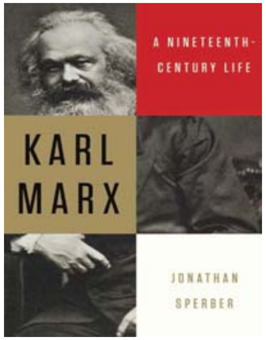

11 *The Economist*

IN THE WAKE OF the global recession of 1857, Marx began writing his long-planned treatise on political economy. The idea of such a treatise had initially been conceived when he first studied the major political economists in Paris during the mid-1840s. In the following decade, exploiting the storehouse of knowledge in the British Museum, he had deepened his knowledge of economic theories and explored empirical evidence of the development of capitalism, writing up some results of his researches in his commentaries on business and finance for the *New York Tribune*. Influencing his interpretations were the theoretical reflections he had devised under and against the influence of positivism.

Marx's plans for his treatise were expansive and ambitious. He would subject the ideas of the leading political economists of the day—particularly Adam Smith and his chief disciple, David Ricardo, but also Thomas Malthus, Jean-Baptiste Say, James and John Stuart Mill, to say nothing of many other, lesser figures—to Hegelian conceptual criticism. For all Marx's disagreements with these theorists, he endorsed a number of their chief ideas, such as the determination of goods' value by the labor required to produce them, the tendency in a capitalist society for the rate of profit to fall over time, and the relationship between the rent of land and differences in agricultural output. His Hegelian critique would not so much refute the proposals of these economists as it would reformulate their fundamental notions with greater theoretical precision and greater empirical accuracy. Finally, Marx would connect the tendencies of economic development that Smith and Ricardo had discerned with his theories of the stages of human history into a broad panorama of the violent rise, antagonistic flourishing, crisis-ridden decline, and revolutionary disappearance of capitalism.

It was a lot to do, and Marx's initial efforts at the end of the 1850s turned into a quarter-century-long theoretical, empirical, and mathematical odyssey. Unlike Homer's wily hero, Marx never reached an Ithaca of political economy, but continued to wander around an intellectual Mediterranean, with a few stops, of shorter and longer duration, at islands of publication. While he was on his journey, both the economic landscape of nineteenth-century capitalism and the intellectual landscape of economic thought were changing around him. The intellectual voyage was only finished after his death. In the following decade, painstakingly deciphering Marx's scrawled script and laboriously reconciling his different draft manuscripts and extensive notes, Engels compiled and published the rest of Marx's treatise. By the time it appeared, most economists lived in a different intellectual universe from that of Smith and Ricardo; Marx's efforts to reaffirm the economic orthodoxy of the mid-nineteenth century appeared as a dissenting and unorthodox economics four decades later.

Marx's initial unpublished draft of 1857–58 is known as the *Grundrisse* (German for "construction sketch" or "blueprint"), a name given it by the Russian editors who first published the manuscript in 1939. This preliminary attempt, 800 pages strong, was a variegated work, mixing carefully structured arguments with isolated comments, well-connected passages with random insights, and issues from the Paris manuscripts of 1844 with observations from Marx's journalism of the 1850s. For all the fragmentary, non-linear nature of the manuscript, it contained basic themes of Marx's economics that he would pursue for the rest of his life. A few excerpts from the *Grundrisse* appeared in the slender *On the Critique of Political Economy*, published in Berlin in 1859, a work that was the proverbial tip of the iceberg. The pamphlet dealt primarily with money and economists' monetary theories, revealing little of the thematic wealth of its unprinted predecessor.

Marx worked on his economics treatise with heightened intensity in the first half of the 1860s, producing a better-structured draft of the entire work in 1861–62, which included a history of economic thought not found in later manuscripts, and eventually published separately as *Theories of Surplus Value*. A third, and by far the best organized and clearest version of the treatise, was written in 1864–65. It had grown too long to be published all at once, so Marx excerpted the initial 40 percent and revised it extensively for publication. This became Volume One of *Capital*, which was published in Hamburg in 1867. In the 1870s, Marx made a number of changes and corrections to this work for the second German-language edition of 1873, and the French-language edition, published two years later. An English-language version, in spite of Marx's efforts to procure a translation and publisher, only appeared in 1887, after his death.

All these printed versions left the majority of Marx's planned treatise still unpublished. Marx hoped to have the remainder of the work done shortly after the first volume appeared, and he continued to work on the book until the last year of his life. But his efforts after 1867 remained scattered and fragmentary; when Engels collected, organized, and transcribed Marx's writings posthumously, he had to have recourse to the manuscripts from the 1860s. Although Volumes Two and Three of *Capital*, as edited by Engels, were published in 1885 and 1894 respectively, in most respects Volume One was written after Volumes Two and Three and on many important topics contained Marx's latest thinking and formulations.[1]

Summarizing, criticizing, and placing in historical context this giant mass of published and unpublished material would demand a book—many books!—in itself. Readers, I hope, will be content with a briefer account, beginning with the Hegelian conceptions of Marx's work, outlining Marx's main economic concepts, and showing how these were developed into a diagnosis of nineteenth-century capitalism and a prognosis of its ultimate demise. Three crucial features of Marx's economic theory—the tendency of the rate of profit to fall; the so-called transformation problem, the transformation of values into prices across an entire capitalist economy; and the determination of farm prices and ground rent—remained unpublished during his lifetime. Marx's struggles with the problems inherent in these features illuminate the relationship between his ideas and those of his predecessors and contemporaries. In the last third of the nineteenth century, growing discontent with existing theories of political economy led to the development of two new and strongly opposed versions of economics: the "Historical School" and neoclassical marginal utility theory. The reception of Marx's ideas and the criticisms by adherents of these newer trends demonstrates how Marx's ideas were shaped by his predecessors and by the socioeconomic environment in which they lived. In contrast, there was much less in Marx's work relevant to trends either in the economy or the economic theory of the late nineteenth and twentieth centuries.

CAPITAL BEGAN WITH THE simple perception of the capitalist economic system as an immense number of useful goods produced and exchanged. (The German *Ware*, goods for exchange or sale, is usually rendered in English as "commodities," a bit misleading, since Marx did not have in mind the contemporary meaning of commodities as raw materials, but goods and services more generally.) If goods, having incommensurable uses—cloth on the one hand and grain on the other—were to be exchanged, they needed some common measure of value, so their exchange implied the existence of a currency, transforming bartering goods into selling them, trading them for money. Trading goods to increase one's store of money, rather than to exchange one good for another, Marx continued, was what made money into capital. This kind of exchange, increasing wealth and value, he argued, was only possible through the exchange of money with a specific kind of commodity, human labor power.

The rest of Volume One of *Capital* then explained the implications of that exchange: its relationship to the workday, its differentiation of kinds of capital, and its role in creating surplus value, the increase in wealth enjoyed by capitalists as a result of their exchange with workers. Marx elaborated the production of surplus value, including a detailed investigation of the factory system, the changes in the working day, changes in employment and in the structure of capital, and long-term trends in the distribution of the income resulting from the growth of a capitalist economy. The development of these concepts and their empirical investigation took up most of the first volume of *Capital*.

While surplus value had been extracted by the exchange between capitalists and workers, it still had to be realized—that is, the goods workers produced had to be sold in the market, for capitalists to make a profit. If Volume One of *Capital* was about distribution, Volume Two became an investigation of circulation, of the process of buying and selling in the market. Volume Three then returned to the process of production in light of the results on circulation. This work dealt with the transformation of value (whose extraction was considered in Volume One) through sale (Volume Two) into price and relationship of this transformation to the falling rate of profit—both processes considered in regard to the whole economy, and not just individual firms. Volume Three also considered specialized issues emerging from the intersection of production and circulation, such as currency, credit, and finance, and then specific forms of capitalism, including agriculture, mining, and urban real estate. The volume and the work ended—or was designed to end, because Marx never completed even a rough draft of this final section—with an explanation of the differences between Marx's analysis of capitalism and that of Smith and Ricardo, and an invocation of the capitalist economic system's structuring of a class society.

This form of proceeding was fundamentally Hegelian. Authors have compared Marx's economic treatise with Hegel's *Logic*.[2] A more appropriate comparison might be to another of Hegel's works, the *Phenomenology of Spirit*, which began with simple, immediate sense perception, and moved up a conceptual ladder of increasing complexity, each rung in the ladder generated by the ultimate inadequacy of the previous one, as it was more carefully elaborated. *Capital* began with the simplest forms of economic activity, the production and exchange of goods, and developed a theoretical structure of increasing complexity, each step emerging out of the inadequacy of the previous one: money needed to explain how objects with incommensurate uses could be exchanged, the nature of labor power to explain how equal exchanges could produce profits, the analysis of circulation to explain how extracted surplus value could be realized, to give just a few examples. At the end of the analysis was a complex class society, containing all its inequalities and tendencies toward self-destruction.

A crucial part of Hegel's process of conceptual and historical development was the movement of self-externalization and self-estrangement, in a word, alienation, and the recovery of the capacity and material that had been alienated. As early as the Paris manuscripts of 1844, Marx had transformed Hegel's insights into an explanation of political economy, in his discussion of the alienation of labor under capitalism. Whole passages in the *Grundrisse* were just repetitions of these viewpoints, first written down fifteen years previously. In *Capital*, Marx did not use the language of alienation and self-estrangement, but he did talk about the "fetishism of commodities," the way capitalism turned the process of the actualization of human labor into a thing, a commodity, or good for sale, distinct from the workers who had produced the commodity and holding power over their lives.[3]

If Marx's use in *Capital* of the concept of commodity fetishism is evidence of a link to ideas from the 1840s, his opposition of secrets to semblances, and his description of inner connection and inner logic as the truth in his economic work, reflected his methodology after 1850 and his ambivalent feelings about the increasingly dominant positivist understanding of knowledge. In describing the fetishism of commodities, Marx stated that "The mysterious character of the commodity form thus simply consists of the fact that it reflects back to men the societal character of their own labor as the objective characteristics of the labor product itself. . . . thus also reflects the social relationship of producers to their total labor as a social relationship of objects existing outside themselves."[4] This passage, reminiscent of the philosophical analysis of the Paris manuscripts, pointed out the difference between appearance and inner logic. Goods appear in the marketplace, are sold at market prices that appear independent of individual control; but this appearance veils the inner logic of the labor process, the production of those goods by workers, who have lost control of the products of their own social labor.

This evocation of secrets as the inner logic of an empirically perceived semblance was most noticeable in the unfinished third volume, in which Marx planned to bring his entire system together as a totality and to compare it with the ideas of the classical political economists. At the beginning of Volume Three, he insisted that surplus value was the hidden form of profit, that the rate of profit and idea of value emerging from credit were both a "semblance," while the rate of surplus value was "the invisible, but the essential to be discovered." Marx felt that in distinguishing between the rate of profit and the rate of surplus value, he had "for the first time uncovered this inner connection." He insisted that supply and demand, which bourgeois economists asserted determined prices, was just a semblance, rather than the reality of value determined by labor time, which could only be found by investigation of the inner connections of value.[5]

Getting to the conclusion of this volume and his entire work, Marx discussed the idea first formulated by Adam Smith, and endorsed by his followers, that the sales price of a commodity was made up of the incomes of those who had produced it, and that those incomes could be divided into rent on land, profit (or interest) on capital, and wages of labor. Marx described this idea as "the Trinitarian form, which encompasses all the secrets of the social process of production." The secrets that Marx had uncovered in his investigation were that these forms of income were not independent but were, ultimately, the products of labor in the capitalist system of production. The best classical economists, Marx asserted, had penetrated the semblance of the three forms of income, but remained, as a result of their advocacy of the capitalist system of production, "imprisoned in the world of semblance they themselves had critically dissolved."[6] It was only by engaging in the Hegelian labor of conceptual development that Marx was able to show how the semblance of the system depended on the connected logic of its inner workings.

Marx's methodology might be compared with two other common forms of social science investigations of empirical reality. In one, stemming from the nineteenth-century positivists, social scientists posit the various terms of their model (today, in a more mathematical mode, they say their "independent variables") and use it to explain empirical findings. In *Capital*, Marx certainly developed a model of a capitalist economy, a model that, even by the end of the first volume, to say nothing of all three, had many terms and concepts. But these were all developed out of the initial conditions of goods produced and exchanged. Each step of the development followed from the inadequacy of the previous one to explain different, empirically evident aspects of capitalism. That procedure would reveal the inner logic of the system, as more positivist forms of modeling, beginning with a large number of terms, would not.[7]

A second version of modeling is one used by economists, both in Marx's time and today. This version employs a reduced number of terms to produce a deliberately simplified model of economic reality, in that way revealing the effects of what the economists regard as crucial factors. In a further step, economists are supposed to bring back in the neglected factors, but they have been known not to do so, and to apply their simplified model directly in making policy recommendations. This is not unlike Marx's procedure, only the terms Marx brought back in were not so much modifications of his initial premises as consequences of their conceptual development, a distinctly dialectical aspect of Marx's mode of investigation.

MARX'S ECONOMIC THEORY WAS framed by five conceptual distinctions: between use value and exchange value; between the use of money to exchange commodities and the use of money to accumulate capital; between labor and labor power; between constant and variable capital; and between the rate of surplus value and the rate of profit. Only after making these distinctions, which, as might be expected from Marx's methods, emerged from one another, could Marx develop his analysis of capitalism and his diagnosis of capitalism's future, and distinguish these from the versions offered by contemporary political economists.[8]

The distinction between use value and exchange value was conceptually straightforward. Use value was the subjective benefit an individual received from the consumption of a good or service; exchange value the price paid for that good or service in the market. Exchange required a common measure of value, or money. The producer of a commodity sold it, turning its use value over to the purchaser, received the good's exchange value in the form of money, and then purchasing another commodity with that money. Marx used the example of a farmer who sold the wheat he had grown and employed the proceeds to buy linen cloth from a handloom weaver, while the weaver used the money he received from the sale of the cloth to buy a Bible. The mention of the purchase of the Bible and the spiritual use value it possessed was meant ironically, but the point was to illustrate the relationship between exchange and the division of labor.[9]

This simple exchange, for Marx, was not capitalism. Rather, capitalism involved a different version of the process of exchange. In this version, money was used to purchase a commodity, and then that commodity was sold at a profit, so that more money existed at the end of the chain of transactions than at the beginning. This use of money to increase value, Marx asserted, turned money into capital. But, as he noted, how could this happen if goods sold for their exchange value? Where did the extra value—the "surplus value," as Marx said—come from?

The answer to this question involved Marx's intervention in a long-running debate among political economists concerning the labor theory of value. First advanced by Adam Smith, elaborately formulated by David Ricardo, and endorsed in the standard economics text of Marx's time, John Stuart Mill's *Principles of Political Economy* (1848), this theory stated that the value of a good was given by the amount of labor needed to produce it.[10] "Socially necessary labor time" was the phrase Marx used. The problem, as Ricardo's critics pointed out (and Marx, unusually well read on political economy, was well aware of this problem), was that using such a measure of value failed when applied to the value of labor itself. It was conceptually unclear how labor could be both valued and the measure of value. If one tried to overcome this objection by stating that the value of labor was labor itself, then both the value of the good produced and the value of the labor needed to produce it were the same. Such an equality of value implied that capitalists could not make any money, unless—as some socialists, including Marx's old rival Proudhon, suggested—they were systematically cheating the workers, and paying them less than the value of their labor. Marx rejected this idea, and in his 1859 pamphlet explained that future publications would provide the solution to this fundamental problem of the labor theory of value.[11]

In the *Grundrisse*, Marx went over the problem a number of times, before formulating the solution he would adopt in his economic writings. Workers, he asserted, did not sell capitalists their labor; rather, they sold them what Marx first called "ability to labor" and "capacity to labor," before settling on the phrase "labor power." The exchange value of the labor power was the labor time needed to produce that labor power—that is, to keep workers and their families alive and working, maintaining their standard of living. The use value of the labor power, on the other hand, was the labor itself, which had the unique property of increasing value. Formulated in terms of labor time, the standard contemporary measure of value, Marx's argument was that workers in a textile mill, to take a typical industrial establishment of the 1860s, worked a twelve-hour day transforming raw cotton into cotton yarn. The yarn the workers produced in six hours, half the workday, when sold, sufficed to pay their wages, to compensate them for their labor power, as well as half the other costs of their employer for raw cotton, fuel for the machinery, heat and light for the factory building, and depreciation of the productive facilities. But they continued to work the remaining six hours, and the product of that time, when sold, both replaced the other half of the material costs of their employer and added a surplus value, the profit of the capitalists.

In a famous passage, laden with sarcasm, yet also expressing his historical philosophy, Marx described this sale of labor power as "liberty, equality, property and Bentham."[12] Capitalists and workers, two freely contracting parties, made an equal trade, the workers receiving the fair exchange value of their labor power, in return for which the capitalists got to consume the use value of this labor power. Each side was trading what it had to sell, the workers their labor power, the capitalists their money for wages, and each, as the utilitarian philosopher Jeremy Bentham proposed, was acting in self-interest.

Marx added one final feature to his basic concepts: the distinction between different kinds of capital. Contemporary economists distinguished between "fixed" and "circulating" capital, the former including structures and production facilities, the latter raw materials and finished goods. Marx endorsed that distinction and discussed it at some length in the posthumously published Volume Two, but also lumped together fixed and circulating capital under the heading of "constant capital." Against this constant capital, he counterposed "variable capital," the cost of workers' wages, an idea developed in the *Grundrisse* from a concept of Ricardo's political economy, the "wages fund": the proportion of national income available to pay workers' wages. Marx gave the concept a Hegelian twist, defining wages as capital, uniting seemingly opposite conceptions, and also pointing to the central role of labor in creating capital.[13]

Marx's counterposing of constant and variable capital served another crucial purpose of his economic theory, particularly relevant to the central proposition of the falling rate of profit. He asserted that the constant capital contained in any given good for sale did not increase its value; the price of raw materials, machinery, structures, fuel, etc., was just passed on in the finished goods. Only variable capital, human labor power, could increase the value of commodities.[14] Marx distinguished between the rate of surplus value, the ratio of capitalists' profit to their labor costs, and the rate of profit, the ratio of capitalists' profit to their costs for both labor and materials and machinery, or for living and dead labor, as he sometimes described these two forms of capital. Although the rate of profit corresponded to the way capitalists themselves calculated returns on their investments, it was a semblance, for it was the rate of surplus value that determined capitalists' profit.

With these conceptual distinctions in place, Marx was ready to begin articulating his theory. Capitalists, driven by competition in the market, were fighting to increase or at least maintain their profits; and given the origin of profit in surplus value, Marx perceived two ways they could do so. One he called "the extraction of absolute surplus value," by which he meant the lengthening of the working day, so that workers would devote a greater proportion of their labor time to producing profits for their capitalist employer and a lesser proportion to producing goods that, when sold, would pay their wages. In this discussion of the extraction of surplus value, which began about a third of the way into Volume One, Marx dropped the form of abstract reasoning he had used previously, and began to cite empirical material. Using as his chief source the Blue Books, reports of British parliamentary commissions of inquiries, Marx painted a dark picture of misery and exploitation, of exhausted and ill workers, even young children, laboring day and night. He told the story of the washerwoman Mary Anne Walkley in London, who, while toiling on cleaning the dresses for ladies preparing for the ball of the Princess of Wales in 1863, was literally worked to death.[15]

At the same time, this capitalist exploitation generated working-class resistance, in the form of campaigns for a legally guaranteed shorter working day, and in the demands of trade unions for shorter hours.[16] Marx's theory of surplus value helps explain his support of the International Working Men's Association and the trade unionism it sponsored. Unions' advocacy of shorter working hours was central to the class struggle, for it involved the workers seizing back from the capitalists a portion of the value they created, decreasing the capitalists' surplus value and hence their profit. It was a reformist action, but one that struck at the root of the source of capitalists' profits, and led toward the end of the capitalist system.

Marx understood that extending the working day, even if there were no working-class opposition, ran into physical limitations, unless all the workers were going to join Mary Anne Walkley in the grave. The greater part of his analysis was focused on the extraction of what he called "relative surplus value," generated by making labor more productive. Even if such more productive workers devoted the same proportion of their working day to replacing the capitalists' equipment and raw materials costs and generating a profit for them, they would produce more goods during those hours and so generate more profits. Marx thought it was "the immanent drive and constant tendency of capital to raise the productive power of labor. . . ."[17] Capitalism was all about producing more and producing more productively.

The increase in labor productivity was the result of the expanded use of machinery. Marx's many illustrations of this point came from England in the first two thirds of the nineteenth century, the land of steam engines, mule jennies, and power looms. As Marx saw it, this trend was not just ongoing but intensifying. Machinery, the fuel needed to run it, and the raw materials processed by it made up a steadily increasing proportion of capitalists' expenditures, as compared to the money they spent on workers' wages. To use Marx's phrase, the "organic composition of capital," the ratio of constant to variable capital, was steadily rising.[18]

The consequences of this trend were both varied and far-reaching. The greater expenses needed for ever more machinery put smaller firms out of business and encouraged the formation of steadily larger capitalist enterprises. Larger firms and greater output required larger markets—an entire world market. Craft producers, such as the Indian handloom weavers, were driven out of business, and their countries turned into sources of raw materials. Emigrants from industrial countries settled in Australia or North America, and created still more markets for industrial goods and still more sources of raw materials.[19]

Yet the very same process leading to the production of ever greater societal wealth was producing ever greater immiseration. As production became steadily more mechanized, capitalists' demand for labor decreased, driving down wages for regularly employed workers, and creating a growing number of workers who were irregularly employed or completely unemployed. If they did not join the waves of emigrants, they became, in Marx's celebrated phrase, members of an "industrial reserve army." In this way, capitalism created a constant condition of overpopulation for the working class. But the introduction of steadily more expensive machinery required that it be run for longer hours to amortize its costs, so that the expansion of mechanization produced simultaneously unemployment and a longer workday for those workers who were still employed.[20]

Marx also suggested that the fluctuations in the size of this reserve army were the cause of the business cycle and of regularly recurring commercial crises. The causation on this point was not entirely clear, and it seems more logical to turn cause and effect around, to see the business cycle as determining the size of the industrial reserve army: in boom times, the unemployed would have been more likely to find jobs, and the size of the industrial reserve army would have declined, while in recessions, with growing unemployment, its ranks would have increased. In any event, Volume One of *Capital* lacked an explicit theory of business cycles and commercial crises. There was more on the topic in the posthumously published Volume Three, which noticeably differed from the assertions in Volume One. After the disappointment of his hopes of revolution to follow in the wake of the global recession of 1857, Marx rather downplayed the importance of crises for the end of capitalism.[21]

What he did see as leading to the end of capitalism was the contrast between the wealth created by the growing productivity of labor, resulting from the increasing organic composition of capital, and the misery these same trends caused for the workers. In a chapter entitled "The Universal Law of Capitalist Accumulation," Marx summed up, in angry tones, the general direction of the process driven by the increasing organic composition of capital:

> The law, which . . . constantly keeps relative overpopulation or the industrial reserve army in equilibrium with the extent and energy of accumulation, binds the worker more firmly to capital than the fetters of Hephaestus bound Prometheus to the rocks. The law determines an accumulation of misery corresponding to the accumulation of capital. The accumulation of wealth at one pole is thus simultaneously the accumulation of poverty, tormented labor, slavery, ignorance, brutalization and moral degradation at the opposite pole, i.e., on the side of the class that produces its own product as capital.[22]

Following this drastic statement, Marx set out to offer empirical evidence of it, using (as with almost all the material in his book) developments in Great Britain from the mid-1840s to the mid-1860s. He related the enormous expansion of exports, from £58.8 million in 1847 to £188.9 million in 1866, the steady increase in high incomes according to the income-tax statistics, and the growth of production in coal and iron. This evidence of increasing capitalist production and accumulation was familiar to Marx, as he had been reporting on it for the *New York Tribune* since the early 1850s, and had made it a practice to carry around notebooks in which he wrote down economic statistics.[23]

Against this backdrop of increasing bourgeois affluence, Marx deployed a wealth of evidence about the misery and poverty of the working class. The Blue Books he cited revealed badly undernourished shoemakers or Londoners who could not afford the high rents of the metropolis and were thrown out on the street. They reported on overfilled poorhouses, on farm workers who toiled in labor gangs in which women and children kept down adult male workers' wages, but paid for it with frequent teenage pregnancies. The diet of those abused farm laborers was worse than that of prisoners in jail.

Marx's accounts were disturbing documents of exploitation, oppression, and poverty; they make for uncomfortable reading even today. But they were, quite in contrast to the discussion of the growing industrial output and wealth of the upper classes, static, snapshots of the 1860s, with no indication of whether conditions then were worse or better than in past years. Marx knew that circumstances had changed in England since the early years of the industrial revolution at the beginning of the nineteenth century. Writing about the initial phases of industrialization in Russia during the 1860s, he stated that in the czar's empire, "so fruitful in all infamies, the old atrocities from the childhood period of English factories stand in full bloom."[24] This denunciation of Russia was a tacit admission that such atrocities were no longer occurring in England, that conditions had improved over the previous forty to sixty years.

Besides not taking change over time into account, Marx's portrayal of working-class misery was also selective. He buttressed his position with accounts of the poorest and most defenseless of the lower classes in the United Kingdom. In the International Working Men's Association, Marx had met British trade unionists, representatives of better-off workers, and had seen those workers in the rallies he had attended in Hyde Park and on the platform of meetings called by David Urquhart or the IWMA; but such workers were not included in his descriptions of the conditions of the English working class in the 1860s.

In the concluding chapters of Volume One, Marx set his picture of working-class impoverishment into a broader panorama of the history of capitalism. It began with "primal" or "original accumulation" (both those phrases are better renderings of the German *usprüngliche Akkumulation* than the standard English translation, "primitive accumulation"), the appropriation of surplus value by the pre-industrial capitalists of the sixteenth through the eighteenth centuries. Before machinery increased the productive power of labor, capitalists extracted surplus value by scarcely legitimated theft: seizing the farmers' common lands and forcing sturdy yeoman into misery as landless laborers, exploiting slaves, looting colonial subjects. With these observations, Marx integrated into his communist economic theories the criticism of British rule in India as a system of organized theft and corruption he had taken from pre-socialist British radicals and published in the *New York Tribune*. Following the onset of the industrial revolution, this open theft was replaced with the extraction of surplus value from the workers by means of industrial employment.

Peering into the future, Marx reiterated the predictions he and Engels had first made twenty years earlier in the *Communist Manifesto*. Capital would accumulate in fewer and fewer hands, as the financial demands of the increasing organic composition of capital drove smaller firms out of business. Production would be increasingly centralized and mechanized, designed for maximum efficiency. Productivity would grow, as would the global connections of the capitalist market economy. All these developments would be features of a future socialist economic system, already developing under the aegis of capitalism. At the same time, the general law of capitalist accumulation dictated that alongside the increase in capital, there would arise

> the mass of misery, oppression, servitude, degeneration, exploitation, but also the outrage of the steadily growing united and organized working class, schooled by the mechanism of the capitalist process of production itself. The monopoly of capital becomes a fetter on the means of production that have previously blossomed with capitalism and under it. The centralization of the means of production and the societal character of labor reach a point where they become irreconcilable with their capitalist shell. It is exploded. The hour of capitalist private property strikes. The expropriators are expropriated.[25]

This powerful and oft-cited passage was not the end of Volume One of *Capital*. The book continued for a few more pages with another aspect of the capitalist future: an account of how the growing population of England's settler colonies was gradually transforming them from islands of cheap land and working-class prosperity into centers of capitalist misery and exploitation like their mother country. While adding on this very final segment was rather an anticlimax after the powerful evocation of the end of capitalism, the discussion of colonization was both part of Marx's understanding of capitalism as a global system and also of his consistent use of the development of capitalism in Great Britain as a global model. Following the stages theory of history he had outlined in *On the Critique of Political Economy*, he perceived the British experience as the initial example of a universal process of capitalist development that other countries would have to emulate. At the very start of the book, in the preface to the first edition of Volume One, Marx cautioned his German readers about his use of English examples: "Should the German reader, shrug his shoulders, like a Pharisee, at the conditions of the English industrial and agricultural workers, or optimistically calm himself by thinking, that in Germany things are by far not yet so bad, then I must call out to him: De te fabula narratur!"[26] Breaking into Latin to emphasize, "It is your story being told!" Marx was asserting that the English examples employed in his narrative of capitalist expansion, exploitation, oppression, and ultimate self-destruction were no peculiarity of the island kingdom but universal directions of human history.

THE DEVIL, AS THE saying goes, is in the details, and the broad picture of the origins, nature, and destiny of a global capitalist economy in Volume One of *Capital* left a number of crucial issues for future publications. In a letter to Engels in April 1868, outlining his plans for the development of his work, Marx emphasized the "tendency of the rate of profit to fall in the progress of society," the appearance of surplus value to capitalists as profit, and the "transformation of surplus profit into ground rent."[27] Of these three points, the falling rate of profit was the key, helping to explain the other two, and also demonstrating Marx's relationship with the classical political economists of the early nineteenth century.

Elucidating the long-term direction of the rate of profit was a constant theoretical and empirical concern for Marx, from the first draft of his economics treatise until the eve of his death. In the *Grundrisse*, he described the law of the tendency of the rate of profit to fall as "in every respect the most important law of modern political economy . . . in spite of its simplicity, it has, up to now, never been intellectually grasped. . . ." The point was made in a different way in Volume Three of *Capital*, where Marx described the tendency of the rate of profit to fall as "an expression specific to the capitalist mode for production for the increasing development of the societal productive power of labor."[28] Since increasing labor productivity was central to his explanation of the extraction of relative surplus value in Volume One, and that extraction to his theory of the ultimate self-destruction of capitalism, his analysis of the falling rate of profit stood at the very heart of Marx's understanding of the life and death of the capitalist mode of production.

In both the *Grundrisse* and *Capital*, Marx did not claim to have invented the law of the tendency of the rate of profit to fall. Quite the opposite: he felt that his analysis explained correctly, for the first time, a characteristic observation of the political economy of his day. It was Adam Smith who had first asserted this tendency. David Ricardo had reformulated it in a different and more rigorous form, and it was once again endorsed in John Stuart Mill's standard work. For the latter two, the tendency had ended in a "stationary state," where the economy stopped growing, because the rate of profit had fallen so low that new investments were no longer profitable—a final ending that was Ricardo's nightmare, but an almost utopian prospect to Mill.[29] Both men perceived the falling rate of profit as culminating in some form of the end of capitalism. Marx thoroughly concurred, although his version of capitalism's end, a workers' uprising leading to a communist regime, was hardly one that the pro-capitalist political economists would have endorsed.

In his letter to Engels laying out the plans for work on the economics treatise after Volume One, Marx explained that the falling rate of profit "results from the idea already developed in Book One of the change in the composition of capital with the development of the social force of production. This is one of the greatest triumphs over . . . all previous economics." Marx's basic analysis, developed in Volume Three, was that competition among capitalists led them to become more productive by introducing ever more machinery, so that the value of the means of production—machinery, structures, fuel, raw materials—steadily rose compared to the value of labor; or, as Marx said, the ratio of constant to variable capital, the organic composition of capital, increased. Since according to the labor theory of value only labor could increase value or create surplus value, the price of the means of production just being passed on in the cost of the goods produced, then with the growing organic composition of capital, the rate of profit, the ratio of surplus value to capital invested, had to fall.[30]

Marx developed this initial insight in a wealth of elaborations, qualifications, and formulations. Quite a few of these formulations were explicitly algebraic, some even reflecting his study of calculus. There is one formula, not actually used by Marx—it did appear in his unpublished manuscripts, although incorrectly, due to a mistake in calculations—but much simpler than his, which shows the point of Marx's assertions and also reveals the problems with his assumption. First proposed by Samuel Moore, the English translator of Volume One of *Capital*, whom Engels consulted in editing the more mathematical sections of Marx's manuscripts, the formula has since been used frequently by commentators on Marx's economics.[31] The rate of profit is the return on investment, or, in Marx's language, the ratio of the surplus value (s) to the sum of the constant capital, the machines, structures, raw materials, etc. (c), and wages, or variable capital (v). This makes the rate of profit $\frac{s}{c+v}$. Moore proposed to divide numerator and denominator by v, giving $\frac{\frac{s}{v}}{1+\frac{c}{v}}$. The numerator of this new fraction is the rate of surplus value, and the denominator 1 plus the organic composition of capital.

What Marx was saying is that if the organic composition of capital, $\frac{c}{v}$ increased as more and more expensive machinery was used in production, costing steadily more than the workers' wages, the denominator increased, so that the entire fraction, the rate of profit, would tend toward zero. This is true, but only on the assumption that the numerator, $\frac{s}{v}$ the rate of surplus value, stays the same, or increases at a slower rate than does. If the increase in the organic composition of capital meant that capitalists were simply using more machinery, more raw materials, more fuel, and building more factory buildings, this assumption would be correct; but not if this new machinery were more productive than the machines or the unpowered artisanal labor it replaced. Increased productivity would mean that the workers could produce the goods whose sale was needed to pay their wages in a shorter part of the working day, leaving a greater proportion of the working day for the production of surplus value for the capitalists, thus increasing the rate of surplus value. This increasing productivity of labor across the entire capitalist economy was a central feature of Marx's analysis.

Even through his clumsier and more complicated formulations, Marx was aware of this problem, and he sought to resolve it: in the manuscripts making up Volume Three of *Capital*; in other, mostly algebraic manuscript studies of the falling rate of profit; in his correspondence with Engels; and, implicitly, in his discussion of the relative rate of surplus value in Volume One of *Capital*. He returned to the problem over and over again, writing down equations for the last time in 1882, a year before his death, and offering many explanations and solutions, none of which appeared to him entirely satisfactory.

One possibility was to assume that the rate of surplus value remained constant over time and across different economic sectors with varying ratios of constant to variable capital. Marx sometimes made that assumption, but he knew it was not accurate, for when he compared economically more advanced countries, such as the United Kingdom, with economically less advanced ones, like Austria, he took it for granted that the rate of surplus value would be higher in the former. A related possibility was that, considering the entire economy, the rate of surplus value might increase over time, but more slowly than the organic composition of capital. This, too, was an assumption made without any supporting reasoning or evidence.[32]

Marx found such solutions ultimately unsatisfying, as can be seen from his systematic consideration, in Volume Three, and in unpublished manuscripts, of the differing consequences for the rate of profit from different tendencies in the development of the rate of surplus value and the organic composition of capital. He posited other explanations. One was that the initial introduction of more productive machinery would temporarily raise the rate of surplus value, at least for the capitalist who was the first to employ these methods. As these productive innovations became standard, competition would drive down the prices of the goods produced, so that no additional profit would remain and the rate of surplus value would revert to its previous level. Another argument, seemingly taken from David Ricardo, was that more efficient and productive methods only increased the rate of surplus value if they were employed in the production of goods necessary for working-class consumption. It is clear how this argument works: if mass consumer goods were cheaper, then workers could be paid less, yet still maintain the same standard of living. They could then devote a smaller proportion of the working day to producing goods whose sale would pay their wages, and a larger proportion to goods whose sale provided capitalists with surplus value. One does have to wonder about the limitation to the production of consumer goods. To take an example of a major technological change underway as Marx was writing his economics treatise, a Bessemer converter could transform 3–5 tons of pig iron into steel in fifteen or twenty minutes, a process that took twenty-four hours in a puddling furnace. Would not such an enormous increase in the labor productivity of the producers' goods sector of the economy drive up the rate of surplus value?[33]

In Volume Three, Marx discussed countervailing tendencies, noting that, empirically, the rate of profit had not fallen over the previous three decades. He observed that the period had seen the introduction of high-profit luxury goods industries, and that there had been economies in the use of capital: more efficient steam engines, using less fuel, for instance. Trade with colonies and underdeveloped countries was another way to keep the rate of profit high; but Marx, unlike his successors, did not see such commerce as the life jacket of capitalism. Competition, he asserted, following a line of argument developed by Ricardo, would bring down initially high rates of profit. More generally, Marx saw colonialism as belonging to an earlier phase of capitalism, the pre-1800 era of primal accumulation, when capitalists extracted surplus value by force and violence; it was less relevant to an industrial age, when surplus value could be extracted in more peaceful fashion.[34]

The sheer variety of explanations demonstrated Marx's difficulty with the concept of the falling rate of profit. Most of his final views on the topic are contained in Volume One of *Capital*, written after Volumes Two and Three, even though Volume One did not explicitly address the issue. One explanation Marx gave in Volume One—especially the French and second German editions of the

1870s—was to treat improvements in productivity as the result of scientific and technological discoveries, having no necessary connection to investments. This analysis cut the link between the rising rates of labor productivity and the growing organic composition of capital. Another was to consider whether increases in productivity could raise the rate of surplus value, the rate of profit, and workers' wages simultaneously. Such a development, Marx concluded, would only be possible in a communist economy, never in a capitalist one—a conclusion that could only be reached if one assumed that under capitalism the rate of profit had to fall in the long term.[35]

There was one final and quite different consideration of the matter in a late manuscript fragment, written after 1875. In this very brief consideration, Marx suggested that capitalists would be reluctant to introduce more productive machinery and more efficient forms of production, because these would make their existing facilities obsolete and reduce their rate of profit. It would then fall to socialism to take up the former capitalist task of increasing the productivity of labor. This is an interesting idea—and one could certainly induce many examples of capitalists reluctant to innovate for precisely the reason Marx gave—but it ran contrary to all of Marx's previous thoughts on the topic.[36]

In the end, there was no proof of the tendency of the rate of profit to fall, a noticeable gap in Marx's analysis of the future of a capitalist economy. Although his vision of a capitalist world where wealth grew at one pole and misery at another did not require a falling rate of profit, the dynamics unleashed by that trend were needed in his system to make the bipolar result, with its revolutionary implications, an ineluctable possibility, with no room for mitigation. In postulating a falling rate of profit, Marx was not developing a new idea, but repeating what had been a truism of political economy since the publication of Smith's *Wealth of Nations*, nine decades before the appearance of Volume One of *Capital*. This idea had emerged and gained widespread assent in the late eighteenth- and early nineteenth-century British scene of rapid population growth pressing on limited resources, of halting and limited increases in labor productivity, and of a disruptive introduction of early industrial technology—a gloomy environment, very different from the more prosperous decades following the mid-nineteenth century. Marx's vision of capitalism's future was this transcribed version of capitalism's past, a backward look shared by many political economists of his day.

CLASSICAL POLITICAL ECONOMY FACED the problem of reconciling the labor theory of value with market prices. Marx did not believe that all economically relevant variables were determined by socially necessary labor time; he thought interest rates, for instance, arose from the intersection of supply and demand. He did assert that the price of commodities, and the wages of labor (the price of the commodity labor power), resulted from the socially necessary labor time required for their production and reproduction; the setting of prices by the intersection of supply and demand in the market was a semblance, behind which stood the real determinations of value.[37] Marx had to expose this semblance, explain how the inner logic of value led to its articulation as price.

This "transformation problem," the transformation of value into price, is one faced by all economists—in the twentieth and twenty-first centuries very much a minority—who reject the idea that price and value are identical. The primary representative of this viewpoint in recent decades has been the neo-Ricardian school of the Italian economist Piero Sraffa, whose followers have devised elaborate mathematical formulations of this transformation problem.[38] Marx's own ideas were much simpler; he found them considerably easier to explain than he did the tendency of the rate of profit to fall.

Marx first articulated his solution to the transformation problem in a letter to Engels in 1862, and he reiterated it in Volume Three of *Capital*. The solution began by imagining the sum of all production in an entire capitalist economy, its constant and variable capital, and its rate of surplus value. This would produce an overall rate of profit, which, Marx argued, would, via competition between capitalists and the movement of capital from one business to another, eventually become general. Because the rate of profit was set by the organic composition of capital and the rate of surplus value in the entire economy, in some specific economic branches, whose organic composition differed from the overall average (Marx assumed here a constant rate of surplus value across the economy), goods might sell at a market price above or below their value. This price, the cost of capital, plus the average rate of profit, Marx called the "price of production," and he identified it with Adam Smith's "natural price" of a commodity, David Ricardo's "price of production," and the eighteenth-century French economists, the Physiocrats', *prix nécessaire*. All these concepts referred to the respective economists' reconciliation of the difference between value determined by labor and price determined by the market. As was the case with the tendency of the rate of profit to fall, Marx placed himself squarely in the tradition of political economy, arguing that his work provided the correct explanation for observations made and conclusions long reached but not properly understood.[39]

As the followers of Sraffa have pointed out, Marx's solution to the transformation problem is formally incorrect.[40] But besides their criticism, which involved mathematical techniques not existing in Marx's day and well beyond his own knowledge of mathematics, Marx's solution seems to be very strongly at odds with his observations about the central features of an industrial and capitalist economy. Marx explained that the rate of profit was equalized across different economic sectors by capital flowing from less profitable to more profitable ones. One would expect capitalists to seek out the greatest profit, but what made one sector more profitable than another? In his analysis, Marx assumed that the rate of surplus value was the same across all economic sectors. In other words, a given quantity of labor produced a certain amount of profit. If that were the case, then the rate of profit, which was the ratio of the surplus value to the sum of the constant and the variable capital, was highest where the constant capital was smallest. In his letter to Engels outlining his solution to the transformation problem, Marx compared a textile mill—by the standards of the 1860s, a highly mechanized enterprise—with a large tailoring workshop, a craft operation without machinery or steam power, and asserted that the latter was the more profitable business. "Were the value of $c = 0$," Marx wrote in Volume Three, "the rate of profit would stand at its maximum."[41]

The explicit statement that the least mechanized firms were the most profitable sounds empirically rather dubious, whether considering capitalism in the nineteenth century or capitalism today. Marx's solution to the transformation problem required capitalists to equalize the rate of profit by transferring funds from less profitable to more profitable sectors of the economy, but that would mean from more mechanized to less mechanized ones. It is difficult to see how such a movement of capital could be reconciled with Marx's repeated, analytically crucial observations about the growing social productivity of labor and the increasing organic composition of capital. A possible solution would have been to relax the assumption that the rate of surplus value was the same in all branches of the economy. If the more mechanized sectors had a higher rate of surplus value, then they could have been more profitable than the less mechanized ones, and capital would flow their way. But such an assumption would have undermined Marx's central assertion of a falling rate of profit caused by an increasing organic composition of capital. Marx's analysis of the relationship between value and price, an investigation of a central problem of the political economy of his day, ended up raising still more questions about his entire vision of the future of capitalism.

KARL MARX AND AGRICULTURE together in the same sentence sounds rather odd. Marx's capitalism was of an urban and industrial nature, filled with steam engines, railroads, and textile mills. His cities were dense and burgeoning, teeming with working-class slums. His vision of a capitalist future was more of the same, only more extreme. Sarcastic comments about the "idiocy of rural life" in the *Communist Manifesto*, or about French peasants being like a bunch of potatoes in a sack in *The Eighteenth Brumaire*, do not suggest any sentimental feelings about the countryside or regrets about the dissolution of rural folkways under the impact of a capitalist market economy. If Marx cared little for rural life, the policies of twentieth-century communist governments, claiming to follow his doctrines, have magnified this impression. These governments displayed strong, at times downright genocidal hostility toward farmers, and their agricultural policies generally ended in disaster.

Such a view of Marx as hostile or at best indifferent to the countryside and its denizens ignores the development of his thought. Even though he lived in the world's largest city after 1849, he became steadily more convinced of the significance of agriculture in a capitalist economy and of the importance of social conflict in the countryside for his revolutionary plans. In part, he gained these views through an intensive study of the works of eighteenth- and early nineteenth-century political economists—the French Physiocrats plus Ricardo and Malthus, in particular—for whom the economics of agriculture were crucial to their understanding of the functioning and the patterns of development of the entire economy. Marx's journalism and political engagement also influenced his views. He reported frequently for the *New York Tribune* on agricultural prospects in England and the state of the grain trade. His obsession with Lord Palmerston led to a study of the power of the great Whig landowners. Both through his association with the IWMA and the campaigns of its English affiliates for a more democratic franchise in Great Britain, and via his personal connections to Irish nationalism, Marx became aware of the nature of landlord rule in Ireland, and its ramifications for political and social structures in Britain, the center of global capitalism.

As a result of all these interests, a considerable portion of *Capital* was devoted to disputed agricultural questions in the political economy of Marx's day, especially the nature of ground rent, as well as the extent of crop yields and the prospects for increasing them. Marx's investigations into these topics and his conclusions about them never made it into the portions of *Capital* published in his lifetime, in part because he became convinced of the importance of agriculture-related topics and continued his studies of these until the very end of his life. But a consideration of the material on agriculture, which was published as part of Volume Three, illuminates the importance of Marx's predecessors in shaping his own views, and demonstrates, in an unexpected context, the problems emerging from Marx's ideas about the falling rate of profit.

Marx relied on conditions in Great Britain not only for his analysis of industrial capitalism but of agricultural capitalism as well. He pointed to a small number of aristocratic or gentry landowners, renting out their land to capitalist tenant farmers, who employed large numbers of propertyless agricultural laborers to cultivate it. This three-class model—landlord, capitalist farmer, agricultural laborer—made a considerable impression on Marx. In the concluding section of *Capital*, he talked of the "wage laborers, capitalists and landowners, [who] make up the three great classes of modern society based on the capitalist mode of production."[42] This was quite different from the passage in the *Communist Manifesto*, written some fifteen years earlier, when Marx and Engels had explained that capitalist society was being divided into two great classes, the bourgeoisie and the proletariat. The addition of a class of landowners is compelling evidence of the growing importance of agriculture and rural society on Marx's thought.

Marx was certainly aware that there were many other forms of agricultural production, beyond the British model. A brief section of *Capital* dealt with the small peasant agriculture of France and Marx's native Rhineland. Another variant existed in east-central and Eastern Europe, especially the Russian Empire following the emancipation of the serfs in 1861: a mix of noble landlords, some directing the cultivation of their own estates, others renting them out to tenants, small peasants, and landless laborers. In European settler societies in Canada, Australia, and the United States, the landowner and the capitalist farmer were the same person. For much of the 1870s, Marx studied these two forms of agricultural production intensively, but never reached the point of writing up an analysis of them.[43]

When political economists investigated farm production in early nineteenth-century Great Britain, they assumed that the good-quality land was already being used at its maximum productivity for agriculture. They then focused on the economic effects of a growing population. The best-known prognosis, one cited ever since, came from Thomas Malthus. Since the best land was already used at its maximum productivity, the only way to increase agricultural output was to cultivate inferior land, whose crop yield would be less than that from the land currently in production, so that food supply would increase less than population did. If that process continued unchecked, the ultimate result would be large-scale starvation.

David Ricardo, Malthus's chief opponent, nonetheless shared a good deal of his enemy's analysis. In Ricardo's economic model, the combination of population growth and the cultivation of inferior land would not lead to starvation, but to rising food prices. Capitalist manufacturers would have to pay their workers more, so the latter had enough to eat, which would tend to reduce the capitalists' profits. (Like Marx's capitalists, who were unable to raise the rate of surplus value, Ricardo's capitalists were unable to introduce more efficient forms of production so that they could pay higher wages and still make larger profits.) Ultimately, this situation would reduce the rate of profit to zero, and lead to the "stationary state," where capitalists did not invest and the economy ceased to grow. The increase in food prices would, in Ricardo's analysis, at first accrue to farmers. Since farmers were tenants, they would bid more for the chance to produce food on the landlords' properties, so that their growing profits would flow into the hands of the landlords as higher rents. The only way out of this gloomy situation, at least temporarily, was to import food from other countries, which is why Ricardo strongly favored the repeal of the Corn Laws that imposed a tariff on imported grain. After his death, his ideas made him the hero of the liberals, radicals, and capitalists of the Anti–Corn Law League, who fought successfully for this repeal.[44]

Marx greatly admired Ricardo, calling him "the greatest economist of the nineteenth century" and the "economist of the modern age." He was rather less positive about Ricardo's rival. Malthus's profound pessimism about the possibility of human progress in any kind of society, his extreme political conservatism, his endorsement of the aristocracy, and his religious vocation (Malthus was, by profession, an Anglican parson) pushed almost every single one of Marx's many buttons. In a lengthy and particularly venomous footnote to Volume One of *Capital*, Marx denounced Malthus's famous essay on population as a "schoolboy's superficial plagiarism, declaimed in the style of a damned, rotten priest, copied from De Foe, Sir James Steuart, Townsend, Franklin, Wallace, etc. containing not a single sentence thought up by him." Malthus's mediocre and mendacious work, Marx went on, "was joyfully greeted by the English oligarchy," seeking a counterrevolutionary response to the progressive doctrines of Condorcet in the age of the French Revolution. Marx then denounced the many Anglican parsons who had taken up the pastime of writing on political economy and compared their work unfavorably to the economic writings of anti-clerical, Enlightened philosophers such as Adam Smith.[45]

Even if Malthus had stolen all his ideas, they still needed refutation, and Marx was quick to provide it. Overpopulation, he asserted, was not caused by the lower classes breeding faster than the food supply could be increased; rather, it was a result of the growing mechanization of production, which offered fewer employment opportunities for the workers. It was useless to improve the working-class condition by the "Malthusian" practice of birth control. (Malthus, like most conservative Christians, then and now, regarded contraception as deeply sinful, but freethinking political economists, such as John Stuart Mill, advocated it.) Capitalists would simply respond to a decline in the number of workers by expanding mechanization rather than increasing wages. All such "Malthusian" ideas involved, according to Marx, falsely interpreting the social and economic consequences of the accumulation of capital as though they were laws of nature.[46]

For all his personal attacks on Malthus and forthright rejection of his views, Marx remained haunted by the problem of providing adequate food for a growing population. Without a fundamental reform of agriculture, as he observed to Engels in 1851, "Father Malthus will prove to be right." The solution lay in the application of science and technology to agriculture. Just a few months before he shared his doubts about Malthus with Engels, Marx read an article in *The Economist* about putting wires into the ground in a rectangular pattern around a field, to pick up electricity from the atmosphere and improve the soil's fertility. Intrigued by this possibility, he wrote to Engels and to Roland Daniels, his unofficial science adviser, about it. In 1878–79 Marx was already suffering from the tuberculosis that would kill him; yet he spent a substantial proportion of his fast-declining energies taking extensive notes on agricultural chemistry, a long-term interest of his. For anybody steeped in the political economy of early nineteenth-century England it was not so simple to exorcise the Malthusian specter.[47]

Intimately connected to the question of the adequacy of the food supply was the nature of ground rent. In this area of agricultural economics, it was Ricardo rather than Malthus who had Marx's attention. Ricardo had devised the theory of differential rent: the idea that rent on land was equal to the difference in yield between the most fertile and the least fertile piece of land. Farmers received the same price for the crops produced on any piece of land, so the most fertile land would be the most desirable, and farmers would bid up the rent they were willing to pay landlords for the right to work that land, until the prospective rent equaled the difference between the yield on that land and that on the worst land that could produce a crop. Opposing Ricardo's theories were the adherents of absolute rent: the proposition that the rent on a piece of land was equal to the return on the capital invested in it.

Marx's antipathy toward private ownership of land was strong, more pronounced than his dislike of other aspects of capitalist private property. In Volume Three of *Capital*, he noted:

> From the standpoint of a higher economic and social formation the private property of particular individuals in part of the globe will appear as ridiculous as the private property of one person in another person. An entire society, a nation, even all simultaneously existing societies together, are not owners of the earth. They are just its possessors, its usufructors and, as good family fathers, have to pass it on to following generations in an improved condition.[48]

Other capitalists, if taking surplus value from the proletariat, were at least directing an increase in society's production, while landlords were simply extracting surplus value from capitalists without doing anything for it at all: "The capitalist is still an independent functionary in the development of surplus value and surplus product. The landowner, without any activity of his own, only has to divert into his own pocket a growing proportion of surplus value and surplus product."[49]

Landlords, in Marx's view, were monopolists and parasites; compared to them, capitalists were relatively admirable creatures. In his discussion of the relationship between English landlords and their capitalist tenant farmers, Marx described how tenants paid their landlords "tribute," how landlords "blackmailed" the rent out of the tenants and "swindled" them—one of the very few passages in *Capital* showing much sympathy for capitalists. (Admittedly, Marx went on to write that the tenant farmers made up their losses in rent by depressing the wages of agricultural laborers below the subsistence minimum.) What made the situation worse was that the landlords' position was steadily improving. A falling rate of profit, and with it falling rates of interest, consistently raised the price of land.[50]

In these respects, Marx's attitude toward landlords was similar to Ricardo's, definitely no friend of aristocratic and gentry landowners. Some of Ricardo's more radical but still quite pro-capitalist followers even advocated the nationalization of land. Marx accepted Ricardo's ideas about differential rent, and discussed them in some detail. He argued that Ricardo's version was not sweeping enough, depending as it did on bringing into cultivation marginal land; instead, he argued, any difference in the fertility of land would be enough to create a differential rent.[51]

If he endorsed a version of Ricardo's theory of differential rent, Marx also accepted the ideas of Ricardo's opponents about the existence of absolute rent. Yet Ricardo's influence extended to the endorsement of his antagonists' theories, because Marx's theory of absolute rent emerged from his solution of the transformation problem, which involved the differential rate of profit in different branches of the capitalist economy. An average rate of profit, according to Marx, developed because capital flowed from the less profitable to the more profitable branches of the economy, and Marx generally identified the more profitable branches with a lower organic composition of capital.

Compared to industry, agriculture was less mechanized, and more profitable, so that capital would flow into it. Ricardo's landlords, in his theory of differential rent, siphoned off the difference in productivity between the most and least productive land. In a very similar way, Marx's landlords, in his theory of absolute rent, siphoned off the extra profits, the difference between the rate of profit in agriculture and the average rate of profit in all capitalist enterprises. Such a state of affairs would continue until the organic composition of capital in agriculture was the same as the organic composition of capital averaged across all economic sectors. At that point, capital would no longer flow to agriculture, since it was no more profitable than any other economic sector. Absolute rent would cease to exist, although differential rent, reflecting the difference between lands of different fertility, would continue.[52]

This eventual end to absolute rent contradicted an assertion Marx made, following Ricardo, that rents would increase over time and landlords would soak up an ever-increasing proportion of total surplus value. How could this contradiction be resolved? Marx's answer was the role of the natural fertility of the soil: "the increase of social productive power in agriculture only compensates the decline in the power of nature, or does not even compensate it . . . so that in spite of technological development the product does not become cheaper; instead it is prevented from becoming ever more expensive."[53] This was a fundamentally Malthusian argument, that the best land was already being cultivated, and additional cultivation or improved methods could not increase agricultural output enough to make for the increasing demand of a growing population. Marx combined his analysis of agriculture in a capitalist economy with two of his key assertions about the development of capitalism: the equalization of the rate of profit across an entire economy, needed to resolve the transformation problem, and the increasing organic composition of capital. The upshot was a contradictory picture that could only be resolved by borrowing ideas from an economist whose person and theories Marx despised.

THE EXTENDED DISCUSSION OF the economics of farming in *Capital* and the increasing significance Marx gave to agriculture and rural society point to a backward-looking economics, a treatise written in the 1860s, whose central interests and approaches stemmed from circumstances in the first decades of the nineteenth century. Did Marx, the secular prophet, have nothing to say about future developments of capitalism? There were brief passages in *Capital*, primarily in Volume Three, where he took up features of economic life that would rise to considerable importance in the twentieth century and beyond. As is almost always the case with Marx's economic writings, his observations about these features were perceptive and sharply written, but not entirely prophetic.

One such area was corporations, a form of economic organization during the 1860s found primarily among railroads and public utilities. (Engels, in editing Marx's writing on corporations for Volume Three, added a note on the enormous expansion of this form of business in the 1880s and 1890s.) Already critical in his 1850s journalism on the *Crédit Mobilier*, Marx continued this assessment in *Capital*, asserting that such a bank could only exist in France, a country where "neither the credit system nor big industry has developed to its modern height." In more modern countries, such as Great Britain or the United States, it would have been impossible. Far from seeing financial corporations as the capitalist avant-garde, Marx perceived them as marks of economic backwardness.[54]

Marx understood that corporations implied scattered stock ownership, payment of dividends (which he regarded as further evidence of the declining rate of profit), and possibilities for stock speculation and stock swindling. He was also aware of what would later be called the separation of ownership from control, where salaried corporate managers directed firms whose owners were individual stockholders with little influence on business decisions. In his discussion of this separation, Marx considered corporations alongside workers' production cooperatives, both of which he perceived as evidence of the imminence of socialism. In corporations, capital was no longer the possession of individuals, but “social capital, capital of directly associated individuals. . . .” Corporations were the “abolition of capital as private property within the limits of the capitalist mode of production itself.” Far from being a new stage of capitalism, corporations in Marx’s view were evidence of capitalism’s end—an idea first devised by French socialists of the early nineteenth century, once again a sign of the backward-looking nature of Marx’s economic views.[55]

Another feature of twentieth- and twenty-first-century capitalism has been the rise of the service sector in the economy. Marx was certainly aware of the sale of services, and he included them in the German expression *Ware*—yet another reason why “commodities” is a poor translation. If hardly at contemporary levels, services were still a significant part of the nineteenth-century economy. Marx’s comment about workers in the service sector was: “From the whore to the Pope, there is a mass of such scum.” In a more positive vein, he also included doctors and teachers in that group. Such labor, he asserted, was useful (sometimes, anyway), and those engaged in it were producing, but they were not productive in terms of his analysis of capitalism, for their labor did not generate surplus value. In other words, Marx regarded service workers as mostly self-employed, and transactions with them as examples of the simple exchange of commodities for money. He also considered commercial employees, such as clerks or traveling salesmen. He saw their work as part of the division of labor among capitalists, including manufacturers, wholesalers, retailers, and financiers: all shared in the surplus value workers produced. The common twentieth- and twenty-first-century situation in which capitalists employ workers to produce services rather than goods was outside Marx’s intellectual universe.[56]

BASIC CONCEPTS OF MARX’S economics were as linked to early nineteenth-century economists as they were to early nineteenth-century economic circumstances. Marx himself felt that post-Ricardo economic theories were, with very few exceptions, a production of mediocre epigones. But the land of Smith, Malthus, Ricardo, James and John Stuart Mill had nothing to say about Marx’s continuation of and challenge to their economic theories. The language barrier was impenetrable: the only English-language notice of *Capital* to appear in Marx’s lifetime was one paragraph as part of a review on twenty-two different German-language publications. The anonymous reviewer knew little about political economy and seemed a good deal more interested in a scholarly tome on Romanian poetry.[57] Marx’s economic treatises had a greater intellectual impact in central Europe, where readers spoke the language in which he wrote, but most of them rejected the intellectual world of classical political economy that formed the basis of Marx’s ideas.

Marx himself was deeply frustrated by the lack of response to his first work, *On the Critique of Political Economy*. He veered between accusing pro-capitalist economists of engaging in a conspiracy of silence to suppress his ideas and condemning his publisher for inept marketing—or, perhaps, for being in on the conspiracy. Marx did succeed in offending his Berlin publisher with his accusations, so that he needed to seek out a new publisher in Hamburg when *Capital* was ready for the press. Although biographers have followed Marx’s belief in the lack of interest in his initial work of political economy, that opinion is not entirely correct. The pamphlet sold out its entire printing within a year of publication. It did receive a number of short reviews, by some well-known German economists of the time, generally in specialized business and literary journals, to which Marx in London had no access.

One of these reviews, in Bremen, by the prominent pro–free trade economist and journalist Viktor Böhmert, praised the pamphlet’s investigation of monetary theories, but criticized its Hegelian “handling of economic occurrences as moments of a dialectical process . . . a form of expression which . . . exceeds the boundaries of that which one has, by God, alas, allowed authors operating with Hegelian phraseology to make of our good German language.” Böhmert wondered why Marx could not use the “opposing genuinely empirical [method] of all the natural sciences.” It was an evaluation that emphasized the growing position of positivism in post-1850 German and European thought.[58]

There were no reviews of Marx’s book in the German daily newspapers, the major reason he became convinced of a conspiracy of silence against him. Determined not to allow this to happen again, Marx and Engels arranged to have Engels publish anonymous reviews of *Capital* in a wide variety of German dailies. Since those dailies would not tolerate an openly pro-communist review, they discussed what sort of political personas Engels should adopt for the reviews. The whole point of the exercise was to spur a public debate in central Europe about Marx’s work.

For all his efforts to get such a debate going, Marx was once again frustrated by the silence of the leading newspapers. By 1867, a German labor movement had come into existence, which greeted the work of a pro-labor and socialist economist with enormous enthusiasm. Johann Baptist von Schweitzer, for all his personal and political differences with Marx, ran a nine-part article series in the

Social Democrat, providing a detailed account of *Capital*'s contents, and heavily praising its point of view. One of the leading social democrats, Johann Most—later to become an anarchist and flee for the United States—wrote a popular summary of Marx's work under the title *Capital and Labor*, in 1874. Marx, although he inevitably had criticisms, was impressed with the book; he and Engels edited and revised it for a second edition, published in the Saxon city of Chemnitz in 1876.[59]

German economists did review *Capital*, often offering impassioned defenses of private property against Marx's subversive doctrines. But, gradually, another view emerged, at first just via word of mouth, that economists and others with related occupations, such as senior civil servants and statisticians, were sympathetic to Marx's ideas. Ludwig Kugelmann reported that a Berlin academic had been so impressed by *Capital* that he wanted to nominate Marx for a professorship of political economy at a German university.

With the passage of time, more favorable comments began to appear in print. This attitude was connected with the rise in central Europe of a group of academics critical of the doctrines of classical political economy. Known as the "Historical School," these economists denounced the abstract theorizing of Smith, Ricardo, and the Mills; they wanted an empirical examination of labor and business conditions, a discussion of the economic effects of institutions, and an analysis of the historically specific circumstances of the development of capitalism in different countries and regions. Instead of leaving the economy to the workings of the market, they advocated government intervention, via wages and hours legislation, health and safety inspections, and, more controversially, the creation of a social insurance system, the revival of the guilds, and the imposition of protective tariffs. From the advocacy of these measures, they came to be known in the 1870s as *Kathedersozialisten*, or "chaired professor socialists"—a distinct exaggeration, since a large majority of them were adherents of the liberal and conservative parties. A few, mostly younger men, above all the economist and sociologist Werner Sombart (later to become famous for posing the question, "Why is there no socialism in the United States?"), were willing to flirt, briefly, with supporting the socialist labor movement.[60]

This reconciliation between Marx's ideas and those of German economists was, essentially, a misunderstanding. Far from rejecting the abstract economic reasoning of Ricardo, Marx strongly endorsed it and devised his own, Hegelianized version of it. More insightful members of the Historical School recognized this feature early on. One of the first scholarly reviews of *Capital*, written in 1869 by Hermann Roesler, a professor at the University of Rostock, praised Marx's historical investigations of the development of capitalism. It also denounced his economic abstractions, noting that Marx's description of labor power was "exactly as Smithianism is accustomed to representing it," and that his labor theory of value was devised "with Ricardo," as "Smith, J. St. Mill," and others of that school had propounded it.[61]

Marx had nothing good to say about Historical School's arsenal of state-sponsored economic remedies, in view of his intense suspicion of any measures taken by an authoritarian Prussian and German government. Even before he became a communist, Marx had been pro–free trade, and he continued to hold this position as a critic of capitalism. If there were to be any interference in the workings of the market, which was leading to the collapse of capitalism, then it would have to come from trade unions and the politically organized labor movement, not from economics professors and German state officials.[62]

Members of the Historical School were not the only later nineteenth-century economists to reject the ideas of classical political economy. More widespread, and more successful in establishing a European and worldwide following, were the marginal utility theorists, who found the problem with classical political economy not in its theoretical abstractions, but in the wrong theoretical abstractions. These economists, whose ideas form the basis of contemporary mainstream economics, rejected the labor theory of value and asserted that the value of a good or service was determined by consumers' subjective appraisal of the usefulness of purchasing an additional one of these goods or services as against the purchase of any other good or service. This viewpoint brought together use value and exchange value, which Marx had so carefully separated. It identified value completely with market price, and perceived the intersection of supply and demand as the determinant of value, rather than labor time as Marx, following the classical political economists, asserted.

Marginal utility theory was just developing in the 1870s. According to the Russian academic Maxim Kovalevsky, then a frequent visitor in the Marx household, Marx was resuming his study of calculus to respond to the ideas of an English economist, William Stanley Jevons, one of the first marginal utility theorists, who deployed this advanced mathematics. Marx never seems to have put his considerations of this new version of economics on paper, but by the time all three volumes of *Capital* had appeared, it had increasingly become the dominant form of economic analysis. In Germany itself, marginal utility theory could make little headway against the Historical School; instead, it was Austria that became a center of marginal utility analysis in the German-speaking world and on the Continent more generally. Eugen von Böhm-Bawerk, one of the leading Austrian economists, wrote a celebrated critique of Marx's ideas in 1895, following the publication of Volume Three of *Capital*. The point at which Böhm-Bawerk struck at Marx was his analysis of the transformation problem, the way that commodities, whose value was derived from the socially necessary labor time needed for their production and reproduction, came to be sold at market prices. Böhm-Bawerk pointed out that in Marx's work this transformation occurred via the establishment of an average rate of profit across different industries, by means of "competition." What, asked the Austrian economist, was this competition, if not the intersection of supply and demand in the market? If this was the case, then prices and values were not determined by labor time, but by market interaction of consumer preferences, as the marginal utility school asserted.[63]

Böhm-Bawerk was not contending, as other contemporaries did, that Marx had gotten the transformation problem wrong, but that a transformation from value to prices was conceptually impossible. His criticism was a declaration that most economists were living in a completely different intellectual world from the one Marx had inhabited. Of course, this applied to Adam Smith, David Ricardo, and James and John Stuart Mill as well, since they too had based their economic analysis on a labor theory of value. Böhm-Bawerk was honest enough to admit this, but most "neoclassical" economists, as partisans of the marginal utility approach came to be known, were not so open about the fundamental differences in their understanding of economics from that of the iconic pioneers of their discipline. They hid these differences by quoting phrases, such as Smith's "invisible hand," generally wrenched completely out of their original context.[64]

By the beginning of the twentieth century, Marx's economics had become unorthodox, fundamentally different from the mainstream, neoclassical version of economics, and also at odds with the chief established alternative to the mainstream, the ideas of the Historical School. Marx's economic conceptions, however, had found a home in the burgeoning early twentieth-century socialist labor movement, as part of that movement's more general rejection of the ideas of the bourgeois society it criticized and rejected. This was not at all what Marx himself had intended. Far from opposing the mainstream political economy of his day, the ideas of Smith, Ricardo, and their followers, Marx had embraced it and promoted his own work as the most advanced and correct version of their approach. His criticisms generally centered on the extent to which political economists were unwilling to develop the ultimate consequences of their ideas. Marx was an orthodox political economist, who rejected most socialist criticisms of Ricardo. He did not want to see his economic writings limited to a ghettoized existence in a labor movement promoting a counterculture to the established bourgeois capitalist world; he had yearned for a public confrontation in the established newspapers, magazines, and scholarly journals of his day, and was frustrated when it failed to materialize.

Marx's basic economic principles, his views about the main lines of economic development, and his conception of the place of his particular economic vision in the public sphere, had all been shaped by the intellectual trends and economic and political circumstances of the first half of the nineteenth century. When his ideas finally percolated into a broader public domain, a good decade after his death, in part as the result of the tireless and painstaking editorial labors of Friedrich Engels, all these circumstances had changed. What was once economic orthodoxy had become outdated and unscientific to the economic mainstream; or, if one prefers, dissenting and unorthodox. What was once the future of economic developments had become their past, and what were once common assumptions of bourgeois society had become the prized possession of a labor movement distant from and hostile to that society.

Notes

11: THE ECONOMIST

1 Michael Krätke, "'Hier bricht das Manuskript ab.' (Engels) Hat das *Kapital* einen Schluss? Teil I," *Beiträge zur Marx-Engels-Forschung* n.s. 2001: 7–43; *MEW* 34: 307. The editors' introductions to the volumes of Series 2 of the *MEGA*, containing Marx's economic writings, include detailed discussions of their publishing and manuscript history.

2 See, e.g., Mark Meaney, *Capital as Organic Unity: The Role of Hegel's* Science of Logic *in Marx's* Grundrisse (Dodrecht: Kluwer Academic Publishers, 2002), or Enrique Dussel, *Towards an Unknown Marx: A Commentary on the Manuscripts of 1861–63*, trans. Yolanda Angulo (London & New York: Routledge, 2001).

3 *MEGA* 2/1: 226, 440, 697–99.

4 Ibid., 2/8: 100–01.

5 Ibid., 2/15: 40, 46, 169, 190.

6 Ibid., 2/15: 789, 804–05; for Marx's own explanation of the place of Vol. Three in this work, see *MEW* 32: 70–75.

7 Marx's son-in-law had observed this feature of his thought: Lafargue, "Persönliche Erinnerung," in *Mohr und General*, 332–34.

8 These distinctions are developed in *MEGA* 2/8: 63–237.

9 Ibid., 2/8: 130.

10 David Ricardo, *Principles of Political Economy and Taxation*, ed., Michael P. Fogarty (London: J. M. Dent & Sons, 1960), 5–24; John Stuart Mill, *Principles of Political Economy*, 2 vols. (New York: D. Appleton & Co., 1864), 1: 563. Although Mill is known today as a political philosopher, to his contemporaries he was above all an economist.

11 *MEGA* 2/1: 75, 455–56, 474; 2/2: 138–39; 2/3.3: 1020–28; 2/3.4: 1300–01, 1313–14, 1357–58; 2/8: 506–07; Noel Thompson, *The People's Science: The Popular Political Economy of Exploitation and Crisis 1816–34* (Cambridge: Cambridge University Press, 1984), 87–106.

12 *MEGA* 2/8: 191.

13 Ibid., 2/1: 301, 305; 2/8: 210–21.

14 Ibid., 2/8: 378.

15 Ibid., 2/8: 259–60 (on exploitation and extraction of absolute surplus value); more generally, 237–80.

16 Ibid., 2/8: 280–303.

17 Ibid., 2/8: 318.

18 Ibid., 2/8: 574–75, 585–90.

19 Ibid., 2/8: 438–39, 714–22.

20 Ibid., 2/8: 585–608.

21 Ibid., 2/8: 594–95; 2/15: 245–55.

22 Ibid., 2/8: 606.
23 Ibid., 1/12: 276–77, 491–96; 2/2: 608–11; 3/7: 169; *MECW*: 255–61, 430–34, 521–26, 560–65.
24 *MEGA* 2/8: 529.
25 Ibid., 2/8: 712–13.
26 Ibid., 2/8: 44.
27 *MEW* 32: 70–75: an important brief précis of crucial features of Marx's mature economic thought.
28 *MEGA* 2/1: 622; 2/15: 211.
29 Ricardo, *Principles of Political Economy*, 70–72; Mill, *Principles of Political Economy*, 2: 290–322; for Marx's observations on Smith's and Ricardo's theories, see *MEGA* 2/1: 625–30; 2/3.3: 1049–93; 2/15: 211.
30 *MEGA* 2/15: 210–11.
31 Leon Smolinski, "Karl Marx and Mathematical Economics," *Journal of Political Economy* 81 (1973): 1189–1204, esp. 1196–97. The algebraic manuscripts are in *MEGA* 2/14; the relevant equations on p. 3.
32 *MEGA* 2/8: 527–28, 567; 2/15: 222.
33 Ibid., 2/8: 318; 2/15: 203; Ricardo, *Principles of Political Economy*, 80; David Landes, *The Unbound Prometheus: Technological Change and Industrial Development in Western Europe from 1750 to the Present* (Cambridge: Cambridge University Press, 1969), 255.
34 *MEGA* 2/8: 704; 2/15: 229–35; Ricardo, *Principles of Political Economy*, 77–78.
35 *MEGA* 2/8: 315–18, 501–02.
36 Ibid., 2/15: 258. In the relevant passage, Marx talks about goods priced in marks, the currency of the united German Empire, which was only introduced in 1875, so the passage must be later than that date.
37 Ibid., 2/15: 347–48.
38 For an overview of their work and its connections to Marx's theories, see ibid., 2/15: 875–910; some English-language accounts appear in Ricardo Bellofiore, ed., *Marxian Economics*: *A Reappraisal*. *Essays on Volume III of* Capital, 2 vols. (Houndmills, Basingstoke: Macmillan, 1998), esp. the essays in Vol. 2.
39 *MEW* 30: 263–67; *MEGA* 2/15: 155–198.
40 They observe that Marx assumed the transformation from value to price only occurred in the "price of production," the price of the goods for sale, the "outputs." Marx overlooked that the "inputs," the constant and variable capital needed to manufacture those goods, were themselves originally outputs, and needed to be transformed from value terms to price terms. Doing this sort of multiple simultaneous transformation requires the use of multiple linear equations and matrix algebra.
41 *MEW* 30: 264; *MEGA* 2/15: 83; earliest formulation, *MEGA* 2/1: 634–35.
42 *MEGA* 2/15: 856, also 607.
43 Ibid., 2/14: 448–54; 2/15: 606–07, 779–88; *MEW* 32: 403–04.
44 Thomas Malthus, *An Essay on the Principle of Population*, ed. Anthony Flew (London: Penguin Books, 1970), 100; Ricardo, *Principles of Political Economy*, 64–76, 80; Donald Winch, *Riches and Poverty: An Intellectual History of Political Economy in Britain 1750–1834* (Cambridge: Cambridge University Press, 1996), 350–71.
45 *MEGA* 2/8: 578–79.
46 Ibid., 2/8: 590–601.
47 Ibid., 3/4: 106–07, 113–14, 183, 356; *MEW* 31: 178–79, 183; 32: 5–6, 51–52; Anneliese Griese, "Die geologischen, mineralogischen und agronchemischen Manuskripten. Ein Beitrag zu ihrer wissenschaft-historischen Einordnung," *Beiträge zur Marx-Engels-Forschung* n.s. (2006): 31–48. Engel's views on Malthus were similar to those of Marx: see *MEGA* 3/13: 362–64; *MEW* 35: 150–51.
48 *MEGA* 2/15: 752.
49 Ibid., 2/15: 626; similarly, 608, 612–13.
50 Ibid., 2/15: 611–17.
51 Ibid., 2/15: 627–722.
52 Ibid., 2/15: 725–49, esp. 736, 738–39, 742, 748–49.
53 Ibid., 2/15: 744.
54 Ibid., 2/15: 428–29, 595; also *MEW* 34: 53.
55 Ibid., 2/15: 427, more generally, 426–32. These six pages on corporations in the *MEGA* edition of Vol. Three of *Capital* might be compared to the 160 pages on agriculture and ground rent, to gain an idea of their relative importance for Marx.
56 Ibid., 2/1: 196, 484; 2/8: 484; 2/15: 285, 293–95. Marx's Protestant upbringing and education, his left-wing sympathies for Italian national unity, and his atheist worldview all contributed to his dim view of the Catholic Church, and its intellectually and politically deeply conservative leader, Pope Pius IX.
57 [Anon.], "German Literature," *Saturday Review of Politics, Literature,*

Science and Art, vol. 24, no. 638, January 18, 1869, 96–98; *MEW* 32: 535.

58 Inge Schliebe and Ludmilla Kalinina, “Rezensionen des Marxchen Werkes, ‘Zur Kritik der politischen Okonomie aus dem Jahre 1859,” *Beiträge zur Marx-Engels-Forschung* 1 (1977): 103–23; *MEGA* 3/9: 437, 442–43, 471, 474, 477, 491, 495, 522, 532–33, 539; 3/10: 31, 42–43.

59 *MEW* 31: 345–46, 370, 377–80, 384–86, 388–89, 403–05, 563, 567–68, 573–74, 577; 32: 9–10, 41, 91–92, 134–35, 186–87, 459, 536–67, 546, 550–51, 554, 589; *MEGA* 1/21: 3–14, 38–45, 68–74; 2/8: 737–87, 1368–73.

60 *MEW* 31: 290–91, 391, 575; 32: 8, 11–12, 30, 187, 459, 538, 749; Erik Grimmer-Solem, *The Rise of Historical Economics and Social Reform in Germany 1864–1894* (Oxford: Clarendon Press, 2003); Albert Schäffle, *Kapitalismus und Socialismus mit besonderer Rücksicht auf Geschäfts- und Vermögensfragen* (Tübingen: Verlag der H. Laupp’schen Buchhandlung, 1870), 308–61, 413–28; Lenger, *Werner Sombart*, 78–114.

61 Johannes Siemes, “Karl Marx im Urteil des sozialen Rechts,” *Der Staat* 11 (1972): 376–88.

62 For Engels’s skepticism about nascent social insurances schemes, see *MEW* 32: 369–70.

63 Heinz Kurz, “Marginalism, Classicism and Socialism in German-Speaking Countries, 1871–1932,” in Ian Steedman, ed., *Socialism and Marginalism in Economics 1870–1930* (London: Routledge, 1995), 7–86; Eugen von Böhm-Bawerk, *Karl Marx and the Close of His System*, trans. Alice McDonald, ed. Paul Sweezey (New York: H. Wolff, 1949), esp. 86–98; Kowalewski, “Erinnerungen an Karl Marx,” in *Mohr und General*, 391.

64 http://delong.typepad.com/sdj/2009/11/yet-another-note-on-adam-smiths-invisible-hand-what-it-is-and-what-it-is-not-by-adam-smith.html, accessed 1/6/10.