the “extraction and appropriation of effort.”⁹ By treating labor as bodily or cerebral exertion, these analysts cast it as an elementary transhistorical, quasi-physical or biological property in the ownership of individuals. This conception of labor is consistent with their use of game theory and of other decontextualizing models in common with the neoclassical economists whom they take on in debate. The gamble I wish to take consists of recovering the cross-national and historical specificities of concepts of abstract labor. This move transforms concepts of labor into robust predictors of industrial practice and forms of labor resistance. To initiate this shift, let us begin with the compelling record of diverse cultural definitions of abstract labor.

PART ONE: THE EMERGENCE OF “LABOR” IN BRITAIN VERSUS GERMANY

In keeping with the principle that the most developed country produces the most advanced appreciations of the categories of capitalist relations, Marx concentrated his studies in political economy on the economic thought of Britain above all. He took the intellectual products of Britain’s singular path of capitalist development and universalized them as the fluent expressions of capitalist relations in general. Certainly Marx was perspicuous in his contemptuous dismissal of the economists of his native Germany as nothing more than desperate peddlers of second-rate goods.¹⁰ Germany produced no equals of Smith, Mill, or Ricardo. Yet by ignoring the German economists’ theory of labor, Marx deprived himself of the comparative perspective from which he might have come to appreciate telling peculiarities in how abstract labor was conceived in Britain. In a history of distinguished accomplishment, the German epigones have no place, but as tell-tale markers of cultural differences between Germany and Britain, they offer a key for a regrounding of Marx’s concepts.

In Britain the precocious emergence of free product exchange in a national market during the seventeenth century inspired a flurry of original treatises on prices and labor.¹¹ The outstanding feature of this vigorous literature in Britain was that it treated everything as a vendable commodity—except labor power.¹² In part this was due to public concurrence with statutory prohibitions on the free negotiation of wages. For instance, William Petty, in Marx’s eyes the founder of political economy, assumed as a matter of course in 1662 that wage rates for free workers should remain fixed by statutes to give the workers “just wherewithal to

live.”¹³ The local justices’ rating of wages in many trades and localities did exactly that. By some estimates, a licensed beggar on the streets in the seventeenth century could expect proceeds as high as those of a laborer whose wages were set by law.¹⁴ In consequence, labor could be envisioned as an article of free commerce only when it was embodied in a product and vended by independent producers. Petty reproduced this assumption in his promising discussion of labor as a source of value in commodities. Petty allowed labor to enter into the market price of goods when it took the form of the surplus labor of husbandmen who had their own means of subsistence. Petty treated the labor of these independent landholders as a regulator of the price of commodities because it was not sold under compulsion and because it was deposited in a product by autonomous workers.¹⁵

Until the era of Adam Smith, both elite and popular commentators in Britain supposed that selling one’s labor for a wage to an employer enmeshed one in relations of subordination that made it impossible to participate in equalitarian exchange. The depth of this popular belief became apparent in the outlook of the Levellers in the English Revolution. The Levellers, the preeminent advocates for the rights of the common people, supposed that wage workers lacked the ability to exclude others from the use and enjoyment of their labor power. In their eyes, wage workers thereby forfeited their “property” and autonomy. As dependents they were disqualified from joining a body politic through contract. By this reasoning prominent spokespersons for the Levellers concluded that wage workers must be denied the franchise.¹⁶ Gerrard Winstanley, a leader of the Diggers, responded to this predicament by recommending that the law forbid the institution of wage labor altogether. “We can as well live under a foreign enemy working for day wages,” he said, “as under our own brethren.”¹⁷ Through the end of the seventeenth century, the verb *to employ* applied to the recruitment and binding of an abject servant rather than to fluid contracts of the wage-labor relation.¹⁸

The inability to reconcile the employer’s domination of the wage worker’s labor power with the circulation of labor among equals in the sphere of exchange marked the thought of intellectual elites as well. Until Smith’s publication of *The Wealth of Nations*, James Steuart reigned as the most influential of political economists in Britain. In his *Principles of Political Oeconomy*, published in 1767, Steuart divided workers into two groups: slaves, who produced under the political domination of either feudal or colonial orders, and independent work people who produced for a liberal commercial order. The distinction was between those who sold their labor power, and were therefore subjugated, and those who sold products, and were therefore autonomous agents. The free workers in his model labored as independent commodity producers who covered all the production expenses of the wares they manufactured.¹⁹ Analogously, in Blackstone’s celebrated *Commentaries* from 1765 to 1769, the workers who conveyed their labor power did so on the basis of status rather than of contract. Blackstone classified those who sold their labor power as “permanent” servants, a label that referred to

the inborn character of their person that obligated them to work for others by command.²⁰

The disappearance of statutory wage regulation in the eighteenth century and the increasing separation of workers from their means of subsistence enabled labor power to come into its own as an article of commerce. Yet the labor conveyed through the engagement of wage workers was still conceived as a general social substance only as it was embodied in a product. Adam Smith illustrated the preservation of this assumption in 1776 in the *Wealth of Nations*. As is well known, Smith developed his theory of how labor accounts for the prices of commodities by reasoning from an archetypical “nation of hunters” prior to the accumulation of capital. These independent producers exchange only the produce of their labor for the produce of others. With this simplification Smith inferred that “the proportion between the quantities of labor necessary for acquiring different objects seems to be the only circumstance which can afford any rule for exchanging them one for another.”²¹ In the contemporary, capitalist setting, Smith saw that dependent wage workers are hired by the owner of materials and stock. Yet he adhered all the same to the assumption that such workers transfer their manufactures rather than their labor power to the employer. For Smith envisioned that the capitalist employer receives “complete merchandise” from the worker, and then exchanges it again “either for money, for labour, or for other goods”—all three of which represented to Smith’s mind receipt of the same quantity of labor, as if employing labor were identical to purchasing its output. By Smith’s account, after the deductions due to the owner of the accumulated stock, the same laws of exchange among market equals apply in contemporary, “opulent” society as in precapitalist society:

Every workman has a great quantity of his own work to dispose of beyond what he himself has occasion for, and every other workman being in exactly the same situation, he is enabled to exchange a great quantity of his own goods for a great quantity, or, what comes to the same thing, for the price of a great quantity of theirs.²²

Each dependent wage laborer in this portrayal markets his or her labor as surplus “goods.”

Even into the age of the great mechanical factory British commentators continued to theorize the workers’ sale of labor as the conveyance of a product. James Mill in the 1844 edition of *Elements of Political Economy* wrote that capitalists cannot even be said to have purchased any labor until they buy it materialized in an output. The employment contract in Mill’s eyes comprises an agreement to purchase a share of “the commodity, *when produced*.”²³ The manufacturing workers themselves reasoned so throughout the nineteenth century. For example, the *Poor Man’s Advocate*, the journal of textile and other mill operatives, declared in 1832 that the factory owner who purchased a “stipulated quantity of labor” from workers was like a customer who bought finished cloth in a store.²⁴ At the close of the

century, Robert Blatchford became known as the author whose analysis of exploitation was most widely cited by workers. Blatchford defined the capitalist in 1894 as a “middleman” who “buys *the article* from the maker, and sells it to the user, at a profit.”²⁵

In market society in Germany the agents began their engagement with economic theory more abruptly than in Britain and in a substantially different commercial setting. Not until the start of the nineteenth century did several of the German states officially and decisively weaken guild restrictions on free trade of articles and on the exercise of occupations.²⁶ Once they did, the Germans developed their interpretive economic theories with a divergent understanding of labor as a general substance of value, as their response to Smith reveals. As early as 1805, Ludwig Jakob, a professor at Halle, complained that Smith had mistakenly identified the wage for labor with the quantity of labor delivered. “It is not what the worker receives for his labor that forms the measure of exchange value,” he wrote, “but what it has cost him in the expenditure of power.”²⁷ In British reflections, work could appear in the guise of abstract labor only when examined from the perspective of the later moment of exchange in the market. Jakob viewed the work activity itself as abstract labor because he saw it as the expression of a general, quantifiable power. “For it [labor] is only an action,” he said, “not a thing.”²⁸ Jakob defined labor as a commodity as “the activation of human power” and measured its sum by “the sacrifice of power.”²⁹

An important contemporary of Jakob’s, Johann Lotz, criticized Smith for failing to recognize the difference between the use value and the exchange value of labor. In 1811 he wrote that “the products of labor are always different from the labor itself. . . . Viewed as a productive power, it [labor] is always a capacity, a good of high value, but only of use value, not of exchange value.”³⁰ To be sure, Lotz’s emphasis on the concrete moment of using labor power led him to abandon Smith’s faith that labor not only produces value but establishes the metric for their exchange. Lotz shows that at the very dawning of their market society, the German economists posed (but did not solve) the problem of combining the British theorems of the equal exchange of labor products with the German insight that value came from the moment of *use* of labor *power*. Yet the premise that labor is conveyed to the employer in the form of a capacity became commonplace in the writings of German economists. As Hans Mangoldt, a spokesperson for the business community, put it in 1863, “the wage is the compensation for the use of one’s personal labor power that has been entrusted to another person.”³¹

The distinction between labor and labor power that emerged in the treatises of German intellectuals appeared in the plebeian language of the streets as well. *The Brotherhood*, the newspaper of the workers’ associations during the revolutions of 1848–49, specified that workers transferred their labor in the form of labor power in the employment relation. Its correspondents complained that workers “chained to the power of capital have to hire out their physical or mental powers.”³² Simi-

larly, in the vocabulary of public remonstrances in the 1850s, workers said their employers were “renters of labor power.”³³ Even commonplace dictionaries cited the term “labor power”—*Arbeitskraft*—to specify how workers vended their abilities. The celebrated Grimms’ dictionary of 1854 included a separate entry for *Arbeitskraft* and illustrated its usage: “One views a person with his labor power as a commodity, whose price rises and falls with the level of supply and demand.”³⁴ German workers did not wait for Marx to use “labor power” to describe the extraction of surplus. This usage had surfaced in the vernacular beforehand and had become commonplace in the revolutionary period of 1848-49.

Despite major differences in economic institutions and in local culture among the fragmented German states, the German lands shared essential features by contrast with Britain. The key was that officials in many states, particularly in Prussia after 1811, freed the manufactory workers’ marketing of labor power from statutory interference or police surveillance *simultaneously* with the creation of a market in products. In contrast to Britain, labor was established as a commodity conjointly with the establishment of market culture. This shared feature of the German lands permits us to speak of an overall German path of development. The crystallization of market discourse in Germany also coincided with the centralization of manufacture in factories. The employer’s domination of the manufacturing worker appeared to result from the free negotiation of social relations in the factory, not from ascribed social status or from the external compulsion of local authorities who enforced terms of servitude, as in Britain. In this culturally formative period, Germans could view the immediate domination of the wage worker as part and parcel of the free commercial order, not as an exception to it.

In Marx’s approach, concepts of labor, like the other categories of political economy, are more than tools of analysis. They are also forms of social consciousness that constitute the practices of capitalist production. For this reason the differences in the concept of labor in the mature theories of political economy in Germany and Britain cannot help but suggest a daring hypothesis: the everyday practices by which labor was conveyed as a commodity and consumed in capitalist manufacture must have had correspondingly different structures in Germany and Britain. Each of the nationally distinctive theories of how labor appears as a quantifiable, reified social substance would then be “true” in its own locale: each would be enacted in its own land in what Marx called the “hidden abode of production.”

PART TWO: THE CONVEYANCE OF LABOR IN THE FACTORY

If the commodity of labor in Britain made its appearance in the guise of embodied labor, a vulgar historian might surmise that British manufacturing workers would be paid for their products by *piece rates*. Correlatively, if labor were commodified in Germany under the guise of “labor power,” it would be simple to

infer that German manufacturing workers were paid *time wages* for the disposition over their laboring capacity. But such an interpretation of the hypothesis rests on exactly the vulgar acceptance of the appearance of wage labor that Marx effectively undermined.³⁵ The epochal *differentia* of capitalism, as Marx emphasized, is not the employment of dependent wage labor.³⁶ Even in antiquity free artisans had received piece rates for their output. The workers of Athens and Rome did not thereby imagine that they were being paid for the delivery of a general social substance, labor, that was embodied in the ware. To the contrary, neither Greek nor Latin crystallized a vocabulary that expressed “the general notion of ‘labor’ ” for the sake of an economic output.³⁷ It is obvious, as Marx remarked, that the appearance of a particular wage form—piece rate or time wage—is no automatic indicator of the understanding of labor as a generalizable substance.³⁸

What is historically unprecedented and definitive of capitalist relations is the strangely objectified form that labor assumes to mediate producers’ relations to each other.³⁹ In the transition to capitalist labor markets labor appears as a general, quantifiable substance apart from its specific embodiments. Correlatively, in *Capital* Marx unfolded the historically specific dynamic of capitalism, its contradictory growth, and its forms of consciousness and social conflict from the abstract form of the commodity.⁴⁰ The means by which types of social labor were equated with each other under the sign of abstract labor came to mark decisive political and economic differences between Britain and Germany in Marx’s era.⁴¹ In Britain, abstract labor was compared in the sphere of exchange as embodied labor; in Germany, this form of labor was compared in the sphere of production as the requisitioning and expenditure of labor power. These foundational means of measuring and conveying abstract labor can be enacted in either of two superficial forms of remuneration—piece rate or time wage. In Britain time wages were designed to represent a contract for delivery of a quantity of labor products delivered within certain hours; in Germany piece rates were configured as an index of the extraction and expenditure of labor power. The formal construction of the payment system, and how that system works in conjunction with the other practices on the shopfloor, reveal the conceptions of the substance of abstract labor on which the producers rely.

In the classical age of the nineteenth-century factory, the piece-rate scales of the textile industries became the most elaborate and widespread of the German and British economies. Their efflorescence in that branch was due not only to the size of the textile work force, which by some indices outweighed that in any other category of manufacture.⁴² In addition, textile products such as thread and fabric are composed of geometric properties—density, twist, and length—that facilitate measurement and comparison of product values by numerous metrics. What is more, the labor processes for textile occupations were so standardized that the workers’ principal motions could be enumerated and compared in piece-rate systems. Marx’s case illustrations from textile mills in *Capital* are truly paradigmatic

rather than adventitious. The industry exemplified the objectification of labor in work processes that subordinated and correlated every exercise of labor power with a mechanical output.

Among weavers, who comprised the largest occupational group in both German and British textiles, piece rates comprised almost the exclusive means of remuneration.⁴³ The construction of these piece rates reveals how producers in each land defined labor as a general, comparable substance. In Britain the scales took a length of finished cloth of a given density as the unit for comparing different kinds of weaving jobs. Given a standard length of woven warp, payment rose linearly with increases in the number of weft threads inserted per inch. The different amounts of time and effort taken to carry out the insertion of weft threads in varying densities of weave were grasped by these two dimensions of the product.⁴⁴

In Germany, by contrast, the predominant mode of calculating piece rates was by the shots of the shuttles crossing the warp to insert the weft. Unlike the British system, which took the fabric length as the unit of comparison, the German method labeled the insertion of the shots—that is, the movements by which the labor was executed—as the “unit of labor.” German employers and workers recommended this method as a more direct measure of the expenditure of labor power.⁴⁵ In Germany remuneration per one thousand shots often rose linearly as the shots inserted per centimeter of the warp declined. This slope compensated weavers working on relatively loose fabrics for using up the warp more frequently, and therefore for losing more time on changes of the warp. Rather than taking a unit of finished cloth and extrapolating different kinds of labor from it, the Germans took a unit of motion and equated the values of the motions by the features of the work process. In both countries, the dimensions of intelligible (in this case, linear) increases mark the dimensions on which types of weaving were compared and conveyed to the employer as generalized labor.⁴⁶

The foundational difference between these piece-rate scales emerge from how pay rates that increase linearly in the British system are erratic and unintelligible on the German dimensions. To illustrate, “Chart A” portrays the benchmark Huddersfield, Yorkshire scale of 1883 as if it were on the German dimensions of payment per shot. The British data for the simplest weaves appear in the lower curve. Their irregular shape shows the payment systems represented fundamentally different ways of conceiving the conveyance of labor. The table also translates the prices for completing two kinds of fancy weaves in Britain, when pay on the Huddersfield scale rose monotonically but not always linearly. The transfer of data shows that when British weavers received bonuses for fancy work (the upper curve), the pay per shot inserted—the measure of the weaver’s effective motion—became inconsistent and inequitable. For example, the British weaver earned less per shot for weaving fifty-six weft threads per inch than for sixty-two, although fifty-six would certainly take longer *per shot*, because the warp would have to be changed more often. In strike campaigns British weavers astutely criti-

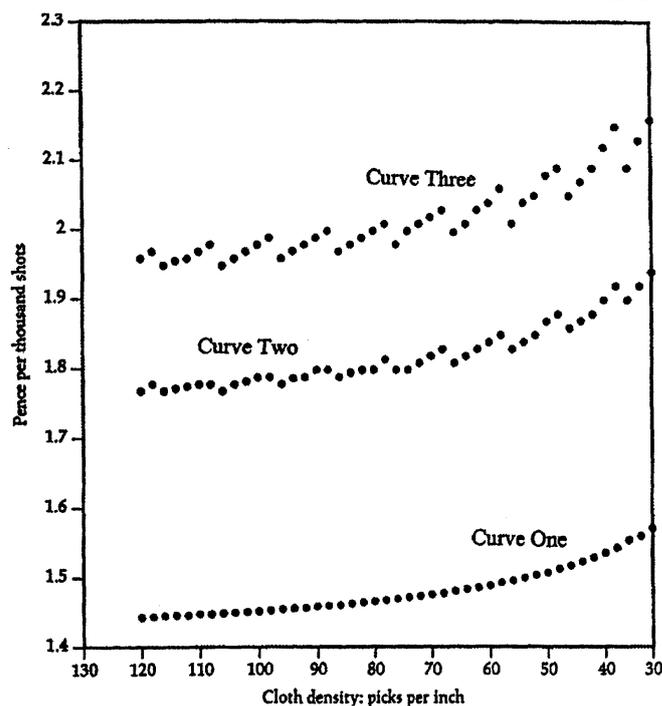


Figure 1.

cized the slopes of this scale in terms of payments per length of fabric delivered, but they never noticed the inequity in the payment per shot.⁴⁷ The British weavers confirmed that in their practice they could grasp the social character of their human activity only as it appeared in the misleading guise of the product's geometry. Like putative fetishists, the social processes of labor assumed in their eyes "the fantastic form of a relation between things."⁴⁸ In other British trades for finished articles as well, piece rates shifted in increments that reflected product dimensions but systematically misrepresented differences in the labor processes required to manufacture the products.⁴⁹

When textile workers in Germany had their pay calculated by output, neither managers nor workers accepted the product as the very object of payment. The piece-rate scales, they emphasized, adopted the product as the accessible surrogate for measuring the worker's action, or expenditure of labor power.⁵⁰ In German weaving, cloth comprised merely the unit of observation, the insertion of the shots the object of analysis. In national surveys of German stuff and wool firms, 75 to 85 percent paid weavers by shot. The remainder used a diversity of methods, including the affiliated method of payment by weight of weft inserted.⁵¹ Significantly enough, many German firms that officially paid weavers by length of cloth nevertheless gauged the payment for that cloth by the method of shots inserted. Their scales graduated the pay for lengths of different cloths following the German principle of shots as the unit of orderly comparison, not the British principle.⁵²

Just as piece rates could mark labor power in Germany, so time wages could gauge materialized labor in Britain. In Britain both the employers and the time-

wage workers monetized the hours worked as a proxy for products delivered. For instance, when the textile adviser George Wood compared the method of piece rates with time wages in 1910, he concluded that time wages, too, measured the transfer of embodied labor: "We may define 'Time-Work,' " he said, "as a 'Contract to sell all the produce of labor in a certain time.' " ⁵³ Similarly, investigators into payment systems for the Board of Trade in 1910 defined time wages as a means of requisitioning articles rather than labor power: "Time wages," they concluded, "is a contract to sell to the employers . . . all the labour which the workman shall perform in a specified time." ⁵⁴ By their formulations, workers paid by time still transferred their labor by the *results*. In consequence, British manufacturing workers on time wages often had quotas for products to be delivered to count as an "hour" or "day." Indeed, in industries with complex variation in wares, such as glass bottle making, these quotas were graduated precisely by type of output. ⁵⁵ In the formulations of the workers and employers, even overtime wages appeared as a compensatory payment for more rapid delivery of products. ⁵⁶

The means by which producers conceived abstract labor configured the entire experience of production in the classical age of the factory. In the *The Fabrication of Labor* I endeavored to show how it guided the recognition of efficiency, the observation of the passage of time, the means of time discipline, the definition of supervisory positions, workers' calculation of their wages, factory architecture, strike repertoires, and more. Here I will offer several examples and develop their implications in new directions.

British and German employers up to the intervention of state officials in the First World War developed contrasting methods for calculating improvements in production. German employers in the textile branches measured improvements by the degrees to which labor power was fully consumed. They calculated the number of motions a worker could carry out if the machinery ran without pause. Then they compared this figure with the actual number of motions executed to create a ratio measure of the efficient absorption of labor and machinery. British textile employers, by contrast, gauged improvements by the quantity of products delivered and by absolute reductions in the hours of idled machinery. ⁵⁷ In contrast to the Germans, they lacked a ratio statistic of efficient throughput. British employers were no less concerned with measuring production than were their German counterparts. In the weaving mills they were just as ready to have managers apply pressure on workers to increase efficiency. What differed between the countries was the mode of conceiving and carrying out the valorization of labor as a commodity.

The British managers did not quantify a labor potential in relation to the actual expenditure of labor power. When British employers disciplined workers for tardiness, they typically shut the latecomers outside the fortress-like factory gates for hours or occasionally even days. The employers thereby suspended the contract for products due to untimely delivery. In so doing they denied themselves the use

of the workers' labor power, and they failed to assert a contractual claim for exact compensation for the workers' theft of labor power. Those British employers who did impose fines for late arrival levied them at flat rates after the passage of a certain portion of the hour, as if they were only gross signals of punishment. By contrast, German employers disciplined workers for tardiness by levying fines calibrated by a precise metric to loss of the property of labor power, depending on the value of the withheld skill in minutes.⁵⁸

When British employers organized their account books to inventory production, they envisioned their purchase of labor like that of any other tangible good. As manufacturers they theorized profit like mercantile traders dependent on the sphere of exchange. In the boot and shoe trade, for instance, the manager Edward Swaysland argued in 1905 that "the method of employing labour is analogous to the purchase of material."⁵⁹ Even if employers took a loss reselling the labor, Swaysland explained, they could realize a profit by reselling the leather and materials at a price higher than cost: "It might happen," he said, "that a loss on his labor would be more than counterbalanced by the gain on his use of material."⁶⁰ Labor entered the equation already embodied in the shoe, so that the buying and selling price of that element could be immediately assessed. In larger, mechanized firms such as textiles, with higher capital outlays, employers thought of their profit as interest collected on the equipment they put at the disposal of workers.⁶¹ In Germany, by contrast, employers viewed profit as an outcome of their integration of resources. As early as 1805, economists such as Jakob treated the immediate management of the productivity of labor as a requisite of profit.⁶² Sophisticated theories of the firm as an organization that created profit from the use value of labor emerged by the 1830s—long before German industrial take-off.⁶³

An economist might presume the causes of these cross-national differences lie in technological and market factors that varied between Britain and Germany. But the contrasting practices occurred even in industrial sectors, such as wool textiles, with similar conditions and developmental trajectories in Britain and the German lands. In wool textiles German and British factories mechanized contemporaneously, used similar technologies, enjoyed similar pools of skilled labor, and competed in the world market with matching goods.⁶⁴ To explain the contrasting factory regimes, a state-centered theorist might well search for differences in government regulation in Britain versus the German states. But the differences in shop floor practices that might be attributed immediately to state intervention—such as the point at which workers were considered to have legally "arrived" at the work site, the methods of legitimately fining workers, or the depositing of the fines collected from workers—all appeared before the rise of relevant factory legislation. Time and again the factory inspectorate in each country borrowed the cultural categories of labor and the factory rules that had been put into practice by the employers and workers themselves decades before.⁶⁵

A legal historian might ask whether antecedent differences in the judicial systems of Britain and Germany, including the contrast between common law and civil law, configured the recognition of labor as form of property in the era of industrial capitalism. Yet in both countries the inherited corpus of statutes of employment offered a flexible resource for accommodating diverse concepts of labor. In both countries the special injunctions regulating the delivery of labor power by servants on estates offered a framework that could easily have been transferred in toto to the capitalist factory.⁶⁶ And in both the legal appreciation of labor (like that of other rights in intangible property such as copyright) was dramatically altered in the development of commercial society. In Britain, the common law of the seventeenth and early eighteenth centuries had followed the surface experience of rudimentary commercial society—and of free artisanal employment in ancient society—by recognizing concrete labor as either the delivery of a service or as a contract for a ware. Once agents in capitalist Britain recognized abstract labor as a general substance embodied in a ware, however, the law came to define the labor of dependent wage workers as if it were a commodity delivered by contractors of manufactures.⁶⁷ In the German states after the end of guild restrictions on the exercise of an occupation, the courts saw labor as a commodity in the guise of labor power despite the dramatic shift to reasoning from Roman law through the first half of the nineteenth century and despite another shift to a revolutionary civil law code in Germany at the end of the nineteenth century.⁶⁸ Since early assumptions about labor steered the subsequent evolution of factory regulations and of judicial statutes of employment, it is not the discontinuous and dramatically changing technical frameworks of law, only the agents' popular understanding of labor that comprises the explanatory key.

PART THREE: MARX'S THUNDERBOLT

Both of the critical insights that led Marx to his analysis of the source of surplus value in the production process were commonplace in the academic economics of Germany in the first half of the nineteenth century: what the employer purchases was already specified with deliberation as “labor power,” and this peculiar human commodity (like any ware) carried the dual properties of “use value” and “exchange value.” In 1861, six years before the first edition of *Capital* appeared in bookstores, the economist Hermann Roesler published a treatise on wages that uncannily foretold the logic of Marx's theory of surplus value. Roesler highlighted the double character of “labor power” (*Arbeitskraft*) by entitling one chapter “The Use Value of Labor” and the next “The Exchange Value of Labor.” Roesler contended, as Marx would, that the exchange value of labor power derived from the labor needed to produce it.⁶⁹

One must hold on to the ground principle that in the process of exchange, including the labor market, only values against like values are traded. Without this rule the amount of use

value . . . would determine the amount of value for the sale of labor power and every relation with the general system of other exchanges sundered. If the free resources in the earth, in the air, or wherever they may find themselves, cannot be considered in the measurement of exchange value, and thus in the price [of a good], so it is not to be seen, why this is not also or possibly the case, with human labor power . . . the use value of labor has no influence on the formation of its price.⁷⁰

Roesler, like Marx, retained the principle of equal exchange from classical British economics and united it with the prevalent German assumption that the employer could extract a surplus from the unpaid value of labor power.

For those unfamiliar with the antecedent history of German economics, Marx's theory of surplus value must appear an inexplicable act of genius. His voluminous notebooks and citations happen to reinforce this view. As a matter of principle Marx wrote exegetically. When he organized *Capital*—subtitled, of course, a *critique* of reigning views of political economy—he conceived a history of theories of surplus value as an integral part of the project.⁷¹ Most of the theorems he presented in publications or drafts acknowledge the earlier suggestions by philosophers or pen-pushers. *Only* the analysis of the double character of labor power—which Marx cited as the cornerstone of his contributions to economic theory⁷²—surfaced in his drafts as an invention without precedent.⁷³

Marx was unaware of parallel conceptions of the employment of labor among elite German economists. In his rough draft, *Grundrisse*, Marx presented a full-scale version of the theory of exploitation at the point of production that later surfaced in *Capital* itself. He cited more than 150 economic commentators or economic historians. Of these, only 15 were of German origin, whereas more than 90 came from Britain.⁷⁴ Marx's references to German economic thinkers in this draft and in earlier notebooks mention their empirical histories of trade and history or on their currency theory.⁷⁵ The neglect of German labor theory was deliberate. As early as 1845 Marx had decided that the delayed emergence of the German bourgeoisie made it "impossible" for its representatives to contribute to the political economy adduced in more advanced countries.⁷⁶ Marx arrived at this judgment by sociological deduction before he had even begun his formal-analytic inquiries into economics. In his correspondence with Engels Marx accentuated the pure originality of his discovery of the double character of labor power: "The economists *without exception* have missed the simple point that, if the commodity is a duality of use-value and exchange value, the labor represented in the commodity must also possess a double-character."⁷⁷ Only disregard of the dominant literature in his country of birth could have permitted Marx to advance this claim.⁷⁸

The evolution of Marx's vocabulary corroborates the supposition that he developed his distinction between labor and labor power independently of the German economists. By the time he finished *Capital*, Marx considered it a scientific failing to use the imprecise term "labor" when the more precise sense of "labor power" was intended.⁷⁹ But in the first draft of *Capital*, the so-called *Grundrisse*, Marx sometimes made use of the concept "labor power" without marking it as

such.⁸⁰ For example, in some passages he focused attention upon the difference between the “use value” and the “exchange value” of what he indifferently termed “labor.” He wrote, “The worker exchanges his commodity, labor, the use value, which like all other commodities, also has a price [an exchange value]. . . .”⁸¹ To make this distinction between exchange and use values, Marx tacitly had to make labor *power* the commodity. Had Marx borrowed this analytic distinction from German economists, he would have expressed his thought more precisely and comfortably from the start with *Arbeitskraft*.⁸²

To be sure, where Marx’s explanation of the appropriation of surplus value in the *Grundrisse* is formally identical to that in the renowned final version, Marx contrived a scholastic compound, *Arbeitsvermögen* (labor capacity), to define the conveyance of labor as a commodity.⁸³ In the little-studied second draft of *Capital*, Marx was mindful of the uncertain impression his strange vocabulary would make on prospective readers. He clarified how *Vermögen* in his usage had the connotation of “potential” rather than of “fortune.” In this second version, Marx used *Arbeitsvermögen* for the additional tasks of theorizing the rates of absolute and of relative surplus value and for explicating the difference between his science and that of predecessors such as Ricardo. By contrast the term *Arbeitskraft*, famous today as the mandatory talisman of Marxian economics, appears but once in his formal theorizing, in a nontechnical aside to the chapter on “capital in general.”⁸⁴

How then did Marx at his writing table in London duplicate so closely the technical understanding and vocabulary of “labor power” of the leading German economists before him?⁸⁵ In his foreword to the English edition of *Capital*, Marx introduced himself as a representative of the German lands. “We,” the Germans, he explained to his English readers, “suffer not only from the development of capitalist production, but also from the incompleteness of its development. Alongside of modern evils, a whole series of inherited evils oppress us, arising from the passive survival of anachronistic modes of production. . . .”⁸⁶ Marx’s texts reproduce this social experience. Given the endurance of artisanal corporations in German hand crafts, Marx assumed in *Capital*—as could no British thinker—that feudal guilds as a matter of course survive long enough to prevent the commodification of labor among the urban craft workers who vend their own products.⁸⁷ Instead, in keeping with the coincidence in German history of commercial liberty and the centralization of production in the manufactory or factory, Marx made immediate domination of the worker integral to the appropriation of surplus. Marx thereby emphasized the underlying continuities between the use of labor in feudalism and in the capitalist factory. In feudalism, Marx claimed, every serf has immediate knowledge of what was hidden by the artifice of the market exchange in capitalism: “Every serf,” Marx said, “knows that what he expends in the service of his master is a definite quantity of his own personal labor power.”⁸⁸

Marx, like the economic theorists of Germany, remarked upon the unusual coincidence in nineteenth-century Germany of capitalist relations in the factory

and feudal relations in agriculture.⁸⁹ He called on his familiarity with the feudal past to explicate his notion of the transfer of labor as a timed “use value,” a service capacity.⁹⁰ It provided him with the historical vantage point requisite for critiquing the equalitarian exchange of materialized labor in British economic thought. German economists, employers, and workers were impressed and troubled by the resemblance between the command over the person of the worker in feudal agriculture and in the “free” capitalist factory. For this reason they preferred to speak of the “rental” of labor power rather than its “sale.”⁹¹ In their eyes, “sale” connoted the permanent alienation of the service capacity, as in feudalism.⁹² The experience of precapitalist “backwardness”—of relations of immediate domination over the person—enabled Marx and his German compatriots to penetrate Britain’s purer, more “advanced” commercial thinking. The early, overwhelming consolidation of product markets in Britain mired its thinkers in models of indirect, impersonal, equalitarian trafficking in finished wares.

For the final edition of *Capital* Marx carried over with slight revision many passages from his second draft. But he took care to switch his vocabulary from *Arbeitsvermögen* to *Arbeitskraft* at dozens of sites. Marx retained *Arbeitsvermögen* only in the first definition of labor as a commodity, as a technical synonym for *Arbeitskraft*, the term adopted thereafter.⁹³ This new mode of presentation comprised part of Marx’s effort to position his analytically generated insights in relation to popular ideology. In the final manuscript he worked above all on showing how his grounding categories of value and capital, laid out first in the *Grundrisse*, explained the issuance of the surface categories of cost price, profit, wages, rent, and more. In this process of translating from deep analytic to cursory popular terms, *Arbeitskraft* functioned as an analytic category when it marked labor’s double character in capitalism, and it operated as a superficial category of capitalist consciousness when Marx considered its visible expenditure in production. In the first, analytic role, the stilted phrase *Arbeitsvermögen* served best. Marx chose it to distinguish it from the less precise popular connotations of *Arbeitskraft*. But for tracing the constitutive popular ideology of capitalism—a goal given new emphasis throughout the final edition—Marx was compelled to label his concept with the common idiom *Arbeitskraft*.⁹⁴

In consequence, as Marx calls attention to the form of appearance of labor power in the final edition of *Capital*, he discusses it in a manner inconsistent with its treatment in earlier drafts as a purely analytic term. Most notably, he suggests that abstract labor is grasped in capitalism as the physical effort underlying the consumption of all kinds of labor power:

All labor is an expenditure of human labor power in the physiological sense, and it is in this quality of being equal, or abstract, human labor that it forms the value of commodities. . . . Tailoring and weaving . . . both comprise the productive expenditure of the human intellect, muscle, nerves, hands, and so forth, and in this sense are both human labor. They are merely two different forms of the expenditure of human labor power.⁹⁵

Equating labor by means of transhistorical, physiological commonalities contravened Marx's primary emphasis on abstract labor as the correlative sign of historically peculiar, social processes of production and exchange. But it captured as intended the peculiar nineteenth-century sense of *Arbeitskraft* in German popular culture. The common people conceived it as physical effort in the employment relation. This meaning correlated with the German producers' notion that it was not social relations of production and exchange, but the tangible consumption of labor power—observed, for instance, in the motion of the weaver's shuttles—that was formative of value.⁹⁶

What Marx failed to appreciate was how culturally distinctive it was to Germany to commodify labor in the form of *Arbeitskraft*. Unlike the German producers, who coined *Arbeitskraft* with their commodification of labor at the opening of the nineteenth century, the British adhered to the careless, precapitalist vocabulary of "labor." Above all, Britain lacked the ideology and practices marked by the term *Arbeitskraft*. When astute British Marxists in the 1880s did their best to absorb Marx's theory of surplus value, they insistently misread it as a theory of market profiteering. They assimilated it to the prior British understanding of commodified labor as embodied labor in the sphere of exchange.⁹⁷ By contrast, drawing on German social experience, even the anti-Marxist Catholic unions in Germany emphasized the use of *Arbeitskraft* at the point of production as the surplus-generating mechanism of capitalism.⁹⁸

PART FOUR: AN AGENDA FOR THE CULTURAL STUDY OF LABOR

Recovering the cultural fabrication of labor as an economic constituent offers more than an improved *histoire raisonnée*. It recovers several methodological advantages of Marx's inquiry that have been forgotten in more recent analyses. Let me summarize these advantages in relation to two issues.

A. Historical Contingencies in the Formation of Class Ideologies

When Marx theorized capitalist practices, he treated them as forms of consciousness as well as structuring principles that coordinated an objective, systemic logic in the economy as a whole. The mutual constitution of forms of consciousness and of social mechanics drove Marx's theory of exploitation in particular. In calling on British analysis of the sphere of exchange, Marx made the experience of the equalitarian trading of equals for equals by autonomous holders of "property"—capital or labor power—integral to the process of exploitation. And in calling on the German understanding of labor, Marx also made integral the workers' contradictory experience of domination as economic objects at the point of production. Yet the course of Marxian value theory since the 1980s has consisted of theorizing the transfer of labor assets after removing *both* these moments of lived experience, that of free exchange and of immediate domination.

On the one side, Marxian economists have recognized that the British assumption that labor values regulate the prices of commodities in circulation is mathematically irrelevant to the premise that surplus value derives from the exploitation of labor. A simple way of making this point is to recall that within Marx's framework, the capitalist can in principle purchase the commodity of labor power *above* (or below) its exchange value and still extract surplus value from it. Whether the employer extracts this surplus depends on how efficiently the employer absorbs the use value of labor power. John Roemer, too, has reconstructed a theory of labor exploitation by discarding the British view that labor values regulate the prices of commodities in exchanges. Roemer uses a metric of labor values to measure transfers of assets between capitalists and workers. Yet he insists these transfers are governed by competition and class struggle, not by market exchange of equal values.⁹⁹ From the other, German perspective, the assumption that labor is purchased in the form of labor power seems to reflect the German transition to market-industrial society—experienced as a unique overlap between the free sale of labor power and factory employment—rather than analytic necessity. Roemer and others have shown how capitalists who control the resources of production can exploit labor through the trade of products alone.¹⁰⁰

Yet Marx had an overriding rationale for making the British assumption about exchange of equal values and the German assumption about labor power integral to his analysis. Each made culture constitutive of the operation of the principle of labor value. Freely “contracting” for the equalitarian exchange of labor in the employment relation is a means by which social relations come in the eyes of the producers themselves to be subordinated to a kind of objective, regulative metric of labor value. The relentless mechanical control over and quantification of the workers' expenditure of labor power is another means by which social activity appears to the producers themselves to be subordinated to the abstract metric of labor value. If abstract labor is already a central category of popular consciousness that organizes agents' relations with each other, labor transfers already have the cultural significance requisite for serving as the foundation of class formation and class conflict. If, however, analysts convert labor into an underlying, transhistorical, physical quantity independent of a historically specific social consciousness, then the process by which labor becomes an organizing category of practice and contention becomes radically contingent. “Analytic Marxists” are forced to highlight the “relative indeterminacy” and extremely probabilistic character of patterns of class conflict in relation to the extraction of labor and organization of work.¹⁰¹

In consequence, Marxist analysts have developed a powerful repertoire of bridge concepts that link the underlying models of labor exploitation to variation in class organization and conflict. In the past two decades they have become increasingly sophisticated in calling on such mediating variables as state capacities, state structures for channeling shop floor disputes, institutional histories of par-

ties, ideological legacies of past struggles, and more.¹⁰² These variables mediating between labor and structures of conflict are usually added to, not derived from or conceived within, the core problematic of the capitalist labor process. It might be argued that this recent strategy of research amounts to ad hoc historicism. But it is also dogmatic to make this objection, because introducing these mediating variables has undoubtedly brought greater explanatory accuracy. The problem is that highlighting the contingency of class formation and of class conflict also weakens the purpose of taking the class positions defined by labor relations as an explanatory starting point. If a class position defined by labor relations has only uncertain and codependent effects, it can be treated, by all rights, as no more predictive or directive of political identity than discursive processes anchored outside production. It is an irony of recent intellectual history that the very effort to treat labor as an “objective” economic element called forth an opposite movement of theory, that is, the postmodernist emphasis on the independence of identities and politics from productive labor. The two approaches, analytical Marxism and postmodern culturalism, are affiliated with each other as the flip sides of an approach that separates culture from the economic definition of capitalism.¹⁰³

Let us reconsider instead how Marx derived processes of group identity from the definition of capitalist relations. Marx opened *Capital* with an analysis of the abstractions of labor that organized practices of exchange and production.¹⁰⁴ “When we speak of the commodity as the material carrier of labor,” Marx wrote, “this is only an *imagined*, that is, a merely social mode of existence of the commodity.”¹⁰⁵ By treating labor as a culturally specific category by which people grasp, organize, and coordinate their life activities, Marx supposed he could establish a noncontingent relation between those forms of practice and social identity. The enacted ideology of work practices established generalized labor as a pivot of social relations and social identity.

The comparison of differences in abstract labor between Britain and Germany carries Marx’s strategy forward. It shows decisive cross-national variation in class ideologies was intrinsic to the cultural form of economic practice, not a contingent intervention of political history. German workers in the nineteenth-century factory articulated their grievances from the assumption that they conveyed their labor to the employer by the commitment of *Arbeitskraft*. Even unorchestrated strikes in regions with no history of communication with labor organizers followed this assumption. To illustrate, the piece-rate workers in isolated regions of the *Münsterland* argued in the 1890s that they had committed their *Arbeitskraft* to the firm and on this basis alone were due compensation for time lost waiting on work materials.¹⁰⁶ British piece-rate workers in parallel occupations, however, were more likely to seek compensation for waiting time via the selling prices of their labor products.¹⁰⁷ In the eyes of the British workers, the waiting time made up part of the necessary labor time materialized in the product. In Germany both female and male workers, skilled and uneducated, demanded before the First

World War that employers pay them on holidays off work to secure their commitment of a work capacity.¹⁰⁸ In Britain, however, workers thought the principle of vacation pay threatened their status as autonomous contractors. They recommended that wages be hiked for work accomplished so workers could support themselves independently during their holidays.¹⁰⁹ Although British workers considered vacation necessary for maintenance of their ability to work, they did not, like German workers, link it to the contract for labor.

German workers in the classical epoch of the factory viewed their relation to employers in terms of the experience of the expenditure of labor power under the domination of the employer. They demanded payment for performance of tasks to maintain their body—or their labor power—including such chores as carrying coffee water, changing clothes, and washing up. They distinguished themselves from their British counterparts before the First World War by contesting negligible, but unpaid time increments when their labor power was committed to the firm in preparing for or recuperating from production. For example, they launched strikes over waiting in line for several minutes at the factory exit to hand in attendance tokens or to punch out on time clocks.¹¹⁰ They treated their labor power as the very object of struggle by other means as well. They adopted the employers' efficiency ratios to quantify the rate at which their total labor power was absorbed by the employer. At a meeting of the German Textile Workers' Union in the town of Haan in 1899, weavers debated the consequences of using labor so that "manufacturers achieve a gain of 12 to 16 percent in efficiency."¹¹¹ They discussed not just the division of the proceeds from the product, but to what degree "the labor power is fully absorbed" by the capitalist.¹¹² In this period British workers, of course, were ready to contest added exertions, but rather than quantify and contest the consumption of an abstract potential, they demanded proportionately more payment for products completed.¹¹³

British manufacturing workers until the First World War used the social horizon of the exchange of labor products to define their relations to capitalists. They contested the difference between the purchase price of embodied labor and its resale price. Accordingly, British workers sought agreements with employers that correlated their wages or piece rates to the selling price of the output. In spinning, iron manufacture, mining, and manufacture of standard products such as nails, workers and employers negotiated over formulas for adjusting wages by the market values of the outputs workers delivered to their employers.¹¹⁴ These agreements met the requirements of British capitalists who, rather than focusing on the throughput of labor, sought profit from the purchase and resell of materials (including labor) in the sphere of exchange. Indeed, British cloth and yarn manufacturers had begun pegging wages to selling prices as early as the eighteenth century.¹¹⁵ German industrialists rejected out of hand the British method of correlating wages with the exchange value of output. They objected that such agreements

eliminated the purchase of labor as a commodity, since labor power was not priced in its own right.¹¹⁶

British workers' definition of the politically relevant exploitative classes was founded on the circulation of commodities rather than on the social relations of domination in production. Nineteenth-century urban mill workers in Britain focused on the agrarian elites' receipt of unearned rent from land ownership as a key mechanism by which urban workers were cheated in exchanging their labor for commodities. The *Blackburn Labour Journal* declared in 1898 that the explanation for "exploitation" was simple: "We allow a certain class to own all the land in the country."¹¹⁷ Accordingly, industrial workers looked to public ownership of agriculture as a key for halting exploitation. In Germany the socialist press complained about the high tariffs erected for the benefit of Junker land owners.¹¹⁸ Compared to the radical British press, however, the German union newspapers for industrial workers treated the agrarian elites' assets in land as peripheral to the exploitation of wage labor.

In sum, consistent differences emerged in the nineteenth century between the German and British workers' articulation of grievances, between their definitions of relevant exploitative classes, and between the horizons they used to construct their relations to capital—differences corresponding to their understandings of labor as a commodity. The generation of nationally distinctive dynamics of conflict despite strong local and temporal variation in the ideologies and organization of unions and in the institutional legacies of past conflict suggests the outcomes were integral to the operative concepts of labor in each country. The culturally established metric for grasping abstract labor served as the conduit between the institutions of capitalism and the dynamics of class struggle. Historicizing labor value as a popular category of practice offers a decisive advantage of method: it draws immediate linkages between the conveyance of "labor" itself in production and forms of class struggle.

B. Dynamics of Capitalist Accumulation

Historicizing the category of labor also generates new predictions about the dynamics of accumulation. As Marxian economists since the 1970s endeavored to defend Marx's notion of labor value with mathematical rigor, they radically diminished its explanatory relevance. They sought to show only that the discernible operation of capitalism was *consistent* with a labor theory of value, not that the theory generated novel, empirically confirmable predictions about capitalist development.¹¹⁹ Indeed, in accounting for particular trajectories in history, labor value offered no more than an interpretive gloss on the operation of markets and organizations.¹²⁰ For Marx, of course, labor functioned as the pivot because it generated a self-expanding "system" out of the agents' micro-level practices of production. The reified categories agents applied in production explained how agents could be dominated by structures of their own making. We can recapture these

compelling linkages—between micro-level conduct and macro-level economics, and between agency and structural constraint—by deriving new hypotheses about the operation of capitalism from the cultural form of abstract labor.

When capitalists envision the receipt of labor value as the appropriation of a fixed material result, they perforce identify profit opportunity by the margin between their purchase price and the resale price of the manufactures of labor. Their investments are based on current demand and calculations of embodied labor costs in the prevailing technical environment. By contrast, when capitalists envision the contingent absorption of labor power as the essential conduit for the receipt of value, their investments pursue opportunities in the production process for successively improving the use of labor power. They make prospective shifts in technology internal to their reckoning of price and demand. Not the intensity of the profit drive, nor the rate of investment, nor the level of psychological interest in innovation will vary between these two cultural forms of capitalism. Rather, the difference will be found in the circumstances of investment and in the financial heuristic by which employers grasp the purpose and pecuniary feasibility of investment in technology.

The idiosyncrasies of British and German industrialization strikingly illustrate these two models of growth. As several eminent historians have noticed, manufacturers and engineers in Britain's lead sector in early industrialization, cotton textiles, rarely framed the purpose of new technology as that of saving on labor inputs. Such innovations as the Crompton spinning mule and use of chlorine in bleaching works increased turnover and thereby reduced costs of capital and of land. Despite these reductions in unit expenses due to quickened turnover, it appears by several calculations that "they saved very little labor effort."¹²¹ Even the invention of the self-acting mule in Lancashire during the period from 1825 to 1830 illustrates this heuristic. It comprises a celebrated instance in which innovation was originally intended to reduce strike disruptions by the high-skill male workers who staffed conventional mules. Yet the self-actors did not diffuse by the principle of replacing costly labor. Just the reverse: they were installed in the coarser counts of spinning, in work that would otherwise have been carried out on ring spindles using inexpensive female labor. Rather than minimizing labor inputs, the self-actors coordinated the output of weft thread with that of warp by throstle machines.¹²² The management goal, as an early factory proprietor put it, was to "produce the goods on time."¹²³

Into the early twentieth century British manufacturers continued to focus on the margin between input and output costs rather than on the efficiency of the labor process per se. The reliance on district-wide, inviolable piece-rate scales in many British industries institutionalized their vision. The inherited regional scales protected piece-rate workers against rate busting.¹²⁴ British employers thereby granted their workers the requisite security for intensifying effort and for investing in job-specific know-how—in short, for accumulating skill. Following

this logic, British employers could cheapen output even as they relied on increasingly labor intensity. Given the fixed piece rates, they could feed lower-cost but troublemaking materials (such as deficient cotton diluted with cheap “sizing”) into the production process. They called on the accumulated expertise of workers to mitigate the resulting problems.¹²⁵ To minimize the cost of increased “down-time” from shoddy materials, British capitalists also chose less expensive (but lower-throughput) technologies. By combining cheap materials with fixed agreements for the receipt of finished labor, British employers sacrificed labor efficiency but achieved lower unit costs.

The British factory owners thereby resembled mercantile hawkers when they scouted out raw materials of questionable quality in port with the aim of inputting them in production and reselling them as if they were regular quality.¹²⁶ By thinking of labor as “embodied” at purchase, the employers tended to cede the managerial function of creatively integrating labor power with capital inputs on the shop floor. This scarcely reflected the build-up of union power and worker prerogatives in the older British enterprises. To the puzzlement of many institutional analysts, the ceding of direct management structured the industrial relations and product niches of entirely new and poorly unionized economic branches, such as the motor-car industry.¹²⁷

In sum, the basic forms of capitalist practice illuminate crucial, but little-noticed differences in the British and German processes of accumulation. British investment in each industrial sector was typically wedded to immediate price margins. In the full vigor of the industrial revolution, W.W. Rostow noticed, British capital investment “lurched forward in a highly discontinuous way, with a high concentration of decisions to expand, or to improve technique, occurring in the latter stages of the major [business] cycles.”¹²⁸ To be sure, the continuation of this pattern up to the First World War might have reflected in part the peculiar ease in Britain after the mid-nineteenth century of diverting capital abroad. But at the level of industrial sectors, the contrast with Germany, especially in long cycles of minimal export of capital out of Britain, requires further explication. Just the opposite from practice in Britain, German cotton textile manufacturers over the *longue durée* from 1820 to the First World War stepped up long-term investment in their firms when the business cycle in that branch was unfavorable. Periods in which German entrepreneurs faced declining consumer demand or diminishing margins between the price of raw materials and the selling price of thread and fabric correlated positively with their initial decisions to invest in new machinery.¹²⁹ In Germany industrial investment in both family-financed companies and, later, in corporations dovetailed less with immediately anticipated profits in the sphere of exchange using existing techniques, more with the opportunity for enhancements in technology that would lead to better use of labor power, less expensive products, and increased sales. The logic and cyclical timing of investment differed between the two countries, long-term rates of investment aside.¹³⁰ This contrast

with Britain holds up in the period of early industrialization at the start of the nineteenth century as well as in high industrialization, in large establishments and small, whether industries called on private funds or on institutional investors like the German banks, and whether firms specialized in consumer goods or “producer” goods.¹³¹ These continuities suggest the investment patterns were internal to the long-standing categories of capitalist practice, not a reflection of shifting, exogenous political institutions or of banking networks for approving and channeling financial investments. Were British industry’s unique position in a global imperial system responsible for the cadence of investment in domestic manufacture, we would expect downturns in foreign investment during the nineteenth century to free up more capital for improvements in plant machinery. Yet the reverse correlation was observed more often. The manufacturers’ *demand* for capital, based on their own business practice, directed the bursts of domestic capital investment.¹³²

To claim with hindsight that German practice was more “rational,” or founded on a clearer perception of industrial capitalism, is historically induced tunnel vision. From 1870 to 1914 the real capital in use per manufacturing employee rose by about 250 percent in Germany, whereas it nearly stagnated in the United Kingdom. Yet during this phase of accumulation profits tended *downward* in German but not in U.K. manufacturing.¹³³ Given a different historical mix of technology and science for putting labor power in motion, the British calculus with embodied labor in the sphere of exchange might have proven developmentally superior. The German emphasis on the conversion of labor power could well have come to illustrate in comparative perspective the costly illogic of capital-intensive experiments.¹³⁴ By most accepted measures, the rate of profit in German industry and commerce averaged somewhat less than that in the United Kingdom in the four decades before the First World War.¹³⁵ Due to its weighting of technological improvement over calculable returns, David Landes once remarked, German enterprise “took the right path, though in part for the wrong, or more exactly, irrelevant reasons.”¹³⁶

It is simple but superficial to imagine the divergence in visions of profit-creation can be explained by the individual psychology of entrepreneurs. Cross-national research into the social backgrounds and generational continuity of British and German entrepreneurs in the second half of the nineteenth century has uncovered surprising convergencies in their class origins, aspirations, and lifestyles.¹³⁷ The cultural categories of capitalism, then, not the character of individuals put into it, proved determinative. Those categories of practice in the two countries were radically inequivalent. In Germany profit appeared as the extraction of value at the point of production; in Britain profit appeared as a receipt from trade in embodied labor. British capitalism lived by Ricardo’s view of profit, and that of his neoclassical successors, by maximizing receipts within existing constraints. German capitalism not only deposited its theory of profit extraction in Mangoldt and Marx

during the nineteenth century, it staged its enactment day by day on the shop floor. By historicizing labor value as a category of popular consciousness, we recover a critical advantage of Marx's method; we connect the elementary components of everyday practice to the developmental tendencies of capitalism as a system.

For more than a generation now, economic historians have debated the rationality of British industrial investment and entrepreneurial conduct during the Victorian era. The more sophisticated they become in their application of neoclassical theory of profit maximization within then-present constraints, the more it appears British entrepreneurs exercised sound investment logic even as they forfeited their lead over their German and U.S. counterparts.¹³⁸ The oft-noted reluctance of British capitalists to invest in new technologies was rational by the criterion of rate of return within existing conditions. To the economists of our day, the circularity of this confirmation by neoclassical economic theory is unapparent. They forget how their model of optimizing within institutional givens comprises a cultural product of the British historical process. British economic practice fashioned the intellectual mirror in which that practice cannot help but shine as "rational" even today.

CONCLUDING CONSIDERATIONS

During the past two decades analytical Marxism has defended the identity of its research program by emphasizing the dependency of contemporary social processes on the substantive variable of "class." This empirical commitment has been combined with increasing reliance on the causal repertoire of the social sciences at large, especially of those that view human conduct instrumentally—from rational choice theory to organizational theories of the state. The *mechanisms* of explanation are no longer distinctively "Marxist" nor (to say the same with different words) are they historically specific to the social relations of capitalism. To be sure, analytical Marxists recognize historical boundary conditions for applying their models, such as the separation of producers from the means of subsistence. Once the economic preconditions of capitalism are in place, however, the principles analytical Marxists invoke to explain change and difference in social organizations are transhistorical and abstractly utilitarian. For example, adaptation to technology, the intensity of competition among employers and among workers, the supervisors' drive to divide and control workers—these oft-engaged principles apply just as well to ancient as to capitalist institutions of production. This causal repertoire assumes that power is exercised independently of reified categories of culture (above all that of abstract labor) that are unique to capitalist social relations. Not surprisingly, this repertoire also provoked the currently fashionable dismissal of Marx's project as a naively "materialist" undertaking.

The traditional view that Marx invented his theory of surplus value as an analyst contemplating a mechanical system constituted outside the filters of his own cultural experience has become standard in the representation of Marx's theory. It

anchors the premise that labor is an objective substance whose circulation Marx grasped by inventing new concepts to make up for the inadequacies of the old. Once his theory is restored to the capitalist lifeworlds in which it originated, however, it is evident Marx did not reveal what was hidden *from* everyday awareness in nineteenth-century Germany and Britain; he revealed what was hidden *in* it. His labor theory was constructed to explain outcomes, and in retrospect it happens to do so, because it reproduces conventions of practice, not because it reflects an objective substance of social life.¹³⁹ Of course this reinterpretation opens up an agenda of inquiry broader than Marx anticipated: if the mechanisms of the bourgeois economy vary with cultural definitions of labor and capital, can we draw more culturally specific models of “class” based upon the local understandings of these constituents? If we contextualize class in this fashion, what openings does this provide for explaining linkages between work identities and other forms of identity? More specifically, starting with the example of the German and British cases, how did envisioning the conveyance of labor power versus labor in a product link up with ways of marking male versus female “labor” in each country?

Of course it is hardly surprising that a focus on labor as a commodity should lead us to conclude that culture is constitutive of capitalism “all the way down.” For in *Capital* Marx did not begin with the institutions of wage labor or class, only from the imagined form of the commodity.¹⁴⁰ The guise of abstract labor explains how the differences among institutions of capitalist production are results of social and cultural, rather than of purely technical or politically instrumental processes. Cross-national comparison shows how the use of machinery, the encoding of time and efficiency, and the movement of profit and accumulation follow regionally peculiar abstractions of labor. The analysis of these cultural forms carries forward Marx’s project of *critiquing* political economy. Once the categories of “labor” or “capital” are recast as historically embedded, local inventions rather than as natural constituents of market capitalism in general, cultural analysis can include them on equal ground with other bases of political identity in contemporary society.

NOTES

1. Karl Marx, *Ökonomische Schriften* (Stuttgart: Cotta-Verlag, 1963), “Vorwort,” xxxi.
2. This essay cites key, illustrative evidence, but the interested reader is referred to my book *The Fabrication of Labor* (Berkeley: University of California Press, 1995).
3. See essays reprinted in Ian Steeman et al., eds., *The Value Controversy* (London: Verso, 1981).
4. John E. Roemer, *Analytical Foundations of Marxian Economic Theory* (Cambridge, UK: Cambridge University Press, 1981), 200.
5. Jon Elster, *Making Sense of Marx* (Cambridge, UK: Cambridge University Press, 1985), 131.
6. John E. Roemer, *Theories of Distributive Justice* (Cambridge, MA: Harvard University Press, 1996), 9.

7. Erik Olin Wright, *Class Counts* (Cambridge, UK: Cambridge University Press, 1997), 14, 16-17.
8. *Ibid.* 37.
9. *Ibid.*, 16; Roemer, *Theories of Distributive Justice*, 182.
10. *Das Kapital*, vol. 1, 21, 22.
11. See, illustratively, "Some Seventeenth Century Contributions to the Theory of Value," *Economica* 30, no. 118 (1963): 137.
12. See, illustratively, Rice Vaughan, *A Discourse of Coin and Coinage*, reprinted in J. R. McCulloch, *A Select Collection of Scarce and Valuable Tracts on Money* (London: Political Economy Club, 1856), 58-59.
13. William Petty, *A Treatise of Taxes and Contributions*, reprinted in *The Economic Writings of Sir William Petty* (Cambridge, UK: Cambridge University Press, 1899), vol. 1, 87.
14. A. L. Beier, *Masterless Men: The Vagrancy Problem in England 1560-1640* (New York: Methuen, 1985), 27.
15. Petty, *Treatise of Taxes and Contributions*, 43.
16. C. B. Macpherson, "Servants and Labourers in Seventeenth-Century England," in *Democratic Theory* (Oxford, UK: Clarendon, 1973), 207-23.
17. Christopher Hill, "Discussion," *Past & Present*, no. 29 (1964): 63.
18. E. J. Hundert, "Market Society and Meaning in Locke's Political Philosophy," *Journal of the History of Philosophy* XV, no. 1 (1977): 41.
19. Sir James Steuart, *An Inquiry into the Principles of Political Oeconomy* (Edinburgh, Scotland: Oliver & Boyd, 1966), 192.
20. Otto Kahn-Freund, "Blackstone's Neglected Child: The Contract of Employment," *Law Quarterly Review* 93 (October 1977): 511.
21. Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (Chicago: University of Chicago Press, 1976), book 1, 53.
22. *Ibid.* 5.
23. James Mill, *Elements of Political Economy* (London: Henry Bohn, 1844), 94.
24. *Poor Man's Advocate*, 21 January 1832, 1.
25. Robert Blatchford, *Merrie England. A Series of Letters to John Smith of Oldham—A Practical Working Man* (New York: Monthly Review, 1966 [1894]), 82-83.
26. An important new study by Sheilagh Ogilvie confirms that even protoindustry in the German countryside, once considered an early outpost of unregulated capitalist markets, was actually dominated by guild organizations and corporate social ties through the eighteenth century. Sheilagh Ogilvie, *State Corporatism and Proto-Industry* (Cambridge, UK: Cambridge University Press, 1997), 415, 419, 437.
27. Ludwig Jakob, *Grundsätze der National-Ökonomie* (Halle, Germany: Friedrich Ruff, 1825), 122; similarly, Jakob, *Grundsätze der National-Ökonomie* (Halle, Germany: Friedrich Ruff, 1805), viii, 68.
28. Jakob, *Grundsätze* (1805), 30.
29. Jakob, *Grundsätze* (1825), 69, 122, 199.
30. Johann Friedrich E. Lotz, *Revision der Grundbegriffe der Nationalwirtschaftslehre* (Leipzig, Germany: Sinner, 1811), vol. 1, 101-5.
31. Hans Karl Emil Mangoldt, *Grundriss der Volkswirtschaftslehre* (Stuttgart, Germany: J. Engelhorn, 1863), 122.
32. *Die Verbrüderung* (Leipzig, Germany: Centralcomite der deutschen Arbeiter), 3 October 1848.
33. *Geheimes Staatsarchiv*, rep. 120, D V Fach 1, nr. 32, vol. 1, no. 605, 19 February 1850.

34. *Deutsches Wörterbuch von Jacob Grimm und Wilhelm Grimm* (Leipzig, Germany: S. Hirzel, 1854), vol. 1, 545.

35. In view of the widespread reliance on time wages in Britain, and on piece rates in Germany, it is untenable to deduce a particular means of remuneration from the form of abstract labor. Marx reasons to a similar conclusion in "Zur Kritik der politischen Ökonomie (Manuskript 1861-1863)," *Gesamtausgabe (MEGA)* (Berlin: Dietz Verlag, 1976), section 2, vol. 3, part 1, no. 1, 146, 171.

36. "Zur Kritik der politischen Ökonomie (Manuskript 1861-1863)," *Gesamtausgabe (MEGA)* (Berlin: Dietz Verlag, 1982), section 2, vol. 3, part 6, no. 1, 2376.

37. M. I. Finley, *The Ancient Economy* (Berkeley: University of California Press, 1985), 81.

38. *Das Kapital*, vol. 1, 564.

39. "Zur Kritik der politischen Ökonomie (Manuskript 1861-1863)" *Gesamtausgabe (MEGA)* (Berlin: Dietz Verlag, 1976), section 2, vol. 3, part 1, no. 1, 33, 131; *Gesamtausgabe (MEGA)* (Berlin: Dietz Verlag, 1977), section 2, vol. 3, part 2, no. 1, 457. "What distinguishes the epoch of capitalism," Marx wrote, "is that labor power in the eyes of the worker himself assumes the form of a commodity which he holds as his property . . . only from this moment does the commodity form generalize itself in the products of labor" (*Das Kapital*, vol. 1, 184).

40. Marx makes the institution of wage labor a derivation from the social form of the commodity at *Das Kapital*, vol. 1, 184, note 41.

41. Equating the values of different kinds of labor, Marx said, creates "a determinate presence of social labor." "Zur Kritik der politischen Ökonomie (Manuskript 1861-1863)" in *Gesamtausgabe (MEGA)* (Berlin: Dietz Verlag, 1977), section 2, vol. 3, part 1, no. 1, 90.

42. For the period of high industrialization in Germany, see Germany, *Die deutsche Volkswirtschaft am Schluß des 19. Jahrhunderts* (Berlin: Puttkammer & Mühlbrecht, 1900), 25, 105, industrial figures excluding self-employed. For Britain in this era, *Census of England and Wales 1891* (H.M.S.O., 1893), vol. 3, ix ff.

43. Biernacki, *Fabrication of Labor*, 43-44.

44. See, illustratively, *Fabrication of Labor*, 55. This practice of comparing the labor in products by a linear function in factories was not a simple carry-over from mercantile custom or from the putting-out system. The linear functions on the piece-rate scales did not become the norm in Britain until weaving became exclusively a full-time occupation at the start of the nineteenth century and until each weaver could be expected to carry out all the types of weaving on the piece-rate scale. See the collection "Merchant Piece-Rate Scales," Manuscript Collection, University of London.

45. *Zeitschrift für die gesamte Textil-Industrie*, 1910/1911, no. 65, 1126.

46. In manufacturing processes whose products, unlike cloth, have only a single metric, the indexes of embodied labor and of the expenditure of labor may be indistinguishable in the eyes of mathematicians, but not in the eyes of producers themselves. "The simple quantitative distinction between labors," Marx wrote, "presupposes their qualitative unity or equality, therefore their reduction to abstract human labor" (*Das Kapital*, vol. 1, 94). The issue is how envisioning that equality organizes industrial practice as a whole.

47. *Northern Pioneer*, 14 April 1883; *Huddersfield Daily Examiner*, 13 and 27 March 1883, 13 April 1883.

48. Marx, *Das Kapital*, vol. 1, 86.

49. For instance, in Sheffield file forging, unlike that in Germany, the piece-rate increments for increases in file size have the same arithmetic pattern even when the materials and type of finish vary. See "Sheffield List of Prices, 1873," in the Sheffield City Archives. Analogously, see Biernacki, *Fabrication of Labor*, 56, note 40.

50. Alfred Müller, *Die Lohnbessungsmethoden in der Chemnitzer Textilindustrie*. Marburg, Ph.D. diss., 1924, 65; Herbert Maucher, *Zeitlohn Akkordlohn Prämienlohn* (Darmstadt, Germany: Darmstadt Druck- und Verlags-Gesellschaft, 1965), 65.

51. Biernacki, *Fabrication of Labor*, 70.

52. Ibid., 62, note 62. On the social origins of deviant pay scales in Germany, *ibid.*, 70, especially note 92. The piece-rate lists for British mule spinners reveal the opposite method: they counted immediately observable motions to conceive a reading of the product. The Oldham list of 1876 compares labor in terms of “draws” of the mule, that is, the pulling out and returning in of the spinning thread. The draws served as a proxy for measuring the length of the product delivered. For the hypothetical length of a draw (63 inches) was chosen to yield by simple multiplication one hank of yarn, the unit for comparing types of labor. *Textile Mercury*, 12 November 1910, 410.

53. George S. Wood, “The Theory and Practice of Piecework,” *Huddersfield Textile Society*, session 1910-11: 5.

54. Great Britain Board of Trade, *Standard Piece and Time Rates* (London: H.M.S.O., 1900), x.

55. Sheffield City Archives, “Statement of Wages, Glass Bottle Making,” Yorkshire, UK, 31 December 1888.

56. Biernacki, *Fabrication of Labor*, 59, note 51.

57. Ibid., 95-96.

58. Ibid., 105-15.

59. Edward Swaysland, *Boot and Shoe Design and Manufacture* (Northampton, UK: Joseph Tebbutt, 1905), 233.

60. Ibid. 236-37.

61. *Textile Mercury*, 19 September 1891, 186.

62. Jakob, *Grundsätze* (1825), 140-53.

63. Friedrich Hermann, *Staatswirtschaftliche Untersuchungen über Vermögen, Wirtschaft, Produktivität der Arbeit, Kapital, Preis, Gewinn, Einkommen und Verbrauch* (Munich, Austria: A. Weber, 1832).

64. Biernacki, *Fabrication of Labor*, 7-9.

65. See, illustratively, *Das deutsche Wollen-Gewerbe*, 22 February 1878, 171; Geheimes Staatsarchiv, rep. 120 B I I 59, 11 April 1848; Günther Schulz, “Die betriebliche Lage der Arbeiter im Rheinland vom 19. bis zum beginnenden 20. Jahrhundert,” *Rheinische Vierteljahrsblätter*, vol. 50, 1986, 175.

66. See, illustratively, Ministry of the Interior, Geheimes Staatsarchiv 120B V 33 nr. 4, vol. 2, 3, 17 January 1839; Biernacki, *Fabrication of Labor*, 309, note 223; Reinhard Lorenz, *Die politische und rechtliche Stellung des Proletariats in Preussen in der Zeit zwischen den Reformen und der Revolution 1848/1849* (Frankfurt am Main, Germany: P. Lang, 1991), 281-82.

67. Biernacki, *Fabrication of Labor*, 82-83, 256 (note 193), 257.

68. For an introduction, see Walter Wilhelm, *Zur juristischen Methodenlehre im 19. Jahrhundert* (Frankfurt am Main, Germany: V. Klostermann, 1958).

69. Karl Hermann Roesler, *Zur Kritik der Lehre vom Arbeitslohn* (Erlangen, Germany: Ferdinand Enke, 1861), 45.

70. Roesler, *Zur Kritik*, 47, 54.

71. Projektgruppe Entwicklung des Marxschen Systems, *Der 4. Band des “Kapital”?* (Berlin: Verlag für das Studium der Arbeiterbewegung, 1975), vi-vii. Even after publication of the first book of *Kapital*, Marx still envisaged a separate volume on the history of theory. Roman Rosdolsky, *Zur Entstehungsgeschichte des Marxschen “Kapital,”* 27.

72. *Marx Engels Werke* (Berlin: Dietz Verlag, 1963), vol. 32, 11.

73. Marx cites Proudhon's contention that labor itself has no value as a commodity, only labor's potential. But Marx dismisses it as unintelligible. Cited by Allen Oakley, *Marx's Critique of Political Economy* (London: Routledge & Kegan Paul, 1984), vol 1, 118.

74. *Grundrisse*. The remainder were French, American, and Italian.

75. *Karl Marx Exzerpte und Notizen* (Berlin: Dietz Verlag, 1986), 47-55. Johann Thünen, a Prussian author whom Marx indicates he read, approximated Marx's definition of the cost of labor power. Thünen rejected as imprecise the notion that the cost of maintaining the working population determined minimum wage levels. He believed that the cost of reproducing the worker's "capacity to labor" provided a clearer analysis of the determination of various levels of wages. Yet Marx's references to Thünen, as to other German writers, are not intended to clarify the use of labor power in the capitalist labor process. *Das Kapital*, vol. 1, 649; Johann Thünen, *Der isolierte Staat* (Berlin: Wiegandt, Hempel & Parey, 1875 [1842]), part 2, 82. Marx also cites Roscher and Rau. *Theorien über den Mehrwert*, (Stuttgart, Germany: Dietz, 1921), vol. 3, 219, 224; *Marx Engels Werke* (Berlin: Dietz Verlag, 1962), vol. 19, 367.

76. Draft of an article on Friedrich List's Book, in *Collected Works* (London: Lawrence and Wishart, 1975), vol. 4, 274. See also *Kapital*, vol. 1, 21-22.

77. Emphasis added. Letter of Marx to Engels, 8 January 1868, *Marx Engels Werke* (Berlin: Dietz Verlag, 1965), vol. 32, 11. "This," Marx added, "is actually the whole secret of the critical view."

78. In contrast to Britain, the distinction between labor's value in use and in exchange became a stock assumption in Germany even among insipid money makers who would not be expected to concern themselves with the subtleties of theory. The chamber of commerce in the textile town of Greiz said in 1906 that "Although the moral value of labor is the same everywhere, its use value and its exchange value are diverse." *Reußische-Volkszeitung*, 13 September 1902.

79. *Das Kapital*, vol. 1, 562, 564.

80. To be sure, Marx, like German economists of his time, does use the plural term "Arbeitskräfte," literally, "labor powers," to refer to the supply of workers at large in a society. See, for example, *Grundrisse*, 408. But neither the singular nor the plural forms are used to explicate the purchase and use of labor at the point of production.

81. Marx, *Grundrisse der Kritik der politischen Oekonomie* (Berlin: Dietz Verlag, 1974), 185. Marx repeats the imprecise reference when he says, "Labor, which is sold to capital as a use value, is a good with exchange value for the worker, which he wants to receive. . . ." *Grundrisse*, 214. See also 178, 183.

82. Ernest Mandel shows that Marx's mature theory of exploitation in the capitalist labor process, known so well from *Kapital*, appears first in the *Grundrisse* even when Marx clumsily uses the indistinct term "labor." Ernest Mandel, *The Formation of the Economic Thought of Karl Marx* (New York: Monthly Review, 1971), 84, footnote. Roman Rosdolsky's analysis of the intellectual genesis of *Kapital* reaches the same conclusion. Roman Rosdolsky, *Zur Entstehungsgeschichte des Marx'schen "Kapital"* (Frankfurt, Germany: Europäische Verlagsanstalt, 1968), vol. 1, 230, and chapter 12.

83. See Marx, *Grundrisse*, 566. "As a use value the labor capacity (*Arbeitsvermögen*) is realized only in the activity of the labor itself, just in the same way as a bottle of wine, which is purchased, is not realized as a use value until the drinking." *Grundrisse* (Berlin: Dietz Verlag, 1974), 946. "The labor capacity (*Arbeitsvermögen*) appears to the free laborer . . . as his property. . . ." Marx, *Grundrisse*, 368-69.

84. "Das Kapitel von Kapital," *Gesamtausgabe (MEGA)* (Berlin: Dietz Verlag, 1976), section 2, vol. 1, part 1, no. 1, 259.

85. Marx's unpublished economic and philosophic manuscripts of 1844 said that in the employment relation "the workers are forced to offer their person and their power . . . for a price." *Marx/Engels Gesamtausgabe* (Berlin: Marx-Engels Verlag, 1932), series one, vol. 3, 51.

86. *Das Kapital*, vol. 1, 12-15.

87. *Ibid.*, 380. Germany, Marx said, illustrates better than any other land the character of guild control of handcrafts. "Zur Kritik der politischen Ökonomie (Manuskript 1861-1863)," *Gesamtausgabe (MEGA)* (Berlin: Dietz Verlag, 1982), section 2, vol. 3, part 6, no. 1, 1975.

88. *Das Kapital*, vol. 1, 91.

89. *Ibid.*, 12; "Zur Kritik der politischen Ökonomie (Manuskript 1861-1863)," *Gesamtausgabe (MEGA)* (Berlin: Dietz Verlag, 1978), section 2, vol. 3, part 3, no. 1, 880-81.

90. "Zur Kritik der politischen Ökonomie (Manuskript 1861-1863)" in *Gesamtausgabe (MEGA)* (Berlin: Dietz Verlag, 1977), section 2, vol. 3, part 1, no. 1, 158, 190.

91. See, illustratively, J. C. Glaser, *Die allgemeine Wirtschaftslehre oder Nationalökonomie* (Berlin: E.H. Schroeder, 1858), 182-83.

92. Friedrich Leitner, *Die Selbstkostenberechnung industrieller Betriebe* (3rd ed.) (Frankfurt am Main, Germany: J.D. Sauerländer, 1908), 77.

93. *Das Kapital*, vol. 1, 181-82.

94. This answers a riddle I failed to address in *Fabrication of Labor*: why Marx resorted to the artifice *Arbeitsvermögen* and later switched to *Arbeitskraft*. The publication in the *Gesamtausgabe (MEGA)* of the intervening drafts of *Kapital*, penned between the first sketch and the final published edition, have proven crucial for intellectual historians.

95. *Das Kapital*, vol. 1, 58-59, 61. My citation joins two passages.

96. See the 1857 petition of the weavers of Greiz, Staatsarchiv Weimer, Landesregierung Greiz, a Rep. A Kap. XXI/2c, nr. 400.

97. See H. M. Hyndman, *The Historical Basis of Socialism in England* (London: Garland Publishing, 1984 [1883]), 119-22.

98. See, illustratively, *Der Christliche Textilarbeiter*, 30 June 1900.

99. Roemer, *Analytical Foundations of Marxian Economic Theory*, 159.

100. John Roemer, *A General Theory of Exploitation and Class* (Cambridge, MA: Harvard University Press, 1982), 104-5. Somewhat analogously, in Erik Wright's model of how skilled workers exploit others via the collection of "rent" from their monopoly of skill, the skilled workers appropriate labor via the manipulation of market prices rather than through the immediate domination of the execution of work. Wright, *Class Counts Comparative*, 22. For an account of "indirect" exploitation in Marx, see Elster, *Making Sense of Marx*, 338. Marx himself theorized the exploitation of the labor of autonomous agrarian small holders through control of the means of credit.

101. Erik Olin Wright, *Classes* (London: Verso, 1985), 123; John Roemer, *Free to Lose. An Introduction to Marxist Economic Philosophy* (Cambridge, MA: Harvard University Press, 1988), 88.

102. Two illustrations from this distinguished body of literature: Ira Katznelson, "Working-Class Formation and the State: Nineteenth-Century England in American Perspective," in Peter B. Evans, Dietrich Rueschmeyer, and Theda Skocpol, eds., *Bringing the State Back In* (Cambridge, UK: Cambridge University Press, 1985) and Bo Rothstein, "Marxism, Institutional Analysis, and Working-Class Power: The Swedish Case," *Politics & Society* 18, no. 3 (1990): 317-46.

103. For an analysis of how the new language-focused cultural history paradoxically resorts to economic reductionism in spite of its practitioners' declared intentions, see Richard Biernacki, "Language and the Shift from Signs to Practices in Cultural Inquiry," *History and Theory* 39 (October 2000): 298-300.

104. Marx sees the cultural form of labor as the starting point of analysis, from which he derives the institution of wage labor. *Das Kapital*, vol. 1, 184.

105. "Zur Kritik der politischen Ökonomie (Manuskript 1861-1863)" in *Gesamtausgabe (MEGA)* (Berlin: Dietz Verlag, 1977), section 2, vol. 3, part 2, no. 1, 457, emphasis added.

106. Staatsarchiv Münster, Kreis Steinfurt, 1311, 2 May 1891 and 29 March 1899; Regierung Münster, 218, 14 May 1891; Geheimes Staatsarchiv, 772524, no. 3, vol. 1, 1 April 1899, Amt Rheine.

107. Biernacki, *Fabrication of Labor*, 372-73. Where British workers in other industries requested out-of-work support, they saw this as requisite for the workers' maintenance, rather than as part of the conveyance of the commodity of labor per se. German workers defined waiting money not as an allowance, but as an indemnity (*Der Textil-Arbeiter*, 12 February 1904, Elsterberg).

108. Hauptstaatsarchiv Düsseldorf Landratsamt Mönchengladbach 303, 1909, Viersen, 10; *Der Textil-Arbeiter*, 3 April 1914, Neugersdorf.

109. *Yorkshire Factory Times*, 12 March 1914.

110. *Westdeutsche Landeszeitung*, Rheydt, 7 March 1906; Hauptstaatsarchiv Düsseldorf, Regierung Düsseldorf, 24699, 1 May 1905, 286; *Der Textilarbeiter-Zeitung*, 13 March 1909.

111. Hauptstaatsarchiv Düsseldorf, Regierung Düsseldorf 24691, Hann.

112. Jutearbeiter-Konferenz, Braunschweig, 7 October 1906.

113. United Kingdom, PP 1892 xxxv, 208-10; Sidney and Beatrice Webb, *Industrial Democracy* (New York: Augustine Kelley, 1965 [1897]), 312.

114. J. E. Crawford Munro, *Sliding Scales in the Coal Industry* (London: John Heywood, 1885), 6; J. E. Crawford Munro, "Sliding Scales in the Iron Industry," Address to the Manchester Statistical Society, 9 December 1885, Manchester Library Archives; Federation of Master Cotton Spinners' Association, *Report of Negotiations 1899-1900*, 16.

115. Ephraim Lipson, *The Economic History of England* (London: Adam and Charles Black, 1948), vol. 3, 35; K. H. Burnley, "An Essex Clothier of the Eighteenth Century," *Economic History Review* 11, no. 2 (1958).

116. *Mitteilungen des Gesamtverbandes der christlichen Gewerkschaften Deutschlands*, 11 November 1901, 146; Otto von Zwiedineck-Südenhorst, *Beiträge zur Lehre von den Lohnformen* (Tübingen, Germany: H. Laupp, 1904), 18.

117. *Blackburn Labour Journal*, September 1898; *The Pioneer*, February 1914, "Socialist Land Policy."

118. Mary Nolan, *Social Democracy and Society* (Cambridge, UK: Cambridge University Press, 1981), 158.

119. John Roemer, "A Thin Thread," *Politics & Society* 18, no. 2 (1990): 245-48.

120. For example, Erik Wright acutely defines skill exploitation as the transfer of labor by occupational wage differentials that are not derived from the cost of acquiring the skills of the occupation or of carrying out its activities. But if we so define the receipt of "surplus labor" as income received above the competitive equilibrium wage rate, the concept of labor makes no explanatory contribution of its own. It offers only a metacommentary on the market. Wright, *Class Counts*, 16.

121. G. N. von Tunzelmann, "Time-Saving Technical Change: The Cotton Industry in the English Industrial Revolution," *Explorations in Economic History* 32, no. 1 (1995);

Joel Mokry, "Introduction: The New Economic History and the Industrial Revolution," in Joel Mokry, ed., *The British Industrial Revolution* (Boulder, CO: Westview, 1993), 87.

122. G. N. von Tunzelmann, *Steam Power and British Industrialization to 1860* (Oxford, UK: Clarendon, 1978), 187-95.

123. Cited by Sidney Pollard, "Factory Discipline in the Industrial Revolution," *The Economic History Review* (second series) 16, no. 2 (1963): 258.

124. See, illustratively, Michael Huberman, "Piece Rates Reconsidered: The Case of Cotton," *Journal of Interdisciplinary History* 26, no. 3, (1996): 416-17; Bernard Elbaum, "The Steel Industry before World War I," in Bernard Elbaum and William Lazonick, eds., *The Decline of the British Economy* (Oxford, UK: Clarendon, 1986), 70.

125. William Lazonick, "The Cotton Industry," in *The Decline of the British Economy*, 21-22.

126. William Lazonick, *Competitive Advantage on the Shop Floor* (Cambridge, MA: Harvard University Press, 1990), 154-55.

127. *Ibid.* 183, 201.

128. W. W. Rostow, *British Economy of the Nineteenth Century* (Oxford, UK: Oxford University Press, 1948), 54, emphasis added with reference to data, note 1.

129. Reinhard Spree, *Wachstumstrends und Konjunkturzyklen in der deutschen Wirtschaft von 1820 bis 1913* (Göttingen, Germany: Vandenhoeck & Ruprecht, 1978), 135, 137. Compare to J.R.T. Hughes, *Fluctuations in Trade, Industry and Finance. A Study of British Economic Development 1850-1860* (Oxford, UK: Clarendon, 1969), 77-78.

130. Much of the recent evidence suggests that the overall level of industrial investment in Victorian Britain was limited by manufacturers' low aggregate demand for financing, rather than by lack of funding opportunities. Michael Collins, *Banks and Industrial Finance in Britain 1800-1939* (Cambridge, UK: Cambridge University Press, 1991), 21, 24, 37. For examples of speculative investment without proportionally greater increases in manufacturing capacity, see S. D. Chapman, "Financial Restraints on the Growth of Firms in the Cotton Industry, 1790-1850," in D. T. Jenkins, ed., *The Textile Industries* (Oxford, UK: Blackwell, 1994), 197.

131. Michael Typus, "Korrelogramm- und Spektralanalyse der Wachstumszyklen der deutschen Wirtschaft 1820 bis 1913," in *Wachstumstrends und Konjunkturzyklen*, 176-77; Rudi Rettig, *Das Investitions- und Finanzierungsverhalten deutscher Grossunternehmen 1880-1911*, Ph.D. diss., Universität Münster, 1978, reprinted New York: Arno Press, 1981, 228-29; Hughes, *Fluctuations in Trade, Industry and Finance*, 160; Francois Crouzet, *Capital Formation in Great Britain during the Industrial Revolution* (London: Methuen & Co., 1972), 204-5. On lack of an inhibiting influence from banks on investment in Britain, Roy Church, Trevor Baldwin, and Bob Berry, "Accounting for Profitability at the Consett Iron Company before 1914: Measurement, Sources, and Uses," *Economic History Review* 47, no. 4 (1994): 712.

132. William P. Kennedy, *Industrial Structure, Capital Markets and the Origins of British Economic Decline* (Cambridge, UK: Cambridge University Press, 1987), 153.

133. E. H. Phelps Brown, *A Century of Pay* (London: Macmillan, 1968), 142, 144.

134. Ulrich Wengenroth, *Unternehmensstrategien und technischer Fortschritt. Die deutsche und britische Stahlindustrie 1865-1895* (Göttingen, Germany: Vandenhoeck & Ruprecht, 1986), 289.

135. Rainer Fremdling, "Productivity Comparison between Great Britain and Germany, 1855-1913," *Scandinavian Economic History Review* 39, no. 1 (1991): 40; Phelps Brown, *A Century of Pay*, 142.

136. David Landes, *The Unbound Prometheus* (Cambridge, UK: Cambridge University Press, 1969), 354.

137. H. Berghoff and R. Möller, "Tired Pioneers and Dynamic Newcomers? A Comparative Essay on English and German Entrepreneurial History, 1870-1914," *Economic History Review* 47, no. 2 (1994): 266, 282.

138. Donald N. McCloskey and Lars G. Sandberg, "From Damnation to Redemption: Judgments on the Late Victorian Entrepreneur," in Donald McCloskey, ed., *Enterprise and Trade in Victorian Britain* (London: George Allen & Unwin, 1981); Ulrich Wengenroth, *Unternehmensstrategien und technische Fortschritt. Die deutsche und die britische Stahlindustrie 1865-1895* (Göttingen, Germany: Vandenhoeck & Ruprecht, 1986), 289-90; John Steven Toms, "Financial Constraints on Economic Growth: Profits, Capital Accumulation and the Development of the Lancashire Cotton-Spinning Industry, 1885-1914," *Accounting Business and Financial History* 4, no. 3 (1994): 363, 371.

139. *Das Kapital*, vol. 1, 95, note 32.

140. Marx derives the institution of wage labor from the social form of the commodity in *Das Kapital*, vol. 1, 184, note 41.