Free to Lose: An Introduction to Marxist Economic Philosophy

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1 Introduction

Marxism is a set of ideas from which sprang particular approaches to economics, sociology, anthropology, political theory, literature, art, philosophy, and history. Some Marxist ideas have been so successful that they are no longer regarded as Marxist; they have become absorbed by social science, or historical analysis. (An example of such an idea in economics is the two-factor growth model, which focuses on the contributions of labor and capital. Prior to Marx, land had been viewed as an equal contributor, with labor and capital, to growth.) Alfred North Whitehead said that any science that hesitates to forget its founder will soon die. One does not refer to contemporary microeconomics as Smithian-although it was inspired by Adam Smithbecause his insights were so pervasive that they came to dominate the whole field. (To call oneself a Smithian would presuppose the existence of non-Smithians.) Marxism, in some parts of the world, has achieved this kind of intellectual hegemony. At least one third of the world's population lives in states founded mainly on principles resulting from the Marxist analysis of capitalism. Although many, perhaps most, of the people in these states do not call themselves Marxist, just as most Americans do not call themselves Lockean or Hobbesian or Rousseauian, the worldview of Marxism-based on class, explOitation, and historical materialism-is pervasive in those societies. I say this with an appreciation of the degree to which many are politically opposed to the regimes in which they live. Even within social science as it is practiced in the capitalist world, some Marxist ideas have occasionally become so powerful that everyone is a Marxist in some dimensions. History and sociology show this assimilation most; political theory and economics least. Perhaps 2 Introduction Marxism is less influential in economics because economic theory in the West is so closely tied to rationalizing the capitalist order. But Marxism may be uninfluential in economics for another reason: some of the key economic models and theories that Marxism champions, such as the labor theory of value and the falling rate of profit, are simply wrong. The labor theory of value claims that market prices should be proportional to the labor time required to produce commodities, but this is simply not the case. The theory of the falling rate of profit claims that competitive technical innovations by rational capitalists will lead to a capital intensity of technology that will cause the competitive rate of profit to fall. Again, just the opposite is true in the standard competitive model, which was not available in Marx's time. When economists use these famous theories to test the validity of Marxism, they find it lacking; so it is not surprising that they do not take Marxism seriously. Although these particular Marxist claims are wrong as theoretical and abstract statements about capitalism, the insights that they were intended to emphasize are nevertheless powerful, and frequently those insights can be salvaged, or at least examined and treated seriously, by using methods of contemporary economic theory. For example, the labor theory of value was intended to emphasize the fact

that capitalists exploit workers in a capitalist system. Although the labor theory of value is false, I think the conclusion is true. Similarly, although the theory of the falling rate of profit is false as an economic theory, capitalism is subject to recurrent crises that create massive unemployment, which is what that theory intended to show. The strategy of this book will be to study a few of the central ideas of Marxism by using the tools of contemporary economics. Those central ideas are exploitation and class, the understanding of which are important for the applications of Marxism to sociology, history, ethics, and political theory. 1.1 The Private Property System Marxist economics is not the economics of socialism; it is one analysis of the economics of capitalism. The main difference between Smithian and Marxist analyses of capitalism is this: Smith argued that the individual's pursuit of self-interest would lead to an outcome Introduction 3 beneficial to all, whereas Marx argued that the pursuit of self-interest would lead to anarchy, crisis, and the dissolution of the private property- based system itself. Thus, for Smith the aggregation of self-interested actions taken by members of a society is socially optimal, whereas for Marx it is suboptimal. Smith spoke of the invisible hand guiding individual, self-interested agents to perform those actions that would be, despite their lack of concern for such an outcome, socially optimal; for Marxism the simile is the iron fist of competition, pulverizing the workers and making them worse off than they would be in another feasible system, namely, one based on the social or public ownership of property. Private ownership of property, more specifically the alienable means of production, is attacked in two general ways in Marxism: on grounds of efficiency and on grounds of equity. To claim that the capitalist system is inefficient means that there is some alternative system that would be better for all. The private ownership of the capital stock holds back social development, the development of society and of individuals. To claim that the private ownership of property is inequitable means that it is unfair to some, although it might be very good for others. This book will concentrate almost entirely on the inequity of capitalism, not on its inefficiency. Can a system based on the private ownership of the means of production be just and fair, or at least as just and fair as some alternative system that does not allow that form of property? I have chosen to concentrate on the equity issue, at the expense of an analysis of efficiency, because I believe it is perceptions and ideas about justice that are at the root of people's support for or opposition to an economic system. When people support capitalism as a system, it is, I think, not only because they believe capitalism delivers the goods better than other systems, but also because they believe that in a capitalist system people deserve what they get. Similarly, even when socialism works reasonably well in delivering the goods, as it does for some kinds of goods and in some socialist societies, the opposition that most who live in capitalist democracies have to it is based on ideas about freedom-that people do not get what they deserve because of their lack of what is conceived of as economic freedom, namely, the right to accumulate private property. Fundamentally, what is at issue is the moral legitimacy of private property in the means of production. 4 Introduction 1.2 Exploitation Exploitation is the concept around which the Marxist condemnation of capitalism is organized. But the term exploitation has two nontechnical meanings: to make use of a thing, as in "to exploit a resource," and to take unfair advantage of someone, as in "to exploit one's wife." The feature of capitalism (according to Marxism) that explains both its ability to expand-by accumulation of capital-and its inequity is the exploitation of workers by capitalists. Capitalists make use

of workers and exploit their labor, as miners exploit a natural resource. This process permits accumulation and economic growth. But workers are, in the same process, unfairly treated, and this unfair treatment constitutes the essential inequity of a system based on the private ownership of the means of production. A good fraction of this book deals with the concept of exploitation. The economic models I present will clarify the concept, so that I may then ask whether, in fact, there is anything wrong with exploitation, as Marxists define it. It is essential to separate the nontechnical concept of exploitation (taking unfair advantage) from its technical definition (see Chapter 2). This distinction quickly leads to questions of political philosophy. Attitudes toward private property are at the heart of the matter: but those attitudes depend on even more fundamental viewpoints, such as those about the rights of individuals to benefit from the skills and traits they have been born with or have acquired. Does a woman have the right to benefit by virtue of being born into a family that owns a valuable piece of land that passes to her? That is, does anybody have a right to inherit property? If not, does a man have a right to benefit by virtue of being born with a talent that makes him able to earn a large income, say, while expending much less effort than others? What is the essential difference, from a moral point of view, between the inheritance of a talent, by genes or luck, and the inheritance of a fertile piece of land or a big bank account? From a moral point of view, does one deserve to benefit by virtue of being born in the United States instead of in Calcutta? Although it is too ambitious a task to answer these questions definitively in such a short book-questions that are at the heart of contemporary moral and political philosophy-my purpose is to show how the Marxist view of the injustice of capitalist society is predicated on quite reasonable answers to these questions. Furthermore, it will become apparIntroduction 5 ent that the Marxist condemnation of the injustice of capitalism is not so different from the conclusion that other apparently less radical and contemporary theories of political philosophy reach, albeit in language less flamboyant than Marxism's. 1.3 Classes A second concept central to Marxist discussions is class. A class is a group of people who all relate to the labor process in a similar way. For instance, all those who sell their labor for a living form a class; and all those who hire labor form a class; and those who work for themselves and neither hire nor sell labor form a third class. Things get much more complicated when one considers the fact that people have widely differing skills. But in the simplest schematic model of capitalism, these are the three principal classes, and Marxism argues that much can be explained about the evolution of society based on the struggle between classes so defined. The class that sells its labor power is engaged in a more or less constant struggle with the class that hires labor. Sometimes a class is defined as a group of people who all have approximately the same wealth. This definition of class with reference to wealth is not the same as my definition, although a relationship between class and wealth will be deduced later. I will not spend much time discussing the history of class struggle, but will concentrate on presenting microeconomic models of exploitation and class and applying them to political philosophy. With a formal economic model, I will show how classes emerge in a systematic way in capitalist society. 1.4 Historical Materialism Marxism does not take a myopic view of capitalist society; it recognizes that a capitalist system is only one phase of class societyperhaps the last one, but certainly not the first. Whereas Adam Smith considered it natural for men to "truck and barter," and for private property to emerge as an institution, the historical analysis associated with

Marxism opposes this view. It claims that a system of production and exchange based on the private ownership of the means of pro6 Introduction duction and on the separation of the vast majority of people from the means of production is just one relatively recent way of organizing an economy. The theory of historical materialism claims that societies evolve through class struggle and that West European society has evolved in an explicable fashion from systems based on slavery, to feudalism, and then to capitalism. Society will in the future continue its evolution, perhaps in the direction of socialism and, finally, communism. The mechanism that brings about this evolution is class struggle: the struggle of the exploited against the exploiters, of those dispossessed of property against those who own it. But, according to historical materialism, the reason such an evolution occurs lies somewhat deeper: evolution occurs because the level of development of the technology outgrows the particular form of social organization, which comes to constrain and fetter it. This theory is perhaps the most famous and important part of Marxism. 1.5 Capitalism and Freedom Capitalism is championed by those who profit from it, and even by many others, as the system that gives to each his just deserts and allows each the freedom to accomplish what he will. Historical research reveals that this attitude toward the predominant system is not so new: slave systems and feudalism had their contemporary advocates as well. Indeed, Aristotle argued that each soul has his particular role to play-the self-realization of a slave involved fulfilling his slaveness properly. Christianity recapitulated this theme in the Middle Ages by teaching people to be content with their lot, as they were but small cogs in God's universal wheel. Now laissez-faire economists and philosophers maintain that an unfettered capitalism is the system that maximizes individual freedom and the opportunities of each. Marxism is much more skeptical. It does not claim that any social system-slavery, feudalism, or capitalism-is particularly virtuous in terms of the freedom accorded its members. Rather, it claims that such systems evolve, like organisms, in a more or less adaptive way as a consequence of the internal and external pressures they confront. Private property and untrammeled free trade do not make for the best of all possible worlds, although the results are probably better for Introduction 7 most people than systems based on explicit bondage. Whether they are better than what can be achieved with the abolition of private property is a pivotal question of our century. Because we are just at the beginning of the period of the transition to socialism, the question cannot be finally answered. But it is possible to think about it. Before thinking about an alternative to capitalism in which the means of production are not held as private property, it is important to construct a challenge to private property. Classical Marxism made that challenge over a century agoj to many it seems antiquated, a dusty chapter in nineteenth-century intellectual thought. I will rephrase the challenge in language that I hope is comfortable for contemporary students of these questions, so that they will not have to battle with the linguistic and logical oddities of Marxist discourse. It is unfortunate, I think, that these oddities are preserved in much modern Marxist debate, because they unnecessarily dissuade those who do not already share the ideas from becoming acquainted with them. 1.6 Method My approach to Marxism is that of a contemporary student of economics and political philosophy. I wish to study the logic of the ideas and the internal coherence of the claims. Focusing on those aspects of Marxism that bear on the legitimacy of private property from the ethical point of view enables one to evaluate the cogency of the claim that capitalism is an exploitative and unfair system. It is of utmost importance to study

this claim, for contemporary liberal capitalist thought makes the opposite claim. I do not take a historical approach or an empirical one. In one sense that is a shame, for abstract arguments are often less convincing than palpable evidence. Concrete cases of the genesis of private property in blood and slavery often do more to convince people of its moral illegitimacy than do the abstract and theoretical arguments given here. The revelation that Ferdinand Marcos accumulated billions of dollars in twenty years as the president of a country that paid him an annual salary of $4000 is a particularly lurid case of the kind of "primitive accumulation" of capital that Marxism claims characterizes the history of capital formation more generally in many parts of the world. If this is in fact the case, there is a strong argument for abolishing private property in the means of production simply so that people cannot amass vast economic and 8 Introduction political power over others by virtue of accumulating it in such obviously immoral ways. Because the approach I take here is not historical, it does not lead to a result as clear-cut as that of the Marcos story. It involves, instead, tying one hand behind one's back, and asking whether a system based on private property should be viewed as a good one, or a necessary one, even if property is accumulated in more honest ways. What are the moral antecedents of private property, and what are its economic consequences? 1.7 A Preview According to Marxism, the qmsequence of private property is exploitation- by those who have it against those who do not. In Chapter 2 I present a simple two-good model to illustrate the main themes of the next three chapters. The Marxist definition of exploitation is presented with this model, which also shows how exploitation, class, and accumulation emerge with private ownership of the means of production. The approach taken in Chapter 2 is certainly not the standard approach to defining exploitation: the classical notions of circulating capital, variable capital, the value of labor power and surplus value, with which Marxists have been brought up, do not appear. Instead I try to make the principles of exploitation clear in a standard microeconomic equilibrium model, in which competition and market-clearing prices and wage rates determine an outcome at which some people are exploited and others are exploiters. The models of Chapter 2 show that exploitation, as Marxists define it, emerges under conditions that include the relative scarcity of capital compared with the labor available for it to employ, and the unequal distribution of ownership of that capital. Chapter 3 compares the exploitation that emerges under capitalism-through the market where no agent is compelled in the usual sense to engage in economic activity-with the forcible extraction of the economic surplus under feudalism, from serfs by lords. Indeed, the economic puzzle Marx wrestled with was explaining how wealth, or economic surplus, could accumulate in the hands of a small class under capitalism when no extraeconomic coercion was involved. Chapter 4 is a more formal and largely algebraic presentation of the ideas presented in Chapter 2. A definition of exploitation more genIntroduction 9 eral than that in the earlier chapter is provided, the concepts of embodied labor and profit rate are defined, and the relationship between exploitation and profits is described. I also show how the social division of labor can obscure the perception of exploitation by those who are exploited in a commodity-producing society. This is one of the ways in which capitalism is traditionally distinguished from feudalism- by virtue of the "veil" that commodity relations place on social relations. In Chapter 4 the labor theory of value is only briefly discussed, because I think it is wrong and because the arguments about private property and exploitation can be made completely independently of it. Indeed, one purpose

of my analysis is to show that those who are interested in the political and social ideas that Marxism stresses should not take the circuitous and misleading route of the labor theory of value to those ends. Chapter 5 asks a question that is far too often lost in the mass of details in Marxist discussions. What is wrong with exploitation, technically defined in the Marxist way? There is, of course, the nontechnical usage of exploitation that I have referred to; but in what sense does Marxist exploitation correspond to or reflect taking unfair advantage of a person? Five possible explanations are presented for the evolution of differential ownership of assets in the external world, the inequality that in tum leads to exploitation. Three of these explanations are robbery and plunder, entrepreneurship, and the willingness to take risks. The first of these is clearly morally condemnable, whereas the second and third are not. The story becomes even more complicated when the nonviolent causes of unequal wealth are considered. One essential issue is self-ownership: Does a person have an unfettered right to the income stream flowing from an attribute associated with his person that, in the last analysis, it was his (genetic) luck to acquire? I certainly have not resolved the controversy surrounding this issue in Chapter 5, but some of the main questions are posed and the link between self-ownership and exploitation is discussed. Whereas Chapter 5 addresses mainly philosophical concerns, Chapter 6 returns to economic analysis and shows how, in the standard model of com and labor introduced in Chapter 4, a class structure of agents in an economy with private ownership emerges as a result of self-interested economic activity. The main purpose is to show that a person's class is not something that should be taken as a given before the person begins economic activity; it is an economic 10 Introduction characteristic that emerges from market activity. A person acquires membership in a certain class by virtue of rational activity on her part, by virtue of choosing the best option available subject to the constraints she faces, which are determined by the value of the property she owns. Two theorems are presented: the Class-Wealth Correspondence and the Class-Exploitation Correspondence. The first of these shows that a person's wealth is related in a systematic way to his class position; the second theorem shows that persons who optimize by hiring others belong to a class of exploiters and persons who optimize by selling labor to others belong to a class of exploited persons. Chapter 6 provides microfoundations for claims that are elsewhere treated as postulates in Marxist social science. I show that both the class position of a person and his status as exploited agent or exploiter emerge from rational, optimizing activity in which the principal distinguishing feature of agents is their wealth. Traditional Marxist analysts postulate that those who hire are the exploiters and those who are hired are exploited. Hence, the analysis of Chapter 6 reduces what was a postulate to a theorem, and thus enriches our understanding of exploitation and class, in the sense of providing a prior determination of the phenomena. Classical Marxists view exploitation as intimately related to the labor theory of value and to transactions that take place in the labor market. One theme developed in Chapters 2 through 6 is that exploitation has much more to do with property relations than with the labor market-and that Marxists' focus on the labor market has been excessive and has given rise to their own fetishism of labor. In Chapter 7 this theme is pursued more vigorously. I show that the phenomena of exploitation and class that are fully developed with a labor market in Chapters 2 and 6 can be just as fully developed in a model of an economy in which no labor market exists-where agents borrow and lend capital to each other, but where the hiring and selling of labor does not occur.

The driving factor of exploitation and class that emerges in Chapter 7, on what I call Capital Market Island, is just the same as before: differential ownership of the capital stock. But I emphasize the point that it is wrong to focus on the labor market if one's concerns are the ethical ones that an interest in exploitation implies. In Chapter 7 I also show that exploitation can emerge without a market for either labor or capital-all that is needed is the exchange of commodities of the usual sort, excluding labor and finance capital. Introduction 11 Given this result, the question that naturally emerges is, Why has capitalism historically utilized labor markets, rather than capital markets, to organize economic transactions between those with wealth and those without it? Why does labor not hire capital instead of capital hiring labor? Although it is difficult to summarize the topic of historical materialism in one short chapter, I have attempted to do so in Chapter 8, for it is necessary to put into perspective the discussion of private property. For this purpose, I rely almost entirely on G. A. Cohen's summary of the interpretation of historical materialism, an interpretation many view as a particularly deterministic form of historical materialism. I contrast Cohen's view of historical materialism with another Marxist view, that of Robert Brenner, which puts more emphasis on the determination of historical change by class struggle than does Cohen's reading. This discussion should serve as a brief introduction to some of the exciting work being done in philosophy and history by those who view their tradition as Marxist. But the main point of the chapter is to explain the emphasis that Marxism places on the evolution of forms of property. The private property system is just one possible way of organizing economic activity; it may have been the best way for a certain period but is probably not the best way today, nor will it be in the future. Chapter 9 builds on the view of evolving property relations presented in historical materialism by proposing a hierarchy of forms of exploitation, each based on different forms in which property might exist: slave property, feudal property (serfs), capitalist property (means of production), and socialist property (skills and perhaps status). The claim is made that forms of property tend to be abolished over time, and that those forms which in the past were viewed as legitimate eventually come to be viewed as illegitimate. Associated with each form of property is a characteristic form of exploitation; the focus of this book, exploitation as defined by Marxist theory, is in fact the particular form of exploitation associated with capitalist property, with unequal ownership of assets (excluding skills and other people) that are useful as means of production. In Chapter 9, I discard entirely the classic Marxist definition of exploitation in terms of surplus labor, which was developed earlier, and propose a definition of exploitation in terms of property relations. Essentially, the exploitation associated with a particular economic structure or mode of production is defined as that inequality of outcome associated with the une12 Introduction qual ownership of that property which is the characteristic property form of that mode of production. (For example, feudal exploitation is that inequality associated with the unequal holdings of property rights in the labor of other people.) In Chapter 9, as well as discarding the traditional Marxist view of exploitation, 1 replace it with a more general conception that fits into the panorama of economic structures highlighted by historical materialism. A concern with exploitation is now viewed, more fully, as a concern with inequality in access to property and the consequences thereof: what evolves through history are the types of property whose unequal distribution characterizes economic structures, and upon which it is essential to concentrate. If exploitation

is the consequence of unequal ownership of a certain kind of property, then why not end it by redistributing that property so that everyone owns an equal share? Socialists advocate abolition, not just of the unequal distribution of property in the means of production, but also of the property form itself. No one should be allowed to hold any property in alienable means of production, which under socialism are to be held publicly. This question of why property forms are abolished does not apply only to the transition from capitalism to socialism, for in previous periods, forms of property were abolished as well. The great revolutionary transitions all are characterized by abolition of forms of property (such as serfs and slaves). Thus far I have not addressed this question of why socialization of the alienable means of production is the answer to capitalist exploitation, rather than syndicalization, which is a kind of people's capitalism in which everyone would own an equal share but markets would continue to operate in the usual way. In Chapter 10, I propose several reasons why Marxists advocate the abolition of the property form in alienable assets. Chapter 10 concludes with the most tentative part of the argument, because it represents work in progress. What does public ownership of the means of production mean? Suppose one wishes to socialize ownership of productive assets in the external world but wishes to allow people to retain property rights over their internal productive assets, that is, their skills and talents. What kind of distributions of income, or of final welfare, will respect these two kinds of property rights: private ownership of self and its skills, and public or joint ownership of the productive assets in the external world? On the basis of the history of capitalist societies, one has a good idea of what private ownership of assets means. (I doubt that our ideas would Introduction 13 have been so clear in feudal times, when, for example, various rights that different people had in a given parcel of land were complex and incomprehensible by modern standards.) The final sections of Chapter 10 take an axiomatic approach to designing an economic constitution that respects both public ownership by persons of the external world and some limited private ownership (at least) of their own skills. Are there any such constitutions, and what sort of inequality of fmal outcome will they permit? The approach taken here is a far cry from a historical one to the question of public ownership, which would of necessity be limited to studying the experience of various states in which property has been nationalized during the last sixty years. It is, instead, an attempt to outline in an abstract way what public ownership of the external world in conjunction with protection of property rights in skills might entail. The motivation for this attempt is philosophical, but the tools for solving the problem are economic. Finally, let me amplify my reasons for limiting the discussion of issues of incentives associated with private property, which are so much the province of economic thinking on the subject. (Incentive issues are briefly discussed in Chapters 5 and 9.) I think that ethical considerations are to an extent independent of incentive problems. It could be argued that the criticisms of private property, and even of self-ownership, which are occasionally made, are wishful thinking and continue a long Marxist tradition of utopianism. But I do not believe that to be the case. I think the timelessness of incentive problems is exaggerated by contemporary economic theory, in the sense that the behavior and preferences of individuals are to a large extent determined by the property forms that exist in the societies in which they live. Indeed, the incentives and remuneration that people expect depend in large part on what they think they deserve, and therefore on their assessment of ethical considerations. Were some kind of socialism universally

established, by which I mean that private property in the means of production would become as scarce as slavery is today, I think people would compete, excel, and realize themselves in ways other than the accumulation of material wealth. In fact, they already do. But this is a hackneyed theme, which I shall not pursue further.

2 The Origin of Exploitation

Exploitation has a technical definition that must be distinguished from its colloquial one. When Marxists say that workers are exploited by capitalists, they mean-colloquially-that an economic relation of exploitation exists between workers and capitalists (that workers are used by capitalists) and that capitalists take unfair advantage of workers (that workers are used by capitalists in an ethically indefensible way). In this chapter I will define exploitation in a technical sense, using a simple model of an economy that produces only one good. In Chapter 5, I will discuss when technical exploitation should be considered as unfair treatment of workers by capitalists. 2.1 An Egalitarian Distribution of Capital Imagine a society consisting of 1,000 members. There is one produced good, corn, which all like to consume. Corn is produced from inputs of labor and seed corn. All members of this society are equally skilled and productive, and all have knowledge of the technologies that exist for producing corn. Each person is assumed to have subsistence preferences: each needs to consume 1 unit of corn per week (to survive, let us say); after having done so he prefers to take leisure rather than to work more and consume more corn. There is one additional condition: each agent desires to reproduce the stock of seed corn, if any, with which he began. He does not want to begin the next week with a smaller corn stock, which is the only kind of capital in this model. Thus, a person's utility, or welfare level, is a function of corn consumed and labor expended-or corn consumed and leisure conThe Origin of Exploitation 15 sumed. The particular preferences I have posited are easy to analyze, "because the trade-offs between corn and leisure are very simple: to get 1 unit of corn, a person is willing to do anything, and after that he is willing to do nothing. Suppose there is a total initial capital stock of 500 units of corn (K = SOO). Further, assume that in this society there are two ways of producing corn, or two techniques of production, which are called the Farm and the Factory: Farm 3 days labor 1 't f + 0 units of seed corn ~ urn a corn Factory 1 day labor 2 units of corn, gross, + 1 unit of seed corn ~ or 1 unit of corn, net The production period for both the Farm and the Factory techniques is 1 week (7 days); that is, seed corn is tied up in the ground that long before it produces a harvest, even though it may take only 1 day to plant, as in the Factory technology. Thus far, no distribution of the means of production, or of the capital stock, which in this model is just seed corn, has been assumed. Now assume that there is an egalitarian distribution of capital stock. Each agent owns V2 unit of corn-the aggregate capital stock is divided equally among all. Given the technologies described, the preferences of the agents, and the distribution of assets, what is the equilibrium in this economy? The equilibrium solution is that each agent works a total of 2 days: V2 day in the Factory and 1 V2 days on the Farm. Assume that a person can switch castles sly and instantaneously between one technology and the other. In the V2 day a woman works in the Factory technology, she plants her V2 unit of seed corn,

which at the end of the week will yield for her 1 unit of corn, gross. Her capital stock is tied up in the ground for that week. The 1 unit of corn, gross, she gets in this process is sufficient to replace her original seed corn stock and leave her V2 unit of corn to consume. She must somewhere produce another V2 unit of corn for consumption; and to do so she moves to the Farm, where in IV2 days she can produce Vz unit of corn, with no capital stock. One might ask what type of technology can produce corn using labor alone. Perhaps the Farm technology involves going to the forest and hunting around for wild corn, which grows there: this labor16 The Origin of Exploitation intensive process yields corn but requires much more labor than is needed to produce an equivalent amount of corn using the Factory process. But the specific technologies of production are irrelevant. The important assumption is that there are two ways of surviving in the economy. One way is to engage in a production process that uses capital, that is, some scarce nonlabor input, which in this model is seed corn. The alternative way is one everyone can engage in whether or not he has access to capital-in this model, the Farm technology . The solution I have outlined is autarkic-there is no trade. Each person works only for herself; she neither sells nor hires labor, nor does anyone sell corn to anyone else. The solution is dearly egalitarian. Each person works 2 days and consumes 1 unit of corn. No one can do any better, and the corn stock is reproduced for the beginning of the next week. A careful definition of the term equilibrium is not necessary; simply notice that this is the natural solution to the problem that people face in this economy-of producing the corn they require subject to the constraints determined by their capital stock and the technology. Given the subsistence preferences that have been posited, no one will work any longer, for after consuming 1 unit of corn, these people prefer only to take leisure. From this solution I can define the socially necessary labor time (SNLT) for this society to reproduce itself. Given the technologies, the capital stock, and the consumption requirement, the socially necessary labor time required to produce 1,000 units of corn is 2,000 days; or, from the vantage point of an individual, the labor socially necessary to produce 1 unit of corn is 2 days. Each producer works, in this equilibrium, precisely socially necessary labor time. More generally, the labor time socially necessary to produce a certain amount of corn is the amount of labor that is needed to produce that corn and to reproduce the seed corn used up in the process. Society will use all its capital stock first in the Factory process, which in 1 week will produce 500 units of corn, net, with 500 days of labor; in the meantime the remaining 500 units of corn will be produced by working a total of 1,500 days on the Farm. Suppose that instead of requiring 1 unit of corn per week for consumption, each person requires 2 units of corn per week. Then the total weekly requirement for this society would be 2,000 units of corn. It would still be true that 500 units of corn, net, can be produced using the Factory in 500 days. To produce the additional 1,500 units of corn The Origin of Exploitation 17 required would now necessitate expending 4,500 days of labor on the Farm; and the socially necessary labor time for producing 2,000 units of com would be 5,000 days. Or, from the point of view of the individual; 1 unit of com would require 21/2 days of labor. Thus, the amount of time socially necessary to produce a unit of com depends on the total com production required and on the fraction of that production that must be carried out using the inferior (Farm) technology. If, in a third model society, people only required 1/2 unit of com per week for consumption, then the total com requirement of this society would be 500 units of com per week, all of which

could be produced using the Factory technology alone. No one would use the Farm, and the labor time socially necessary to produce 1 unit of com would fall to just 1 day. Return, now, to the initial subsistence preferences, in which each person needs or wants to consume 1 unit of corn per week, in which case the amount of labor time socially necessary to produce society's requirement is 2 days per unit of com per individual (or 2,000 days in total). I can also say that 2 days is the labor embodied in 1 unit of com. In other words, the labor embodied in a unit of com is the amount of labor required to produce that commodity and to reproduce the inputs used in producing it, given the technologies and capital stock available. Socially necessary labor time is the labor embodied in the com consumption bundle required by the population. There is, however, an ambiguity in this definition that I wish to point out. If I ask, Given the technologies, how much labor is required to produce 1 unit of com, net? the answer is 1 day. (Just use 1 unit of seed com in the Factory.) This, however, cannot be done on an economy-wide scale-that is, this society cannot produce 1,000 units of com in 1,000 days. When I speak of the labor embodied in a unit of com, that should be understood to mean the average amount of social labor time required to produce that unit, given the total amount of com produced. Thus, the labor embodied in 1 unit of com is 2 days in this economy, because at equilibrium 1,000 units of com, net, are produced with 2,000 days of labor. The particular equilibrium solution I have discussed above is autarkic, but there are other ways of arranging an equilibrium in this economy that do involve trading among members-in particular, when some persons hire the labor of others. Suppose there are two groups of agents, called H (for hirers of labor) and S (for sellers of 18 The Origin of Exploitation labor). Any 750 agents may constitute the H group and the remaining 250 will constitute the 5 group. Those in the 5 group are going to sell their labor for a wage to those in the H group. Each person in the 5 group first works up her own capital stock using the Factory technology. That requires 1/2 day of labor and generates for her 1/2 unit of corn, net, by the end of the week. 5he needs to earn another V2 unit of corn to consume. Instead of going to the Farm to produce that corn, she offers to sell her labor to someone, or to several members, of the H group. What real wage will prevail in this economy to make this offer of labor attractive to both hirers and sellers on the labor market? The answer is that members of H will offer to hire members of 5 to work on their (H's) capital stock at a wage rate of 3 days labor for 1 unit of corn, or a real wage of V3 unit of corn per day's labor. Why? First, observe that at this wage rate a member of 5 can work up the capital stock of 3 members of H, expending a total of 11/2 days of labor, a~d she will earn as a total wage precisely V2 unit of corn. Combining the labor traded with that she has already done for herself, she will have worked a total of 2 days-partly for herself and mainly for others-earned exactly 1 unit of corn, and reproduced her original seed stock, as required. 50 a member of 5 is willing to accept this wage: she is indifferent between this proposal and working autarkically in the Factory and then on the Farm, as in the first equilibrium solution described. Now from the viewpoint of a member of H, he will have his V2 unit of corn capital worked up by some member of 5, producing 1 unit of corn, gross. Out of that, V2 unit reproduces his capital and he pays a wage of V3 unit of corn/day x V2 day = V6 unit of corn, which leaves a profit for him of 1/3 unit of corn. He must go elsewhere to produce the other ¥3 units of corn he needs, for his capital stock is tied up. To earn the additional corn he requires, he uses the Farm technology and works for 2 days, producing ¥3

units of corn. Thus, he, too, ends up working exactly 2 days, reproducing his capital stock and having 1 unit of corn left for consumption. The second equilibrium is exactly the same with regard to the labor- corn allocation as the first one. Each person works 2 days, reproduces his or her capital stock, and consumes 1 unit of corn. But the class structure differs from that of the first equilibrium. Every producer just works for himself in the first equilibrium; there is only one class of self-employed producers and no division of labor. In the second equilibrium there are two classes-H and 5-and there is a complete social division of labor. 50me work only on the Farm and some only in the Factory. The Origin of Exploitation 19 What is a class? That is best seen from the model. It is a group of people, all of whom relate to the labor market in the same way. In the first equilibrium each person is a self-employed peasant, or artisan. In the second equilibrium 250 people are sellers of labor power (and also work for themselves part time) and 750 people are hirers of labor power (and also work for themselves part time). A more precise definition of class will be given in Chapter 4. Note that in both of these equilibria each person works just socially necessary labor time. Indeed, given the preferences of agents in this model, no one has any reason to prefer one equilibrium over the other. For in each equilibrium each person works 2 days and consumes 1 unit of corn. This indifference between the equilibria follows because the only arguments of the utility function of people in this society are leisure and corn. No person has any preference for rural life over urban life or vice versa. Nor does anyone care whether she works for herself or for a boss. But suppose that working for a boss is a source of disutility; that is, labor performed for hire is more unpleasant than labor performed for oneself. In that case it would no longer be correct to say people cared just about corn and leisure: they would care about corn and the various types of labor they expend-labor expended on one's own account being of a different type from labor expended for someone else. Were this the case, the second equilibrium outlined would not be an equilibrium, because members of 5 would prefer to work autarkically, as in the first equilibrium, rather than work for a boss. Given this preference, would it still be possible to arrange an equilibrium involving the two classes Hand S? The wage rate would have to be higher them V3 unit of corn per day to compensate a member of 5 for expending labor under a boss, an activity that she now finds relatively distasteful. But if that were so, the hirer's profits would fall, and he would have to work longer than 2 days on the Farm to get all the corn he needs. What would entice him to do that? Nothing-unless, perversely, he receives utility from being a boss over someone, or unless he has a preference for rural life over urban life. If hirers have preferences of this sort, then indeed one could have an equilibrium with a complete social division of labor, but with slightly different outcomes than those described in the second equilibrium above. Conditions other than disutilities involving types of labor expended can motivate a social division of labor. Suppose there are setup costs in moving from the Farm to the Factory, because it takes time to move. Then, in fact, the autarkic equilibrium discussed above is 20 The Origin of Exploitation not achievable, for when each person moves from Farm to Factory, he uses up some time. It would require 2 days plus set-up time to produce 1 unit of corn by oneself. If these set-up costs exist, it would be to the advantage of society to minimize them, by having one group work only in the Factory and the other only on the Farm. This is, in fact, what the second equilibrium accomplishes. With set-up costs, one would observe only the second equilibrium, because the autarkic solution would not be Pareto

optimal: everyone could be rendered better off by the social division of labor, because only by specializing could each person acquire 1 unit of corn for consumption for 2 days of labor. Thus, despite the class structure of this equilibrium, the result is completely egalitarian in terms of the corn consumed and the labor expended by members of the society. So a class structure is not ipso facto associated with inequality of final welfare. 2.2 The Technical Definition of Exploitation Exploitation is said to exist if in a given economy some agents must work more time than is socially necessary (longer than the socially necessary labor time) to earn their consumption bundles and others work less time than is socially necessary to earn their bundles. Exploitation does not exist in the economy described in Section 2.1, because everyone works precisely socially necessary labor time. Nevertheless, it is noteworthy that class differentiation can emerge without exploitation, at least at this level of theoretical abstraction. That is the lesson of the second equilibrium, which has the two classes Hand S. However, without the kind of set-up costs referred to above, the class structure is rather ephemeral: it is not forced into existence, for society could just as well organize itself as it does in the autarkic equilibrium, that is, in an undifferentiated way. Class structure becomes interesting, and conforms more to Marxist expectation, when there is no other way for society to organize itself to achieve an equilibrium. 2.3 Unequal Ownership of the Capital Stock What happens when a society is organized with unequal ownership of the capital stock (in this model, capital stock is the seed corn)? Instead of the equal distribution posited in Section 2.1, suppose that The Origin of Exploitation 21 each of 10 agents (call them rich agents I, 2, 3, . . . , 10) owns 50 units of corn and the other 990 own none. The only productive asset these last own is their labor power, the capacity to work. This economy also differs from that described in Section 2.1 in another way, namely, that each person's utility function is strictly increasing in corn. In other words, if he can get more corn without expending additional labor, then he wishes to do so. A person having subsistence preferences is not indifferent to getting more than 1 unit of corn, he simply is not willing to expend more of his own time to get more corn. Should more corn come his way for nothing, he is happy to accept it. Otherwise, all features of the economy (preferences for leisure time and technologies) are the same as before. What is the eqUilibrium in this economy with the skewed initial distribution of seed corn? First 1 will try the obvious autarkic arrangement. Each of the propertyless agents (I will call them peasants) works 3 days on the Farm, to get 1 unit of corn. Each of the propertied agents works up 1 unit of corn of his capital stock, producing 1 unit of corn, net, at the end of the week, which he consumes. Thus, each of the rich agents I, 2,. . . , 10 works 1 day and each of the other 990 agents works 3 days. This arrangement would be a case of exploitation, but it is not an equilibrium. There is exploitation in this society because the socially necessary labor time for this society is 2 days of labor. That calculation does not change as the distribution of corn changes, because the calculation of socially necessary labor time is independent of the distribution of assets. It depends only on total consumption, technology, and the total amount of capital and labor available. (If the needs of people, or their demands, were to change with the redistribution of wealth, the story would be more complicated.) But this arrangement is not an equilibrium. The rich agents can do better for themselves, without the poor ones doing any worse. Using a labor market, a deal can be struck. Each rich agent can become a capitalist and offer to hire labor. As before, the rich agents constitute the class H. Each rich

agent has a lot of unused seed corn in the preceding solution. Suppose each rich person offers to hire peasants to work up his capital stock in the Factory technology-at a wage rate of 2 days of labor for 1 unit of corn (that is, V2 unit of corn per day). Then all 990 peasants will flock to the Factory gates to work, for that is a better deal than working on the Farm, at a rate of 3 days of labor for 1 unit of corn. Each peasant will wish to supply 2 days of labor (and 22 The Origin of Exploitation thereby earn his needed 1 unit of corn). But, to put this supply of labor to work in the Factory requires 2 x 990 = 1,980 units of seed corn, an amount that is not available. Thus, at the wage rate just proposed, the supply of labor far exceeds the demand for the labor by the capitalists. Hence, V:z unit of corn per day is not an equilibrium wage. The capitalists can lower the wage from V2 unit of corn per day, because the supply of labor exceeds the demand for labor at that proposed wage. How far will they lower it? The alternative for a peasant is to work at a real wage of V3 unit of corn per day on the Farm. So long as the Factory wage is higher than that, all peasants will flock to the Factory. But there is not enough capital stock to produce the subsistence needs of this population using only the Factory. Therefore, no wage higher than V3 unit of corn per day can be sustained. Furthermore, no wage lower than V3 unit of corn per day can be sustained, for at a wage lower than V3 unit of corn per day no labor will be offered; all peasants will prefer to stay peasants, earning their livelihood on the Farm. Hence, the only possible wage that can clear the labor market is 1/3 unit of corn per day (3 days of labor for 1 unit of corn). At this wage each peasant is indifferent to working on the Farm or in the Factory, because the real wage is the same in both places. Hence, the labor supplied at the wage 1/3 unit of corn per day is anything between 0 days and 3 x 990 = 2,970 days. That is, each peasant, and there are 990 of them, is willing to work any amount of labor from 0 to 3 days for a capitalist at the wage of V3 unit of corn per day. Figure 2.1 shows the supply and demand curves of labor in this economy. An equilibrium can be arranged as follows. The capitalists hire exactly the number of peasants required to utilize fully their capital stock. This requires 500 days of labor, or 500/3 peasants, each of whom becomes a"factory worker" and earns 1 unit of corn for 3 days of labor. The other 823.33 (990 - 500/3) peasants stay as peasants on the Farm and earn their subsistence bundle of corn there. The capitalists, as a class, work 0 days; the workers in their factories produce 1,000 units of corn, of which 500 units replace the seed stock, 500/3 units is paid out as wages, and the remaining ~3 x 500 = 333.33 units of corn are profits. Thus, each capitalist gets 33.3 units of corn as profit in this equilibrium, and does not work at all. He can certainly consume his needed 1 unit of corn, or even much more than that. Or he can accumulate corn. In the equilibrium in this model, there are three classes: capitalists, who do not work but only hire others and reap profits; workers, who The Origin of Exploitation 23 w ~ ~r——— L….–+——-……,.—3~J: t> I 500 2970 Figure 2.1 Equilibrium in the peasant economy. LS, labor supply (days); LD, labor demand (days); w, wage (units of corn per day). work for capitalists and earn a subsistence wage; and peasants, who do not work for capitalists and earn a subsistence wage. Each worker and peasant works for 3 days to earn 1 unit of com. But I concluded earlier that the amount of labor embodied in 1 unit of com is 2 days, given the demands of this society. So exploitation has emerged in this model, because capitalists work less than socially necessary labor time, whereas the workers and the peasants work more than socially necessary labor time. 2.4 The Causes of Exploitation What are the features

of the economy described in the preceding section that have caused exploitation to emerge? Two are worthy of mention: the scarcity of capital relative to the labor available for it to employ; and differential ownership of the capital stock. The second feature has already been emphasized by the comparison of the models of Sections 2.1 and 2.3; exploitation has emerged with the differential ownership of the capital stock. But what effect does scarcity of capital have? Capital is relatively scarce in the economy described in Section 2.3. By this I mean that it is impossible for the society to "reproduce itself economically" (that is, to produce 1,000 units of com, net, in a week) 24 The Origin of Exploitation using only the Factory technology, because it lacks the necessary capital stock to do so. Suppose, on the other hand, that capital is abundant-say, the total endowment of capital is 5,000 units of corn instead of 500, and that each capitalist owns 500 units of seed corn. What would happen when the wage rate offered is 3 days of labor for 1 unit of corn? I have computed that at most 3 x 990 = 2,970 days of labor will be offered, which can be used in conjunction with 2,970 units of seed corn in the Factory, but there is much more seed corn lying around. Capitalists will start to compete with each other; one thinks that if he raises the real wage a bit, he will attract more labor, thereby using all his capital stock and reaping much more profit than he currently gets. Hence, the real wage rate will rise, essentially to the point where profits are zero. It will rise to the rate of 1 unit of corn per day's labor, at which rate the capitalists make zero profits, and no one works on the Farm. (In fact, this is a simplification; it will rise to some value a bit less than 1 unit of corn per day, so that the capitalists can earn at least some of their own consumption bundle. But this is a detail that is not important for my story.) If capital is sufficiently abundant relative to the labor available for it to employ, then the profit rate drops and exploitation virtually disappears. Of course, socially necessary labor time decreases in this economy as the capital to labor ratio rises, because it becomes possible to produce 1,000 units of corn with much less labor. With K = 5,000, socially necessary labor time per individual is 1 day of labor, because society does not need to use the Farm at all. The essential aspect of capital is that it is an input to production that cannot be instantaneously produced. It must already exist in order for it to be used in the present. Thus, either it was produced in the past (as I assumed the seed corn was) or it is a nonproduced factor (like land or some natural resource). (The incomes that accrue to owners of capital that was produced in the past are often called profits, whereas the incomes to owners of natural resources that were never produced are called rents.) When capital (whether it was produced in the past or is an appropriated natural resource) becomes private property and is distributed in an inegalitarian manner, differentiation and exploitation arise, through the market process. Recall that the sense in which the exploitation that occurs here is a technical, but not obviously an ethical, one. It is not clear that the factory workers who are exploited in the equilibrium described in this section are being unfairly taken advantage of (or being exploited in The Origin of Exploitation 25 the colloquial sense) unless one had some reason to believe that the initial unequal distribution of the capital stock that gave rise to that exploitation is unfair. 2.5 The Industrial Reserve Army In Marxist parlance, the excess of labor relative to capital is supplied by what is called the industrial reserve army. That army consists of the people who are potentially in the work force and can be employed by capital but are working lion the Farm," that is, on the margins of the capitalist sector. It is their existence that, in this story, keeps the wage rate down to its subsistence level-and profits

at a maximum. The most proximate source of this industrial reserve army is the unemployed, and for this reason, Marxism views unemployment as a necessary condition for maintaining a "good investment climate," that is, a profit rate sufficiently high to induce capitalists to invest. Many Marxists have claimed that, because it is in the interests of the capitalist class to have an industrial reserve army, capitalism creates such an army, that is, that it deliberately maintains unemployment. Perhaps it does through monetary and fiscal policies. If so, those policies must be policies of the state. Whether maintenance of a pool of unemployed workers is a deliberate policy of the capitalist state is a subject of research and contention. A second source of the industrial reserve army is a pool of migrant workers. If the labor market becomes international and workers can move across borders in search of employment, then capitalists can hold down the real wage by importing workers from other countries, from what has been called the agricultural periphery. Or, alternatively, capital can move to where the workers are. Capital movement has become a very real phenomenon in the United States during the past twenty years as industry formerly located in the United States has moved to Southeast Asia, an area with cheap labor. The effect of this movement has been a reduction of the real wage of workers in the United States. This is not necessarily a bad thing: Do workers in the United States have any more right of access to the capital stock, and employment, than workers in Southeast Asia who were otherwise (perhaps at best) employed on subsistence "farms"? The hypocrisy of capitalists with respect to "illegal aliens" is explained by the effect these workers have as an industrial reserve 26 The Origin of Exploitation army. On the one hand, capitalists do not want the supply of such workers cut off; on the other hand, it is in their interest for the workers to be maintained in an illegal status, for that tends to keep them subservient on the job. The optimal policy for capitalists is therefore to maintain a pool of illegal workers and to have the illegality only mildly enforced. An example of this policy in action is provided by an article by Robert Pear in the New York Times (January 23, 1986) headlined "Reagan's advisers say bill on aliens can hurt economy." The Council on Economic Advisers reported to Reagan that punishing employers for hiring illegal aliens would have adverse effects on the nation's economy. The report says that the presence of low-skilled foreign workers in the United States "enables domestic business enterprises to produce goods profitably that would not otherwise have been produced here." 2.6 Concluding Comments One might ask how realistic the models of Sections 2.1 and 2.3 are as schemata approximating capitalism. For instance, it does not seem as if there are two technologies today. Do people have an alternative like the Farm, where they can go to produce their consumption needs outside of the capitalist sector? There might be several approximations to the Farm, or institutions that take the place of the Farm, in modern capitalism. Some of these are associated with the state: unemployment insurance and welfare assistance may provide the alternative that sets a lower bound on the real wage. But the image of a Farm to return to, as an alternative, is not a real one in modern capitalist society, and the real wage must indeed be set by some procedure more complicated than the one in these models. Before discussing the exploitation that has emerged in the society in Section 2.3, and whether or not it is a bad thing, I want to point out that the phenomenon is one that can exist in a perfectly competitive situation. First of all, there is no cheating or coercion in the model. Nor is there any collusion on the part of capitalists. In this sense, exploitation in the technical sense-that some live off the labor of others by virtue of their

possession of capital-is a phenomenon that emerges in a model with competitive markets. For Marx, it was important to explain this feature of capitalism. How could accumulation take place and capital be concentrated systematically in the hands of a The Origin of Exploitation 27 small class without cheating or coercion, or in what one would today call a regime of perfect competition? The question becomes interesting when one observes that the concentration of wealth in the hands of the landed gentry under feudalism was accomplished only with coercion. Notice, as well, that in this model exploitation and the unequal distribution of income are not the consequence of people having different preferences: everyone has the same preferences. This may not be an accurate depiction of the world; the point is, exploitation and inequality result even under that stringent assumption. Thus, exploitation in this model cannot be explained by the existence of different kinds of people-unless it is the differences between people, unalluded to here, that explain why they started off with different amounts of capital. The internal differences between people that might explain differential wealth will be the topic of Chapter 5. Finally, I want to point out the differences between the equilibria of the models of Sections 2.1 and 2.3. The first difference is in the initial distribution of the capital stock. In the model of Section 2.1 there is no essential class distinction, whereas in the model of Section 2.3 there are three distinct classes, defined in terms of how they relate to the selling and hiring of labor. In the model of Section 2.1 there is no exploitation at equilibrium, whereas in the model of Section 2.3 there is. Finally, and this is a point I have not emphasized until now, in the model of Section 2.1 there is no accumulation of capital, whereas in the model of Section 2.3 there is. Thus, in the model of Section 2.1 precisely the consumption needs of the population are produced at equilibrium, and the society ends up at the beginning of the next week in exactly the same situation as that at the beginning of the first week. In the model of Section 2.3, however, each capitalist makes 33.3 units of corn profits. If I assume that he consumes just 1 unit of corn, then he begins the second week, not with 50 units of corn, but with 82.3 units of corn. Thus, there are three essential consequences of the differential ownership of the capital stock: the emergence of exploitation, class, and accumulation.

3 Feudalism and Capitalism

Adam Smith and David Ricardo were, with others, champions of and intellectual impresarios for capitalism. They constructed economic interpretations of capitalism emphasizing the aspects of capitalism that made it appear to be more progressive than feudalism, or any aristocratic system in which the form of income of the propertied class was rent from land. Capitalists were pictured as progressive because they created industry and physical capital in the process of competition with each other, whereas landed rentiers were parasites who did nothing of social value. These distinctions between capital and land are not present in the models of Chapter 2, although one can construct other models to emphasize that difference. The purpose of the models of Chapter 2 is to focus on the emergence of classes, accumulation, and the highly unequal distribution of income that emerges as the consequence of private and unequal ownership of the means of production (whether these means are capital stock, like seed corn, or land). 3.1 A Brief Account of Feudalism I will characterize feudalism in a fairly simple way, omitting many nuances for the sake of simplicity. A lord owned a large amount of land and had the rights to certain amounts of labor provided by serfs or peasants who lived on the estate. Each serf family had its family plot of land, on which it produced its subsistence needs. In addition to working on the family plot, the serf was required to provide labor to the lord: corvee and demesne labor-working a certain number of Feudalism and Capitalism 29 days a year on the lord's land, building roads to keep up the manor, participating in the activities of the armed forces of the lord. The quid pro quo between serfs and lords was complicated, in the sense that the property rights of the peasant plot were not well-defined from the modern point of view. (For a study of the incredible intricacy of feudal property rights, see Milsom, 1981.) As a rule, the lord could not expel the peasant family from its plot of land. (Sometimes this could happen at the time of death of the head of the peasant household.) Nor, on the other hand, could the serf decide to leave, to go to a town, for example, to work as an artisan or laborer. If he did, he would be hunted down by the lord, returned to the manor, and punished. Thus, the serf and his family had certain rights to the family plot and to the grain he could produce there, and the lord had certain rights to the serf's labor. Feudalism was a coercive system; force against the peasantry was needed to extract the corvee and demesne labor that, under feudal rights, were owed to the lord. Such coercion was necessary, because the peasant family had access to its own means of reproduction, by virtue of its tenure on the family plot. Furthermore, the peasant could not, according to the above description, be removed from the plot if he failed to perform his duties to the lord. Hence, it was necessary for the lord to use extraeconomic coercion to extract serf labor for the manor. The coercion is called extraeconomic because it dispenses with the institution of the market. Serfs were forced to work not for a wage, but because their access to the family plot meant they did not need a

wage. From the economic viewpoint, there were two classes under feudalism: lords, who had property rights in land and in the labor of serfs who lived on their manors; and serfs, who had certain property rights in family plots (of a muddy sort) and some property in their own labor. The surplus above subsistence consumption was produced by serfs, and almost entirely during the time when they worked for the lord, doing corvee and demesne labor. The huge castles in which the lords lived and the extravagant consumption they enjoyed were the product of serf labor, and it is difficult to view those things as not being part of the economic surplus, that part of the product above subsistence needs. Indeed, the Marxist characterization of feudalism incorporates this idea: a large class of serfs produced the feudal surplus product, which was the property of a small class of lords. The initial property rights that gave rise to this transfer of the 30 Feudalism and Capitalism surplus from those who produced it to those who owned it were property rights over a certain fraction of resident serf labor and were established by feudal law . The labor expended in the production of the surplus I will call surplus labor. Under feudalism, the performance of surplus labor was transparent to the serf: his week (or year) was divided into two parts, one in which he worked to reproduce himself on the family plot, and another in which he performed corvee and demesne labor for the lord. It would have been difficult to obscure these class relations and to claim that the serf was working for himself the whole time. Justifying feudalism required justifying feudal property rights and teaching the serf that his duty lay in providing surplus labor for the lord, because the lord was a vassal to another lord, who was in turn vassal to the king, who was the representative of God. Feudal property rights thus descended in a tree originating with the king; and if the king represented God, then to challenge these property rights involved taking on a much bigger challenge. So, ultimately, religious ideology was used to justify feudal property rights, to the extent that such a justification was attempted. There were hundreds of peasant rebellions against feudalism, and these rebellions, in conjunction with a vital capitalism that was associated with an emerging merchant class in towns, eventually contributed to the demise of the feudal system. As the rebellions demonstrated, feudal ideology was not entirely successful in convincing serfs of the righteousness of feudalism. In England in 1381, for example, there was a peasant uprising in which 100,000 peasants formed an army, slaughtered lords, and marched on London. Their goal was to see the king, whom they believed to represent God, and who would therefore right the wrongs perpetrated upon them by the lords. The king agreed to meet with their leaders, whom he promptly executed, displaying the head of one Wat Tyler on a lance. Although this ended the rebellion, the incident sounded the death knell of English feudalism. The class consciousness of some of the participants in this rebellion is indicated in a sermon delivered by one of its leaders, the priest John Ball (Dobson, 1983, p. 374). The sermon began: When Adam delved and Eve span Who was then a gentleman? The Marxist interpretation of feudalism mentioned earlier has been challenged by some contemporary neoclassical economists (North Feudalism and Capitalism 31 and Thomas), who maintain that it is incorrect to view the feudal surplus as an unearned return accruing to feudal lords by virtue of their property rights in serf labor. Their argument is that lords performed certain socially necessary functions in organizing life on the manor; their income, in compensation for these functions, was what I have called the feudal surplus product. Chief among these functions was the provision of defense of the serfs and the manor against invasion by bandits and, perhaps

(in some countries where feudal law was not well established), by other lords. The provision of defense is a public good, and there is a free-rider problem in the provision of public goods. In other words, no serf would voluntarily join the manor's army, for the costs to him of so doing were greater than the marginal benefits that he derived, and whether or not an effective army existed would be unaffected by whether or not he joined. So coercion was necessary to create this public good, and the lord was the agent whose role it was to provide such coercion. The same could be said for the building of roads and the provision of an infrastructure on the manor. Feudalism, according to this account, is a system of exchange in which each factor or agent receives a return that is necessary for that factor or agent to supply its services. Were lords not to receive lordly income, they would not take on the onerous entrepreneurial, and coercive, task of manor organization, which was socially necessary. Even the amount of the lord's income could be viewed as emerging from an implicit contract between the serfs and the lord. And even the coercion of the serfs could be viewed as the outcome of a prior implicit contract between serfs and lords in which the serfs agreed to be ::oerced by the lord, knowing that in their myopic selfinterest they would otherwise act as free riders, and ultimately deprive themselves of the public goods they needed. Serfs, like Ulysses in his attp.mpt to avoid the sirens, agreed to have themselves chained to the mast for fear of otherwise acting in self-destructive ways. This account does not explain why the particular men who were lords occupied that role. One might speculate that the lords were those who possessed the entrepreneurial talent to take on these organizational tasks. They were the risk lovers and the adventurers who were capable of doirlg grand things. Or, more realistically, one could maintain that to a large extent lordliness was inherited. It was not so crucial who the lord was, it was only necessary that someone take on the responsibility of being the lord. According to this second proposal, the feudal class system was socially necessary, although it would be inappropriate to view any particular lord as deserving his 32 Feudalism and Capitalism income, in the sense of his having exceptional capacities for the provision of lordly services. According to the first proposal (lords as adventurers), there is an even stronger argument for lordly income being a "return to scarce talents," in line with the general neoclassical explanation of income distribution. Deciding whether the Marxist or the neoclassical account of feudal class relations and power and income distribution is more accurate is largely a historical matter. Both views are probably internally consistent accounts, although I believe historical evidence makes it clear that the neoclassical implicit-contract account of feudalism is a fairy tale. One of the authors of the neoclassical account I have summarized appears to have retracted his belief in it (see North, 1982)which does not, of course, establish that it is wrong. For some rebuttal of the neoclassical account by a Marxist historian, see the article by Brenner (1977). 3.2 A Difference between Capitalism and Feudalism In a capitalist system no one is coerced (in any normal sense of the word) to sell his labor power. If coercion was the driving force behind the production of the feudal surplus, then what is the driving force behind the production of the capitalist surplus? How does it come about that, in a system with no cheating and no coercion, a surplus materializes in the hands of a small class of capitalists and a large class of workers remains at a level of relative subsistence? This question was, for Marx, essentially economic. The problem was exacerbated by the apparent lack of surplus labor performed by the workers. Although it was clear under feudalism when the surplus labor was performed, such is not the

case under capitalism. A particular worker does not divide his week up between production of his subsistence needs and production of a surplus that is appropriated by capitalists. Instead, he might stamp out auto fenders all day, every day. Furthermore, he is not coerced to do so; he bargains with the capitalist for his wage and is free to take his labor elsewhere if he chooses. Some, although not all, of the explanation for the emergence of a surplus appropriated by capitalists can be seen in the model of Section 2.3. Because workers are deprived of the ownership of the capital stock (the seed corn), they are willing to sell their labor power to capitalists who own capital and can put them to work on it. In both Feudalism and Capitalism 33 models of Chapter 2, workers still have the equivalent of a subsistence plot to return to, although that is not an essential part of the story. One can substitute for the Farm technology in those models the statement that workers simply cannot live if they receive a wage lower than V3 units of com per day. In the models in Chapter 2 a worker did not work more than 3 days per week, and he needed 1 unit of com per week to survive. To be more consistent with my statement above, let me stipulate that a worker must consume 2 units of com per week to survive; production of this consumption bundle requires 6 days of work per week on the Farm. This stipulation changes the equilibrium in the models of Chapter 2, because people must work longer. Then a wage of 1/3 unit of com per day would be a subsistence wage and must be paid by the capitalist, even in the absence of a Farm technology, if he is to have a steady pool of workers (I should say, a pool of steady workers). Any lower wage would not allow workers to meet their own consumption requirements while working for the capitalist, assuming 6 days is the maximum work week. The only productive asset the workers own is labor power, the capacity to work, and this they agree to sell to those who own the means of production, as the only way to gain an income with which to live. The wage workers receive is bid down to the subsistence wage, or to their next best alternative wage (which they earn on the Farm), because of the abundance of labor relative to capital. The Marxist expression is that workers are "free in a double sense": free to sell their labor power and move around (unlike serfs) and freed from access to the means of their economic reproduction (also unlike serfs). Because workers are separated from the means of reproduction, capitalism can operate without extraeconomic coercion; workers will willingly offer their labor power for sale, because capitalists have something they need. Despite the lack of extraeconomic coercion, a surplus does emerge, because the wage rate that equilibrates the labor market is sufficiently low to produce a profit. This outcome was demonstrated in Chapter 2-and profits emerged even without postulating that capitalists had a strong desire to accumulate. Of course, real capitalists do not have the subsistence preferences assumed in the models of Chapter 2, so it becomes even easier to see how profits emerge in a real economy. From the viewpoint of the worker, capitalist property relations obscure the nature of surplus appropriation. Whereas the serf could see that he was expending surplus labor for the lord, because of the physical division of his time between work for his own economic 34 Feudalism and Capitalism reproduction and work for the lord, the proletarian has no such vision. (In some cases, feudal dues were a portion of the product from the serf's plot, a kind of extraction by the lord also highly visible to the serf.) The proletarian, in contrast, stamps out auto fenders all week long and uses his wage to buy other goods that he does not make. The social division of labor under capitalism makes it impossible for any worker to see clearly that the amount of labor he expends during

the week is greater than the amount of labor that is socially necessary to produce the wage goods that he consumes. The model in Section 2.3 was a bit too simple to make this point well, because only com was produced there. A demonstration of how capitalist property relations obscure, from the worker's viewpoint, the expenditure of surplus labor, requires a model with at least two goods (besides leisure), a model in which a worker might work in one industry yet consume goods from several. (This model will be presented in the next chapter.) Nevertheless, even in the model in Section 2.3 the worker can be mystified by capitalist property relations with respect to the expenditure of surplus labor. If I were to ask either a worker or a peasant in that model, "How long must you work to earn enough com to live?" he would reply, "Three days." But if I were to ask a serf the same question, he would reply, "I only have to work two days on my family plot, but then the lord forces me to provide an extra day of labor for him." (If he is a class-conscious serf, he will not mince his words this way.) For the proletarian, there is no clear separation between surplus labor and labor necessarily expended for his own economic reproduction. It might be more clear to the proletarian that he is providing surplus labor if he were to see the capitalists lazily collecting profits without working. In fact, the real world is more complicated: first of all, real entrepreneurs do work hard; and, second, capitalist firms are owned, not by their managers, but by stockholders who are quite invisible to the worker. Third, although many people own some stock, they are not capitalists. The big stockholders are often financial institutions, and therefore the identity of capitalists is difficult to trace. (It is perhaps more accurate to say that, because of the role of financial institutions in the stock market and on the boards of corporations, it is the agents of capital owners who become important.) The essential point, however, is that a surplus far above the present consumption needs of a capitalist society emerges, and in the Marxist analysis, this is due to the abundance of labor relative to capital, which serves to bid down the wage to a level permitting profits. Feudalism and Capitalism 35 These are appropriated by the owners of capital, the relatively scarce factor of production. The purpose of the Marxist economic analysis of a capitalist economy, or at least that dimension of the analysis discussed here, is to point out that the class of agents who are separated from the means of production produce not only their own subsistence needs but also the entire surplus that becomes the property of capital owners as a consequence of competition. Competition under capitalism replaces coercion under feudalism, but beneath the surface the story is the same in this regard: a small, propertied class appropriates the surplus produced by a large, unpropertied one. So long as capitalist property relations obscure this appropriation, religious ideology and direct coercion are not so important as they were under feudalism. It is much easier to maintain the belief that each person is receiving his just deserts under capitalism, for there is no extraeconomic coercion and workers are free to leave or to start businesses and become capitalists themselves. Some even succeed in doing so. There are various ways in which these claims are simplifications of reality, or are false. First of all, there is extraeconomic coercion under capitalism, chiefly in two places: on the job, and in the protection of property rights. The police and judicial power of the state protect capitalist property rights, and capitalists exert coercion on the job in the form of authority that is not mediated through markets. When workers go on strike, state power is often used to help the capitalists in a one-sided way. Nevertheless, the extraeconomic coercion under capitalism is less proximate than it is under feudalism. Second,

I have not yet argued that the distribution of incomeprofits and wages-under capitalism is unjust, as Marxism claims it is under feudalism. I have established that workers produce the surplus product as the consequence of a series of market bargains emanating from an initial unequal ownership of the means of production. But is there anything wrong with that income distribution? To establish that would seem to require an argument for the injustice of the initial distribution of the means of production. And although the argument that feudal lords earned the property rights that gave rise to their wealth is incredible, an analogous argument with regard to capitalism is not. If capitalists came to own their capital by virtue of working harder or more skillfully in the past than those who are now proletarians, is it wrong to deprive them of the profits that emerge from voluntary trades with proletarians on the labor market? I will pursue this question in later chapters.

4 Exploitation and Profits

This chapter presents a simple, algebraic model that formalizes some of the concepts presented in the models of Chapter 2. I will define embodied labor value, exploitation, and the profit rate and then investigate the relationship between exploitation and profits. 4.1 Embodied Labor and Exploitation Imagine a corn economy with just one technology, that called the Factory in Chapter 2. One unit of corn, gross, can be produced using a units of corn as input and L days of labor. Thus, the technology can be summarized {a,L} ~ 1, or, in terms of net corn production, {a,L} ~ 1 - a. Clearly, for this technology to be productive, a must be less than 1. Otherwise, stocks would dwindle to zero. The labor embodied in a unit of corn is defined as the amount of labor that is necessary to produce 1 unit of corn, including the labor needed to reproduce the corn input used in the process. To derive this quantity, let x be the amount of corn that would have to be produced in order to end up with 1 unit of corn after replacing the corn input used in the production of x. Because the technology is assumed to exhibit constant returns to scale, the production of x units of corn requires an input ofaxj to end up with 1 unit of corn, net, x must satisfy x=ax+1. (4.1) Exploitation and Profits 37 Equation (4.1) can be read as "gross output = input used + net output." Solving (4.1) for x gives 1 x = -1–a-. The amount of labor needed to produce this amount of corn is, there fore, L 1 - a == A. (4.2) A is the labor embodied in a unit of corn. There is a useful interpretation of (4.2). Because a $<$ 1, we can expand the expression L/(1 - a) as a geometric series: A = L + La + La2 + La3 + . . . (4.3) In (4.3), the first term L is the direct, live labor expended today to produce 1 unit of corn, gross. But we must replace the seed corn, used in amount a. The labor that had to be expended last week to produce a unit of seed corn for use this week was La, the second term. But, how much seed input was needed two weeks ago, to plant then, so as to have a units of corn available last week? Precisely a2 units of corn, and that required expending, two weeks ago, La2 units of direct labor. In this way, the expression (4.3) decomposes the labor embodied in a unit of corn into the direct labor expended at various times in the past to produce the inputs needed to produce the inputs needed to produce the inputs needed, and so on forever back into the past, to produce the corn today. There is another useful derivation of the labor embodied in a unit of corn. The embodied labor value of a good is the sum of live labor expended during the current production period to produce the good, plus the labor already embodied in the inputs used in production. Let A stand for the embodied labor value in a unit of corn. The labor expended today in producing corn is L, and the labor embodied in the a units of corn used as an input in corn's production is, by definition, Aa, because A is the labor content of 1 unit of corn. Thus, by the second sentence of this paragraph, A = L + Aa. (4.4) Solving Equation (4.4) for A yields, again, Equation (4.2). 38 Exploitation and Profits The expression (4.2) looks very much like the multiplier in

macroeconomics, and this is no accident. Recall that Y = C + I (gross output = consumption + investment) C = aY + d (consumption function). Combining these two equations yields y=d+1 1 - a · The interpretation is the same as that given for expression (4.2). An increase in investment from I to I + 111 increases national income, not by M, but by 111/(1 - a), where a is the propensity to consume. An increase in investment of 111 leads to an increased consumption of a111; in tum, those consumption expenditures generate additional incomes of aM, and people receiving that income increase their consumption by a2111, and so on into the future. Thus, the decomposition ~ = 111 + aM + a2111 + . . . 1 - a has the same sort of interpretation, going into the future, as the decomposition of Equation (4.3) does going into the past. Socially necessary labor time is defined as the amount of labor embodied in the bundle that the worker consumes, a bundle that he purchases with his wage. Suppose that the daily subsistence amount of com that a worker consumes in this economy is b units of com. If the wage is a subsistence wage, then his entire wage is spent on purchasing this amount of com. Thus, socially necessary labor time is defined as SNLT == lI.b = 1 ~ a · (4.5) Notice that this definition is slightly different from that in Chapter 2, where the total capital stock available was considered and socially necessary labor time was an appropriate average of labor time expended in the Factory and Farm sectors. In this model, which has no Farm sector, I do not have that option. Although the definitions are different, the end result will be about the same, and one should not worry about this detail, except to acknowledge its existence. Suppose labor time is denominated in days of labor. There is some Exploitation and Profits 39 fixed length of the working day, by hypothesis; and, by definition, the worker works for 1 day in order to receive his wage, which is w. The wage can be paid in either corn or money. The worker is said to be exploited if the amount of corn he can purchase with his daily wage embodies less than 1 day, the amount of time the worker toiled to earn the wage. If the daily wage just suffices to purchase corn in amount b, then the worker is exploited if Ab < 1. The rate of exploitation is defined as 1 - Ab e=— Ab (4.6) In other words, e is the ratio of surplus labor time expended by the worker to socially necessary labor time. The surplus labor time is that portion of the daily labor that the worker expends above that embodied in the corn he is paid. It becomes embodied in corn that ends up as profits for the capitalist, as I will show in the next section. 4.2 Prices and the Profit Rate Suppose a unit of corn sells for a price of p, denominated in some currency. Then the fact that the wage in this model is a subsistence one is summarized by pb = w. (4.7) The amount the worker must pay to buy his corn bundle is just his wage. For each unit of corn the capitalist produces, she must pay pa + wL for her inputs of corn and labor. I assume she pays the wage at the beginning of the production period (which may not be realistic), so wage costs are considered to be part of her investment costs. (But nothing of significance changes if the capitalist pays the workers at the end of the production period.) Then the profits per unit of corn that a capitalist makes, because I assume she is able to sell her corn at the going price, are p - (pa + wL) = unit profits. 40 Exploitation and Profits The profit rate, 7T, is defined as the rate at which her investment grows; it is the ratio of profits to investment. Thus, 7T = P - (pa + wL) (4.8) pa + wL . Rewriting (4.8) in a more convenient form yields p = (1 + 7T)(pa + wL). (4.9) The capitalist in this model wishes to expand her stock of capital. She is not the same sort of subsistence agent discussed in Chapter 2. Her preferences, for whatever reason, are for accumulation and dictate that she expand her capital

stock as rapidly as possible. I will not inquire into what social norms or other constraints or forces give rise to these preferences in capitalists. Suffice it to say that competition among capitalists forces each to expand as rapidly as possible in order to have the funds to innovate and not be driven out of the market altogether. So in this model I will simply assume that capitalists strive to accumulate. The measure of the rate of the capitalist's accumulation is 7T, the profit rate. It is the rate at which investment capital expands from one period to the next. In summary, the data of the model are {a,L,b}. These are given, exogenous magnitudes. The endogenous variables, determined by the data, are e, A, p, and 7T. Notice that I have left out w. There is one degree of freedom in the model, because there are more unknowns than equations. Equation (4.2) defines A from the data and Equation (4.6) defines e. I am left with Equations (4.7) and (4.9) to determine p, w, and 7T. This cannot be done uniquely, because only relative prices matter. I therefore have the liberty to set either p or w at some arbitrary level, and I have chosen to set w = 1. Hence, the price p is the price of com relative to the wage, or the wage-price of com. 4.3 The Relationship between Exploitation and Profits One can solve for the rate of profit in terms of the data. Substituting from Equation (4.7) into (4.9) and dividing through by p yields 1 1 + 7T = a + bL. (4.10) The expression a + bL is called the augmented input coefficient. The first term, a, is the amount of com that must be planted in the ground to yield 1 unit of com. The second term, bL, is the amount of com that Exploitation and Profits 41 must be fed into the worker to yield 1 unit of corn. Hence, from a technological point of view, a + bL is the amount of corn that must be used as input, in one way or another, in the production of 1 unit of corn. If there are to be any profits, this augmented input coefficient had better be less than the amount of corn produced, a + bL < 1. (4.11) And from (4.10), this is just the condition necessary to generate a positive value for the rate of profit, 1f'. Thus, the condition summarized by inequality (4.11) is required for generating a positive rate of profit. What is the condition for generating a positive rate of exploitation? It is, by reference to the definition of e in Equation (4.6), Ab < 1. (4.12) But by the derivation of the formula (4.5) for socially necessary labor time, (4.12) is equivalent to bL -1 - < 1 or a + bL < 1, -a which is just condition (4.11), the necessary and sufficient condition for a positive rate of profit. Thus, condition (4.11) is necessary and sufficient both for the rate of profit to be positive and for the rate of exploitation to be positive. This is summarized by the following theorem. Theorem 4.1 1f' > 0 if and only if e > o. In other words, the necessary and sufficient condition for the existence of a positive profit rate is that labor be exploited. Some writers have called this the fundamental Marxian theorem (Morishima, 1973). (I do not think it is really so fundamental, for reasons I will mention later.) The theorem verifies the intuition, mentioned earlier, that surplus labor becomes embodied as profits. It is only by virtue of the fact that workers are paid a wage enabling them to buy only an amount of corn embodying less labor than they expended in production that some corn is left over for capitalists. Whether the capitalists consume this surplus, or sell it to buyers other than workers, or invest it, is not my present concern. Theorem 4.1 shows that profits are positive if and only if workers are exploited. But what makes it possible for capitalists to exploit 42 Exploitation and Profits workers? Why should the corn wage, b, not rise until the profit rate falls to zero? The answer to this question is provided in Chapter 2. Capitalists own scarce capital-in this case, seed corn-which is needed for production. Recall that the technology {a,L}

in this model is like the Factory technology of Chapter 2. Because of the scarcity of seed corn (which is owned by the capitalists) relative to the labor available for hire, workers compete for access to the technology, a situation keeping their wage low enough to maintain a positive rate of profit. In other words, the wage is bid down to just the amount required by the worker as a consequence of competition among the workers for employment on the scarce capital stock. Nothing in the story requires that the corn wage of workers be a subsistence wage in any biological sense. As long as labor is sufficiently abundant relative to the capital that is available to employ it, the wage rate will settle at some level that permits a positive rate of profit. At any such wage rate, exploitation occurs. 4.4 An Economy with Many Produced Goods One weakness of the model presented thus far is that it does not provide for a division of labor among workers. Everybody produces only corn and consumes only corn. The social division of labor can be exhibited only in a model in which many goods are produced. To analyze such a model requires some linear algebra. But, in the final analysis, the result is just the same as Theorem 4.1: profits exist if and only if there is exploitation. Assume that there are n goods and that x represents a vector in Rn of levels of production of these n goods. The technology is summarized by the data {A,L}, where A is an n x n input coefficient matrix. The j th column of A, Aj , lists the amounts of the n goods needed as inputs into the production of 1 unit of the j th good. Thus, in the matrix A = (aij), aij is the amount of the ith good used as input in production of 1 unit of the jth good. L is a row vector of n components, L = (Lj), where Lj is the amount of direct labor needed as input in producing 1 unit of good j. 4.4.1 The Vector of Embodied Labor Values Let the subsistence vector of consumption be the n-vector b. No longer do people consume just corn. Then the labor embodied in b is Exploitation and Profits 43 the amount of labor necessary to produce b as a net output. Thus, using reasoning similar to the reasoning prior to Equation (4.1), I search for the vector of gross outputs x that will produce b as its net output, x = Ax + b. (4.13) (If x is the vector of gross output, then Ax is the vector of inputs consumed in the process and b is the vector of net output. Equation (4.13) is of the form, gross output = input + final demand.) Let 1 be the n x n identity matrix. If (I - A) is invertible, then the solution to (4.13) is (4.14) Indeed, a well-known theorem of linear algebra states that (1 - A) is invertible and its inverse is a nonnegative matrix if A is a productive matrix. A productive matrix is one capable of producing a vector of positive net outputs. This is an eminently reasonable economic condition to require of A. The amount of labor that must be expended to produce x (namely, Lx, the scalar product of L and x) is just SNLT(b) = L(I - A)-Ib, (4.15) or the socially necessary labor time. Equation (4.15) is the vector analogue of Equation (4.5). As one might guess, the expression L(I - A)-I, which is a row vector with n components, is the expression for the vector of embodied labor values, A, embodied in the n commodities in the economy; and Equation (4.15) can be written as SNLT(b) = Ab, (4.16) which looks like the first part of Equation (4.5). Indeed, this expression can be derived for the vector of embodied labor values in commodities, A, by an argument like the one leading to Equation (4.4). Let A be the vector of embodied labor, or labor values. Then a typical component Aj of A is the sum of labor expended in the present production period in the production of commodity j, and labor embodied in the inputs manufactured in the past, but used today, in the production of commodity j. The first term of direct labor is the component Lj of L; the expression for labor embodied in the inputs used to produce

commodity j is AIaIj + A2a2j + … + Ananj, 44 Exploitation and Profits which is the scalar product of A with Aj , the j th column of A. Thus, Aj = Lj + AAj • (4.17) Writing Equation (4.17) as a vector equation, for all j, gives A = L + AA. (4.18) Equation (4.18) is the vector analogue of Equation (4.4). It can be solved for A by inverting the matrix (I - A). Hence, A = L(I - A)-l as conjectured. It follows that Equation (4.16) is another way of writing Equation (4.15). As in the corn model, an agent is defined as exploited if socially necessary labor time is less than the amount of time he works, assuming his daily wage only allows him to purchase the vector of consumption b. The labor embodied in the vector b is A1b1 + Azbz + . . . + Anbn = Ab, and so the condition for exploitation of the worker is Ab < 1. The rate of exploitation is defined as before, 1 - Ab e = –:-::– Ab (4.19) and has the same interpretation, namely, the ratio of surplus labor time in the working day to the labor embodied in the worker's daily consumption bundle. 4.4.2 Prices The derivation of prices in the multidimensional model requires an additional argument: I must invoke the fact that capitalists compete. There are now n possible sectors to invest in, but a capitalist will only invest in lines of production that achieve the maximal profit rate, for no other line will expand his capital so rapidly. Let p be the n-dimensional row vector of prices of goods. (Recall that in Section 4.1 the daily wage was set at 1 and that Aj is the jth column of A.) Then the cost of inputs and labor to produce 1 unit of good j is pAj + Lj, Exploitation and Profits 45 and hence the profit rate, at prices p, of producing good j is po - (pA + Lo) 1To == J _ I I (4.20) J pAj + Lj . I have argued that only those processes that achieve the maximal profit rate will be operated. Suppose that in this economy all the sectors must operate (perhaps in order to produce the subsistence requirements and the inputs required for that purpose). Then the economy cannot be considered to be in a long-run equilibrium unless prices are such that all sectors generate the maximal profit rate and all goods are produced. Hence, at such an equilibrium, the profit rates are equalized across all sectors; I will call that uniform profit rate 1T. The price equation can be deduced from (4.20): p = (1 + 1T)(pA + L), (4.21) which is a vector equation stating that the vector p is proportional in its components to the vector (pA + L), with a constant of proportionality (1 + 1T). As before, the subsistence wage equation can be written as pb = 1, (4.22) which states that workers must expend their entire daily wage to purchase the daily subsistence requirement b. Substituting from (4.22) into (4.21) and factoring p out of the right-hand side yields p = (1 + 1T)p(A + bL), (4.23) where A + bL is the augmented input coefficient matrix. Note that bL is the product of a column vector with a row vector, each of length n; so it is an n X n matrix. Indeed the ij th component of A + bL, which is ajj + bjLj, is just the total amount of good i that enters into production of good j when one considers not only the factor input that occurs directly (ajj), but also the input of good i that enters indirectly into good j through the worker's consumption. This last amount is bjLj and is called the labor-feeding input coefficient. A theorem of linear algebra known as the Frobenius-Perron theorem asserts that if the matrix (A + bL) is productive, in the sense defined earlier, then a unique nonnegative price vector p and an associated profit rate 1T that solve Equation (4.23) exist. Thus, prices capable of reproducing this economy exist, so long as the technological and subsistence data {A,L,b} render the augmented technology (A + bL) capable of producing a surplus. 46 Exploitation and Profits 4.4.3 Exploitation and Profits in a Multidimensional Model Equation (4.15) and the definition of the rate of exploitation yield the condition for a

positive rate of exploitation: (4.24) I have remarked that p and 7T are uniquely determined, given A, b, and L, by Equation (4.23). Hence it should be possible to investigate whether there is a relationship between the condition for a positive rate of exploitation, as given by (4.24), and the existence of a positive rate of profit. Indeed, using the Frobenius-Perron theorem one can prove the following theorem. Theorem 4.2 In the n-dimensional model, 7T $>$ 0 if and only if e $>$ o. The result is the same as that of the simple corn model. A positive rate of profit is sustainable in a reproducible economic system if and only if workers are exploited, in the sense that the labor embodied in the goods they can purchase with their wage is less than the labor they expend. The proof of Theorem 4.2 is given in the Appendix. 4.5 The Social Division of Labor and the Perception of Exploitation In Chapter 3 I presented the notion that capitalism and feudalism share a common trait, namely, the extraction of a surplus by a small class of property owners from a large class of direct producers. This view is verified by Theorems 4.1 and 4.2 of the last two sections. According to these theorems, profits exist because workers only spend part of the working day working for themselves; the rest of the day they work to produce the profits of the capitalist. Under feudalism this separation of work time between necessary and surplus time was observable by the producer, but such is not the case under capitalism, because of the social division of labor and the production of commodities. A worker does not actually produce the goods b that he consumes. Suppose that he produces auto fenders all day long. Further suppose that the auto worker works 40 hours a week producing fenders, but the wages he is paid enable him to buy consumption goods embodying only 20 hours of labor (expended mostly by other workers). BeExploitation and Profits 47 cause of the social division of labor, he has no clear conception of the amount of labor that is necessary to produce the goods he consumes. For the auto worker, the division of his labor time is not apparent. For the serf under feudalism, however, the work week, or work year, was clearly divided into labor time expended in the production of his subsistence commodities and labor time expended directly for the lord. Thus, the social division of labor-the arrangement by which no worker in modem capitalism produces all the goods that make up his consumption bundle-obscures the relation of exploitation between capitalist and worker. A commodity is defined as a good produced for exchange, not for the producer's own use. Capitalist production, unlike most production under feudalism, is commodity production. And commodity production is clearly related to the existence of the social division of labor. It could therefore be said that the system of commodity production is responsible for obscuring the nature of exploitation in a capitalist economy. 4.6 The Labor Theory of Value Associated with the classical economists Smith and Ricardo, and also with Marx, is the claim that prices in a market economy are a reflection of the embodied labor values of commodities. In its starkest form this assertion is interpreted to mean that prices are proportional to labor values; that is, that the vector p is proportional to the vector A. In fact, Marx did not assert this "labor theory of value." Rather he used it as an approximation to simplify his arguments about exploitation, because he (rightly) believed that the deviations of prices from embodied labor values were not relevant to his theory of exploitation. The price vector p that solves Equation (4.23) is not proportional to the vector A that solves Equation (4.18), except in certain unusual circumstances (either when the profit rate is zero, or when the technology exhibits a singular property known as equal "organic compositions of capital"). Nevertheless, as I have shown in this chapter, the

relationship between exploitation and profits does not depend on the proportionality of labor values to prices, and so nothing of substance is lost by acknowledging that the labor theory of value is false. Then why did classical economists put some stock in the claim that exchange values, or prices, would be proportional to labor values? 48 Exploitation and Profits Imagine a society that produces deer and beaver, as in Adam Smith's example. In this society everyone needs or wants to consume the same consumption bundle of venison and beaver pelts-say, 1 unit of venison and 1 beaver pelt. Suppose that it takes 6 days to hunt a deer and produce 1 unit of venison ready for trade or consumption and 3 days to produce 1 beaver pelt. Suppose that all labor is equally skilled at either occupation and can move freely between the venison and beaver pelt industries. But suppose further that set-up costs are such that there is a social division of labor, so people must trade with one another to end up with their desired consumption bundle. Suppose that people have subsistence preferences and want to minimize their labor expended in hunting. What will the equilibrium price ratio be between venison and beaver pelts? It will be 2. At that price ratio, each person, regardless of occupation, will spend 9 days hunting, and each will end up with his desired consumption bundle. If the price ratio were higher than 2 everyone would want to move into the venison industry, in an attempt to reduce their hunting times. More realistically, some beaver trappers would start to move into the venison industry, thereby producing an oversupply of venison and driving down its price. If the price ratio were less than 2, producers would move into the beaver pelt industry. Thus, the only price ratio that can support the production of both venison and beaver pelts is 2. Note that 2 is also the ratio of the embodied labor of venison to the embodied labor of beaver pelts, because those labor times are 6 days and 3 days, respectively. Thus, equilibrium prices are proportional to embodied labor values. In the deer-beaver model, the labor theory of value is true. It fails to be true, however, once capital stock is introduced into the economy-so long as the capital stock is scarce relative to the hunters who would use it. Suppose that hunting a beaver requires traps and that hunting a deer requires bows and arrows and that these implements take a fairly long time to make. A hunter who does not already own traps or bows cannot devote time to making them, because it takes so long to do so that he would not have time to earn his consumption bundle and would starve. Now, suppose that there is a capital stock of bows and traps owned by a class of agents who had them made in the past, from their accumulated surpluses. These capitalists today will hire trappers to use the traps and bows to hunt beaver and deer and will pay them wages in return. If there is a scarcity of traps and bows relative to the trappers who would use them, then the wage of trappers will be bid down to that amount needed to purchase only Exploitation and Profits 49 their "subsistence" bundle of 1 beaver pelt and 1 unit of venison. The embodied labor of both beaver pelts and venison must now include an element that takes into account the depreciation of the traps and bows incurred when they are used to hunt the deer and beaver. Moreover, the prices of venison and beaver pelts will include an element of profit that the owners of the implements are able to charge by virtue of the scarcity of their capital stock. When the prices of beaver pelts, venison, and traps and bows equilibrate to a level at which trappers can purchase their consumption bundle with the wage and at which profit rates in the various lines of production are equalized so that all goods will be produced, it will no longer be true that equilibrium prices of beaver pelts and venison are proportional to the embodied labor values of beaver pelts

and venison. The deer-beaver model without capital shows why classical economists believed there was some tendency for market prices to be proportional to embodied labor values of commodities. This relation does exist so long as all goods are produced without scarce capital and so long as there are no naturally scarce and nonproduced inputs (like land) that will command a rent, which will be a component of the price. Marxists also adhere to a labor theory of value because of their belief that the real source of all value is labor. Marx a.rgued that the one property that all commodities had in common was their production by "abstract labor." It is hard to see why this should be regarded as the one property that all produced commodities have in common. They also share the property of being desired by people; and that property gives rise to a welfare-based theory of value (which is reflected in the statement occurring in neoclassical economic theory that prices are proportional to marginal utilities). In fact, the labor theory of value is a supply-side theory, in which prices are thought to be determined entirely by their labor costs; in contrast, emphasizing the importance of the degree to which a commodity fulfills desires or needs or welfare in determining its price is the demand side. The correct theory of market price must take both supply and demand into account. There are some special cases in which demand will not affect price, which is technologically determined, but recourse to those cases should not be sought in an attempt to defend the labor theory of value. I will present one more example in order to emphasize the point that the existence of exploitation, in the Marxist sense, has nothing to do with the proportionality of labor values to prices. Imagine that 50 Exploitation and Profits Andrea planted grape vines on scarce land several years ago and that the grapes are now ready to harvest. Bob would like to consume the wine that can be made from the grapes. Andrea expended very little labor in planting the vines-as little as you please. (Imagine that she only had to press a button some years ago to start the grape-growing process.) Furthermore, assume that no more labor is needed to make the grapes into wine today. Bob produces bread today, which requires a good deal of current labor. He wants to trade some of his bread for Andrea's wine, and Andrea does not want to drink her wine on an empty stomach, so she also wants to trade. After the trade has taken place, Bob will be consuming a bundle of bread and wine, which together embody less labor than he expended-for, by hypothesis, the wine embodies almost no labor. Andrea, in contrast, worked hardly at all and consumes wine and bread that embodies a good deal of Bob's labor. The prices at which bread and wine exchange do not reflect the amounts of labor embodied in the two commodities. Andrea's wine may command quite a high price relative to Bob's bread, because no other source of wine is available for Bob, but Andrea could produce her own daily bread by expending the appropriate labor. One might wish to argue that Andrea is exploiting Bob, because some of his labor has been transferred to her (embodied in the bread), whereas he gets virtually none of her labor in return. In this case, the time elapsed between the planting of the grapes and the present is like capital: although wine can be produced, it cannot be produced quickly, and this is reflected in the price of wine. Or, perhaps more to the point, Andrea but not Bob owns scarce land, a circumstance that explains why Bob did not plant vines some time ago. Note that this example is especially simple, because neither Andrea nor Bob hires the other. Nevertheless, Andrea exploits Bob, in the technical sense, because he expended more labor than is embodied in the bundle of bread and wine he ends up possessing and consuming, and she expended less labor than that

embodied in what she consumes. The transfer of labor from Bob to Andrea occurs in an indirect fashion-through the trade of the commodities they produce- because the prices of those commodities are not proportional to the labor embodied in them. One might view the Andrea-Bob economy as a precapitalist one, because the relationship of wage labor has not yet been established. Nevertheless, the divergence of commodity prices from labor values has emerged, because there is an Exploitation and Profits 51 element of capital involved in the production of some goods. As long as there is differential ownership of the capital stock used in producing goods for consumption today, commodity prices will not generally be proportional to labor values, and some producers will work more hours than the hours embodied in the goods they consume while others work fewer. Even though Marx understood that equilibrium prices were not generally proportional to embodied labor values in a market economy, he made many calculations in an attempt to elucidate how labor values could be "transformed" mathematically into equilibrium prices. One might view this algebraic transformation problem as an attempt to mirror the transformation of economies from simple deerbeaver economies in which prices are proportional to labor values to capitalist economies in which they are not. However, this line of inquiry is not fruitful. The insights from Marxist analysis that remain useful do not require reference to the labor theory of value, or to a special Marxist theory of price determination. Prices are determined by market-clearing (equilibrium) requirements, by the equating of supply and demand. I have referred to a stark form of the labor theory of value, which maintains that prices are proportional to embodied labor values. There is a looser claim advocated by some, namely, that the labor theory of value means that embodied labor values determine equilibrium prices, though not proportionally. Although it is hard to evaluate such a claim, because "determination" is not as clear a relationship as "proportionality" is, there is no interesting sense in which this claim is true. Indeed, there is a sense in which the direction of determination is the other way, that prices determine labor values. Further references on this matter are given in the Bibliographical Notes for this chapter. Although I have verified the claim that exploitation of workers is necessary and sufficient for positive profits, no further headway has been made toward understanding what might be morally wrong with exploitation. Until one can pass judgment on the morality of differential ownership of the capital stock, it is difficult to form an opinion about the exploitation that is its consequence. This is why I remarked earlier that the theorems of this chapter are not so fundamental. To make headway toward understanding the essential ethical question requires some analysis of the conditions that lead to the exploitation of workers, and this is the topic of the next chapter.

5

The worker is exploited because the consumption bundle she can purchase with her wage embodies less labor than she expended, and the capitalist is an exploiter because the goods he can purchase with his profits (or the goods that accrue to him as profits) embody more labor than he expended. Even if the capitalist works hard, this will usually be the case. Why is this accounting of socially embodied labor against labor expended interesting? And to what uses might one put measurements of exploitation? Marxists use exploitation as a statistic for both positive and normative ends. In its positive use, the exploitation of workers is said to explain profits. In its normative use, exploitation is said to indicate unjust treatment of workers by capitalists. In this chapter, I will begin an evaluation of the usefulness of exploitation as a statistic in these roles. 5.1 Exploitation as the Source of Profits The "fundamental Marxian theorem" (Theorem 4.1) provides the basis for the claim that the exploitation of workers is the condition that explains profits. Although Marx did not prove this theorem in the way it has been presented here, he did reach the conclusions embodied in the theorem, and he believed that he had uncovered the explanation of how profits could emerge in a system of noncoercive exchanges where, on every market, equal value exchanges for equal value. Under the hypothesis of the ubiquitous exchange of equals on competitive markets, how could a surplus systematically emerge in The Morality of Exploitation 53 the hands of capitalists? Only if, Marx thought, there is a commodity or factor capable of contributing more value in the production process than it itself had. Marx argued that labor power is that commodity. The worker receives as a daily wage an amount of corn that costs less, in terms of labor, than the amount of labor the worker can expend in a day. The commodity sold by the worker and purchased by the capitalist is labor power-the capacity to perform labor-and a day's labor power can release more labor than is embodied in the goods necessary to reproduce that labor power. This is the source of profits and, Marx believed, uniquely so. I have assigned to labor power the "property of exploitability," because one unit of it can be socially reproduced with less than one unit of labor. Labor power, however, is not the only productive factor that possesses the property of exploitability. I could, in fact, take corn as the numeraire commodity with respect to which embodied values should be defined. Consider the economy of Chapter 4, in which the technology for producing corn is {a,L} and the subsistence bundle per day of labor is b. How much corn is embodied in a unit of corn? To produce 1 unit of corn requires the planting of a units of seed, and it requires the consumption of bL units of corn by the laborer to produce the labor used as an input in the corn production process. The total amount of corn embodied in 1 unit of corn is therefore $a + bL$. I noted that the necessary and sufficient condition for profits to exist is that $a + bL < 1$. But this is precisely the statement that 1 unit of corn be socially reproduced with less than 1 unit of corn. That is, corn possesses the

property of exploitability as well. Indeed, a necessary and sufficient condition for the existence of profits is that corn possess the property of exploitability. This statement generalizes to an economy with n goods. One can adopt any good as the value numeraire and prove a Generalized Commodity Exploitation Theorem, which states that profits exist if and only if each produced commodity possesses the property of exploitability when it is taken as the numeraire for calculating embodied value. This conclusion is not surprising, because the rate of exploitability can be viewed as a measure of the productive efficiency of a factor. The rate of exploitability of labor power is the ratio of the surplus labor that can be squeezed out of a unit of labor power to the amount of labor required to reproduce that unit from a social point of view. 54 The Morality of Exploitation The corn rate of exploitability is the ratio of the surplus com that can be squeezed out of a unit of com to the amount of com required to reproduce that unit of com. Every produced commodity used in production must be capable of giving up such a surplus, when measured this way, for any social net surplus (that is, profits) to be forthcoming. Marx was wrong in thinking that he had discovered the unique source of profits in the exploitability of labor power. What distinguishes the exploitability of labor power from that of com? One identifies the exploitability of labor power with the exploitation of the worker. Some have argued that the exploitability of labor power is different because the extraction of labor from labor power can only be performed with the conscious and cooperative participation of the worker, whereas the productive powers of com can be harnessed without such intimate participation of a human agent. The capitalist must design ways of organizing the manufacturing process to ensure that the worker works-methods of supervision, technologies that lend themselves to controlling the rate of labor extraction (such as assembly lines), and methods of reward that either give workers the right incentives or constrain them in ways that assure that labor will be forthcoming. But, if labor and com differ by virtue of the ability of workers to resist providing labor, that difference is not elucidated by looking at rates of exploitation. One should, instead, study the methods capitalists have used to extract labor, as Marxist social science has done. The seminal work in this area of recent years is the book by Braverman (1974). 5.2 The Initial Distribution If the exploitation of the worker is an important concept, it is so for normative reasons-because it is indicative of some injustice and not because the exploitability of labor power is the unique source of profits. In the model in Section 2.3, exploitation emerged because of the inequality of ownership of the capital stock. If the exploitation of the worker seems unfair, it is because one thinks the initial distribution of capital stock, which gives rise to it, is unfair. I will elucidate this claim. Imagine the following situation, in which exploitation emerges as a consequence of an initial distribution of resources that one thinks of as fair. (Note that I use the term exploitation in its technical sense throughout this chapter.) Suppose that there The Morality of Exploitation 55 are two agents, Adam and Karl. They have different preferences for com and leisure and will live for many weeks. Assume that a week is the length of time required for com to grow and that Karl and Adam have available the same technologies used in the models of Chapter 2: Farm Factory 3 days labor 1 day labor + 1 unit of corn −+ 1 unit of com −+ 2 units of corn, gross Adam and Karl each start with 112 unit of com. Karl is highly averse to performing work in the present: he desires only to consume 1 unit of com per week, subject to the requirement that he not run down his seed stock. In the first week, he therefore works 112 day in the Factory (fully

utilizing his seed com) and l 11z days on the Farm, producing a total of 1112 units of com, 1 of which he consumes at harvest time, leaving him with liz unit to start with in week 2. Adam accumulates during the first week; he works 112 day in the Factory, utilizing his seed com, and 4112 days on the Farm, producing 2Vz units of com, gross. After consuming 1 unit of com, he has IVz units left with which to start week 2. In week 2, Karl works up his own seed stock in Vz day in the Factory, producing 1 unit of com; then, instead of going to the Farm, Karl borrows or rents Adam's 1112 units of seed com and works it up in the Factory. This takes Karl precisely 1112 days and he produces 3 units of com, gross, in the process. Of the 3 units of com, he keeps Vz unit of com and returns 2112 units of com to Adam (Adam's principal of IVz units of com plus interest of 1 unit of com). Indeed, Karl is quite content with this arrangement, for he has worked for a total of 2 days and received 1112 units of com, just as in week I, when he had to use the inferior Farm technology. This means the rate of interest that Adam has charged him (66.6%) is just the rate at which he is indifferent between borrowing from Adam and working on the Farm. (One can see that if there are many people like Karl and only a few like Adam, then competition will drive the interest rate to this value. Thus, the competitors for access to Adam's capital will have bid away any advantage they might have derived from borrowing from Adam rather than working on the Farm. The equilibrium interest rate is the competitive interest rate in a world where there are many people with Karl's preferences and relatively few with Adam's.) Adam, on the other hand, receives a profit of 1 unit of com from Karl's labor, which he consumes, and is left again to begin week 56 The Morality of Exploitation 3 with 1 V2 units of corn. He has not worked at all in week 2. This arrangement can continue forever, with Karl working 2 days and consuming 1 unit of corn each week, and Adam consuming 1 unit of corn each week but working 5 days during the first week and 0 days thereafter (Table 5.1). Clearly there is exploitation in all weeks after the first in this arrangement. Adam does not work but lives off the interest he receives from lending his capital to Karl. Alternatively, I could have had Adam hire Karl to work on his capital stock in the Factory, paying him a wage of V3 unit of corn per day. The interest rate, like the wage that Karl will settle for, is determined by his next best opportunity on the Farm, and if there are many Karls and a few Adams, the competitive wage is V3 unit of corn per day. But is there anything wrong with this exploitation? Karl and Adam (or the Karls and the Adams) started out with equal endowments of corn. Is there any sense in which Adam has taken unfair advantage of Karl? None is apparent, unless one views Karl's preference for leisure today as a kind of handicap, which gives him the right to some kind of protection from Adam's offer. Or, perhaps, Karl (but not Adam) was incapatitated in some way and thereby prevented from working more than 3 days a week. In this case one might decide that they faced unequal opportunities at the beginning, which would surely prejudice the judgment that the outcome was fair. Karl is said to have a high rate of time preference, as he is relatively unwilling to forestall present consumption for the sake of greater consumption in the future. Adam has a low rate of time preference. In this case, the commodity whose consumption over time is at issue is leisure. Suppose Karl's high rate of time preference is due to impa- Table 5.1 Work patterns of Karl and Adam Amount of Amount of Units of corn Adam's labor Karl's labor consumed by Week expended (days) expended (days) each individual 1 5 2 1 2 0 2 1 3 0 2 1 4 0 2 1 The Morality of Exploitation 57 tience rather than to some physical handicap that

prevents him from working as long as Adam does during the first week. If one were to forbid transactions of lending or hiring between Adam and Karl, then Karl still would be no better off (he would continue to work, as he did in week 1, in both Factory and Farm for a total of 2 days to produce his 1 unit of corn, net), but Adam would be worse off. Would it not, therefore, be spiteful to forbid these trades between them? Forbidding these transactions would only give rise to a Pareto suboptimal allocation of streams of corn and leisure over the lives of Adam and Karl. If Adam could not deal with Karl, then he would have to work every period himself, while Karl would work no less. Now supposeto make the argument stronger-that there are set-up costs in moving from the Factory to the Farm. Then, when Karl works in both places, as in week 1, he would have to expend more than 2 days of labor to get 1 unit of corn. In week 2, when he borrows from Adam, he uses only the Factory, and so he works just the 2 days. Thus, with set-up costs, both Karl and Adam strictly gain by virtue of Adam's accumulation in week 1. (It is not clear precisely how the interest rate would be set when set-up costs exist, but that is a matter of second-order concern.) For a socialist society to prevent such exploitation, it "would have to forbid capitalist acts between consenting adults" (Nozick, 1974, p. 163). There may be reasons to forbid such transactions, but they are not visible at the level of simplicity of this model. Yet even at this level exploitation unquestionably obtains. The conclusion to be drawn from the example, then, is this: when exploitation is an injustice, it is not because it is exploitation as such, but because the distribution of labor expended and income received in an exploitative situation are consequences of an initial distribution of assets that is unjust. The injustice of an exploitative allocation depends upon the injustice of the initial distribution. In the example, the initial distribution of equal seed corn endowment was taken to be just, and I was consequently hard put to identify the ensuing exploitation as evidence of anything nasty. What, then, might be the causes of a highly unequal initial distribution of the means of production, and what are our attitudes toward such causes? Should the exploitation that will arise from an unequal distribution, variously caused, in a system of private property be considered morally bad? 58 The Morality of Exploitation 5.2.1 Robbery and Plunder If the initial distribution is highly unequal because some agents robbed and plundered, then clearly there are grounds for viewing the ensuing exploitation as bad. This is the case Marx made against European capitalism, particularly English capitalism. Part VIII of the first volume of Capital is entitled "The So-Called Primitive Accumulation." In this section Marx relates the history of the concentration of wealth by the English gentry through the enclosure movement and other forms of robbery~ The appropriate folk rhyme, popular at the time is (Cheyney, 1923, p. 188): The law locks up the man or woman Who steals the goose from off the common, But leaves the greater villain loose Who steals the common from the goose. The unequal distribution of land that the enclosure movement accomplished not only created a wealthy class but also created a potential proletariat by disenfranchising peasants of all means of production except their labor power. Before the enclosure movement the yeoman peasant had access to the commons and a small herd, and perhaps a small plot of land of his own; therefore, he had no need to sell his labor power to survive. The enclosure movement made it impossible for large numbers of disenfranchised peasants to survive without selling labor power. Thus, proletarianization of a population is often a by-product, intended or otherwise, of the concentration of land or capital. The newly formed class of propertied agents thus becomes

wealthy, not only by virtue of the land it has acquired, but also because, in the process of that acquisition, it has "liberated" a mass of producers from their means of production, thus making them available as a labor force for hire. Without the existence of a class willing to sell its labor power (or to be enslaved or enserfed), large land holdings would do their owners no good. In the Marxist account, the enclosure movement in England was a clear case of robbery and plunder, although that interpretation is not unchallenged. A contemporary analogue to enclosure was accomplished in the mid-twentieth century by the green revolution, during which new varieties of seed (for example, wheat) that were vastly more productive than old varieties were developed. Use of the new seed, however, required capital investment in irrigation, insecticides, The Morality of Exploitation 59 and fertilizers (as well as knowledge), which small peasants could not undertake. Large landholders, by virtue of their wealth, were able to make the transition to the new technology, which created an increase in wheat yield and a decrease in the price of wheat. Small peasants who had survived by selling wheat on the market could no longer survive under these competitive pressures. They had to sell their land and become either landless laborers or urban proletarians. (The amount they could get for their small plots was too little to enable them to become petty capitalists, in part because the big landlord to whom a peasant sold his land was in a monopsonistic position.) It is argued that this process of proletarianization contributed to the rapid growth of Mexico City and the massive unemployment accompanying it. Even though the long-term consequence of technological change has been to increase the income of society, including that of its proletarians, in the short-run technological changes of certain kinds, like the green revolution, can proletarianize large masses of people, who become unemployed and poor. This example is not preciselya case of robbery or plunder, but it underscores the point that the concentration of capital (a process leading to unequal distribution of capital) is often accompanied by the proletarianization of a mass of people, and, hence, benefits the propertied class in a double sense. (For further discussion of the green revolution, see the book by Hewitt de Alcantara [1976].) It is often difficult to decide when an act that leads to the concentration of wealth constitutes robbery. When the American Indians voluntarily agreed to sell Manhattan Island to the Dutch for $24, was that robbery? One might argue that if full information concerning a trader's alternatives is not available, then the trade is immoral, with one side taking unfair advantage of the other. Fairness involves not simply a gain to both sides from a trade but also an equitable division of the gains. Most historical episodes of rapid concentration of land in the hands of a few are accomplished either by direct force or at least by deals in which political power is used in unprincipled ways. The history of capitalism is replete with examples of the accumulation of wealth through clearly unethical means, so it is not very difficult, on these grounds, to condemn the present distribution of wealth. But the question I am investigating is whether all possible causes of an unequal distribution of capital are condemnable. 60 The Morality of Exploitation 5.2.2 Differential Rates of Time Preference If agents have differential rates of time preference, then exploitation will quickly be generated, as it was in the story of Karl and Adam. Whether one views such exploitation as bad depends upon the view one takes toward the genesis of the different rates of time preference of these agents. Suppose the different rates came about as a consequence of exposure to different environments-say, families with different habits and different wealths. Adam, with a low rate of time preference, learned to save because

he grew up in a well-off family that taught him the virtues of delayed gratification, whereas Karl's impatient preferences are the consequence of never having been taught by his parents to think about tomorrow. Perhaps, in such a situation, one could say that the differential rates of time preference that brought about the exploitation were themselves the consequence of a prior injustice-the different wealths of Karl's and Adam's families, which gave rise to their attitudes. More generally, the different attitudes toward saving of Karl and Adam may be the consequence of different external opportunities that one deems to be unfair. Suppose, on the other hand, that Karl's and Adam's external opportunities were identical but that they were born with different rates of time preference. To condemn the ensuing exploitation, in this case, involves construing a high rate of time preference as a handicap. (This is the kind of value judgment that economists are loath to make.) Even if Karl's rate of time preference is so high that he does not take proper care of himself, does one have some objective basis for interfering with the deals he might make? (One might want to interfere because Karl's behavior eventually imposes costs on the minimally benevolent society that insists upon hospitalizing him, and paying for it, when he deteriorates as a result of his own neglect. But that is an issue quite different from the one of exploitation, which I am currently discussing.) Suppose that Karl and Adam have different rates of time preference because of their prior exposure to different external opportunities. It is not necessarily the case that the preferences either one of them has are irrational. In fact, it may be that their rates of time preference are adapted to the environments in which they expect to live. Suppose that there are many Karls, each of whom expects to live only two weeks, and a small number of Adams, each of whom expects to live for many weeks. Except insofar as their different expectations about The Morality of Exploitation 61 the lengths of their lives may influence their choices, the Karls and Adams all have the same attitudes about consumption of com and leisure over time. If a Karl only expects to live two weeks, it is rational for him to enjoy life this week, as well as next week; and so he chooses to work, each week, just long enough to produce his subsistence requirement (and not run down his stock of corn, which he wants to pass on to his child, who will survive him). An Adam, however, is willing to work exceedingly hard during the first week, knowing that he can reap the benefits of leisure postponed to later periods by hiring the Karl types, an option that Karl does not have. Hence, to say that Karl and Adam have different rates of time preference by virtue of their different environments does not imply that one of them is behaving irrationally-against his self-interest, calculated by his best estimate. Each chooses a pattern of work and consumption based on his life expectancy. In this case, one might have grounds to condemn the exploitation of Karl by Adam, not because of the exploitation as such, but because the cause of their differential life expectancies may be proximately related to an injustice. One cannot, in this example, say that the cause of Karl's low life expectancy is his poverty, because by assumption Karl and Adam each began with the same wealth in com. But perhaps Karl came from a poor family or a poor country (whereas Adam did not) and his attitudes about life expectancy were formed in that environment. It might seem silly to discuss these possibilities, but an important justification for capitalism, which Marx attacked, was the theory that capital was the reward for abstinence from consumption: some people abstain from present consumption and provide a benefit to everyone as a consequence, as does Adam in the example. The "surplus labor" that others perform is the premium they pay

to those who provide the socially useful function of abstinence from present consumption of leisure or com, which produces a capital stock for tomorrow. Marx's answer to the abstinence defense of capitalist inequality was that the primitive accumulation of capital did not come about that way. Doubtless that is true. The original capitalists, by and large, both saved and consumed at prodigious rates. Nevertheless, even in modem capitalism, it is quite dear that some people become moderately well-off by virtue of extremely hard but unskilled work, such as small shopkeepers who are willing to work 80 to 90 hours a week. The argument, for example, is made that in England East Indians are willing to set up shops and work those hours; eventually, they be62 The Morality of Exploitation come moderately well-off, in consequence of having chosen a path the native English worker is unwilling to take, even though the capital requirements and skills are within his means. East Indian immigrants have created, for the first time, a British dream. Although one does observe different rates of time preference, it is a mistake to consider those differences to be a consequence of autonomous choices that people have made. Neoclassical economists tend to treat the rate of time preference as an aspect of a person's nature, something that the person should therefore bear the consequences of. But I think this is a myopic view. Attitudes toward saving are shaped by culture, and cultures are formed by the objective conditions that their populations face. If the East Indians work hard and build up small businesses while the native British workers do not, then that outcome is due to the history of the societies in which those populations formerly lived, societies that inculcated them with different values. Their differential success in capitalist enterprise is itself a consequence of past experience with capitalism, which in the one case demoralized the worker and in the other engendered in him a certain degree of ambition. When one sees patterns of behavior that characterize whole populations or classes, one must look for factors of social origin. If there is very little movement out of the working class in Britain, but more in the United States, that difference is due not to an innate enterprising spirit among American workers but to the differences between institutions and cultures in the two countries. Marxists and left-liberals view rates of time preference as socially determined. Therefore in their view it is not possible to justify exploitation and inequality by appealing to differential rates of time preference, for those differences arose from prior conditions of inequality and oppression. Conservatives generally view the rate of time preference as innate. But even if one grants that the trait is innate, it does not follow that a person should bear the responsibility for that trait. In the 1960s, a number of conservative writers, such as Arthur Jensen and Richard Herrnstein, argued that blacks were innately inferior to whites, as measured by IQ tests, and that a high rate of time preference was linked to low intelligence. The evidence for an innate difference in IQs between blacks and whites has now been thoroughly discredited, but in the mid-1980s a new version of the argument surfaced. James Q. Wilson and Richard Herrnstein argue that the consumption of tobacco and alcohol by poor and, particularly, black pregnant women creates brain damage in fetuses and results in a The Morality of Exploitation 63 population of black children who lack the capacity to think about tomorrow. In their provocatively titled book, Crime and Human Nature, they claim that much inner city crime is explained by this population of black youth with pathologically high rates of time preference. The evidence for this position has been sharply challenged by Leon Kamin, the same psychologist who exposed the concocted data that was used to advance the racist IQ theories of the 1960s. Thus,

ideological positions are fought over in an apparently scientific way. The origin of differential rates of time preference is an important case in point, because the view that wealth is a return to abstinence and saving has a long history. If people can be shown to "deserve" their rates of time preference, perhaps because a preference for planning and saving is a constituent of a person's personality or character, then an argument will have been established to justify inequality. It is important to recall the structure of the counterargument. First, the initial conditions of differential ownership were established, in all capitalist societies, by processes of theft and brute power. Second, to the extent that people do have different rates of time preference, and succeed differentially in capitalist society on that account, those differences are largely due to the process by which they are formed, namely, as a reaction to conditions of inequality and oppression. It is incorrect to argue that differential rates of time preference are the primal cause of unequal wealths if the genesis of those differences is due to a prior history of inequality. Third, even if there are some genetic or innate differences in rates of time preference, why should people benefit or lose on that account? If having a high rate of time preference is a handicap in a society with minimal social insurance, then should not those with that handicap receive social compensation? 5.2.3 Entrepreneurship It is often argued in defense of capitalist inequality that profits are a return to entrepreneurial ability. People with this ability see ways of organizing labor and producing commodities that others do not see, and this scarce factor is rewarded with profits. Entrepreneurial ability plays the role in this explanation that a low rate of time preference played in the explanation in Section 5.2.2. Two questions concerning entrepreneurial ability can be raised: Is it a factor that is necessarily scarce, or is it scarce because most people in a capitalist system do not 64 The Morality of Exploitation have the opportunities to develop their entrepreneurial abilities? Even if entrepreneurial ability is really scarce, is it appropriate for it to be rewarded as it is, with the accumulation of capital? I cannot answer the first question. With respect to the second, the argument can be made that entrepreneurs will continue to exercise their scarce talents even without the tremendous rewards that accrue to them in a capitalist system, so the capital stock that they (under assumption) accumulate need not be personally accumulated by them in order for their talents to be available to society. Perhaps the salary society would have to pay an entrepreneur is considerably less than he gets in a free enterprise system. By virtue of the private property rights, the entrepreneur who organizes and hires other factors of production is the claimant who gets what is left after wages and other costs are paid. But one can argue that a good part of that residual is a surplus that the entrepreneur neither needs (to perform his productive function) nor is entitled to. Why might he not be entitled to it? Because his entrepreneurial skill could be considered to be the consequence of environmental or genetic factors from which he does not deserve to benefit. Suppose, to invoke an example already given, he acquired those entrepreneurial skills by virtue of growing up in a family in which he learned them by example. The proletarian had no such luck. The advantage accruing to the entrepreneur over that accruing to the proletarian is then a consequence of an unequal opportunity and is perhaps one a society committed to equality of opportunity should not condone. Granted, the entrepreneur performs a socially beneficial function, but in this case he should be paid only what is required to get him to do so. Indeed, various capitalist societies do take this position to different degrees, because they tax profits and

managerial salaries at very different rates. In Japan the managers of big corporations are paid much less than their counterparts in the United States. But apparently they perform their entrepreneurial and organizational functions at least as well. Some argue that managers are not entrepreneurs but hired labor. But many entrepreneurial functions are performed by managers, and the popular justification of high managerial salaries in the United States is based on a belief in the scarcity of entrepreneurial talent. Suppose that entrepreneurs do not learn their talents but are born with them, or, more realistically, that some people are born with the capacity to acquire entrepreneurial skills and others are not. In this case, people face different opportunities, but of a genetic sort. There The Morality of Exploitation 65 may appear to be more reason to allow these natural entrepreneurs to keep the capital they accumulate, if one holds to a principle of selfownership, which claims that a person ought to be entitled to the income that can be earned by the traits coming with his person. This principle can be challenged. First, do not such genetic dispositions constitute unequal opportunities, and what is our attitude toward such inequality? Perhaps the entrepreneur will derive sufficient pleasure from exercising his entrepreneurship, a pleasure unexperienced by the ordinary person, to draw forth his scarce talent. Is it necessarily the case that he should be repaid, as well, with the accumulation of a large capital stock? Even if one endorses self-ownership, it does not obviously require that degree of accumulation. Second, the entrepreneur may be perfectly willing to exercise his organizational talent without the accumulation of capital that attends its exercise under capitalism. In that case, there would be no reason from a social point of view to reward him in this way. Thus far, I have taken the position that entrepreneurship is a talent. In reality, much of that "talent" may consist in having the right connections, something that is clearly associated with growing up with a certain class background. There may be an element of the feudal lord in the modem entrepreneur: somebody has to be one, but almost anyone could be, and so the positions go to those with family connections. Joseph Schumpeter argued that in early capitalism entrepreneurship was scarce and that capitalism served the function of bringing it to the fore. But now the requisite entrepreneurial skill can be taught to managers of socialist enterprises in business schools. It is available to many, regardless of connections and background. Neoclassical economists tend to argue, in various ways, that each factor receives its appropriate return. Sometimes, in cruder versions of the neoclassical theory, appropriate return is translated as "just return." But, usually, appropriate return is taken to mean "that return required to make the factor contribute its services." This hardly seems to be the case, however, given the large variation in remuneration to talent that exists in different capitalist societies. The Marxist position is that each factor requires some remuneration to be reproduced and for it to be offered for productive service. What is left over after the payment of these necessary remunerations is an economic surplus, and there is considerable leeway in the manner in which society may distribute this surplus. In a laissez-faire system, there is some bargaining over the surplus (between workers and capitalists, 66 The Morality of Exploitation for example), but there is no guarantee that the agreement reached is just or that it reflects a socially necessary pattern of remuneration. Thus, one need not deny the existence of a scarce talent called entrepreneurship to deny the justice of the vast inequalities that may be attributable to it in a capitalist system. Moreover, it is incorrect to assume that entrepreneurship is a resource that would only be forthcoming in a

private property system. Even without the remuneration to entrepreneurship available in a capitalist system, there would in all likelihood be many people who would learn and would like to exercise the entrepreneurial skill that society needs. 5.2.4 Risk Propensity The third category of scarce and valuable attributes that capitalism rightly (it is said) remunerates with profits is the willingness to take risks. This factor, again, is not captured in the models presented thus far. In reality investment is a risky business. Suppose there are two kinds of people: those willing to take risks and those not willing to take risks. Among the risk takers, many go bankrupt (and perhaps become proletarians or people of modest income) and some become capitalists. Proletarians are those who are not willing to take risks or those who have taken them and failed. Their surplus labor, accruing to the capitalists as profits, is the insurance premium they pay to capitalists to take risks for them. The worker is guaranteed his steady wage and sleeps well at night, paying the capitalist to gamble for him. I find this story extremely implausible. I believe that many workers would like to have the opportunity to become capitalists; they would love to take those risks. But they cannot, either because of lack of access to capital markets or because of lack of some aspect of entrepreneurial ability (which might include having the right connections). Second, it cannot be seriously maintained that a worker's life involves less risk than a capitalist's. Workers face the risk of occupational disease, unemployment, and an impoverished retirement, which capitalists and managers do not face. Failing as a capitalist does not usually mean becoming destitute. I do not know of any sociological studies that verify my belief, but I think that the /I American dream" encourages most young American white workers to try to escape from the working class, in one way or another, by taking various kinds of financial risks. If they fail, it is not for lack of trying but for lack of something else, most likely access to capital of a sufficient amount to escape the perils of small business. The Morality of Exploitation 67 5.2.5 Luck Some argue (for example, Robert Nozick, 1974) that luck is a legitimate means of acquiring assets and that this factor could justify an initial distribution of capital that is highly unequal. Here I am not referring to luck that is the consequence of having taken a gamble: that would be covered under risk propensity. The kind of luck I am referring to is that which is not the outcome of choice under uncertainty on the part of the agent but is completely unanticipated; it is sometimes called brute luck. Perhaps the most important kind of luck by which people may acquire differential ownership of capital stock is inheritance. Inheritance can be looked at from the point of view of the giver or the receiver. If one agrees that the giver has property rights in the wealth that she has legitimately earned and saved by virtue of her labor, skills, rate of time preference, and propensity toward risk, then it would seem that she should be entitled to dispose of that wealth as she pleases, and that would include giving it away to whatever heir she chooses. But from the point of view of the next generation-the group of potential receivers-inheritance constitutes perhaps the grossest of unequal opportunities. Does not everyone in the next generation have the right to begin with the same opportunities, including those determined by access to capital? This, after all, is a particularly easy kind of opportunity to equalize, unlike the differential opportunities that exist naturally by virtue of the fact that people grow up in different families. Rights must be circumscribed in many ways, because a complete set of rights one might like to specify cannot simultaneously be satisfied. It seems to me that the right of the generation of givers must be constrained by the unequal opportunities it creates for the

receivers. From an ethical viewpoint, I do not think it is so difficult to argue against the right to inheritance. But there is an efficiency issue that must be faced in advocating stiff inheritance taxes, and it is of the same nature as the efficiency question discussed under entrepreneurship. If inheritance of physical assets is forbidden, will that restriction act as a disincentive for people to save? The answer to this question is unclear; we do not have enough experience with the enforcement of stiff inheritance taxes in capitalist countries to know. Alfred Nobel created the trust that finances the prizes bearing his name instead of giving his accumulated wealth to his children, for he felt that they should earn it the hard way, as he did. One might allow an estate to 68 The Morality of Exploitation escape taxes if the donor gave it for some specific purpose, such as building a hospital, or buying a piece of land for a park, or financing an opera company, each of which could bear her name. Means by which her contribution to society would be publicly recognized could easily be created. These alternatives to passing wealth down to individuals might both be socially more useful than the individual alternative and create as much incentive to save as the present inheritance laws do. The efficiency argument for individualized inheritance is not convincing; such a claim would have to be established empirically. In a recent paper, D. W. Haslett argues for purifying capitalism, a system that he otherwise likes, by abolishing inheritance. He regards inheritance as an institution inconsistent with the equality of opportunity that capitalism champions. Haslett, like Alfred Nobel, believes that virtuous incentive effects would be generated by abolishing inheritance. He offers the following analogy. If two runners start a race with one far behind the other, will the second runner try hard to win? Indeed, how fast will the leader run? Contrast this with how hard each of them will run if they begin the race together. The analogy implies that everyone will work harder if the members of each generation begin with the same level of wealth, assuming people have the usual desires to excel materialistically. It is worth noting the degree to which inheritance is responsible for differential wealth in the United States. The wealthiest 1 to 2% of American families own 20 to 30% of the net family wealth in the United States. The wealthiest 20% own 80% of the wealth, whereas the poorest 20% own just 0.2% of the wealth. Inequality of wealth is far more severe than inequality of income: the top 20% of families in the income distribution earned 57% of the total family income in the mid-1970s. In a study published in 1978, John Brittain showed that 67% of the large fortunes in the United States are derived from inheritance, not present earnings. Even while nominal inheritance taxes were fairly high (before 1981, when the Reagan administration started reducing them), the actual taxes paid on large estates were incredibly small. The average tax rate on estates was 0.2%, and on estates of over $500,000 it was a mere 0.8%. Thus it is said that the inheritance tax is a voluntary one, or a tax on poor planning. Given these facts about the origins of current American wealth, it is hard to countenance the conservative position that the position of people in American society is due to their hard or skillful work. The family into which a person is born is much more important in determining her fortune than are any voluntary choices she makes. The Morality of Exploitation 69 On grounds of equal opportunity, I think there is a strong argument against luck as a legitimate means for acquiring material assets. One might better argue that those assets which materialize because of luck belong to everyone, not to the person on whom they just happen to fall. Why should the point in time at which opportunities are declared to be equal be before Lady Luck has thrown the dice, and not after? After all, by

definition, no one has done anything to earn the fruits of luck, and the motivation for equality of opportunity is that each is entitled to what he earns from a starting point of equality. (This statement applies to luck that is not the outcome of a calculated gamble, which, as I said, is a case excluded here but included under considerations of the rights to earn differentially from differential risk propensities.) Whether the argument of the preceding paragraph also makes a case against allowing individuals to reap the fruits of genetic luck is a more difficult question. Do I have the moral right to the income stream that my inborn talent enables me to earn? 5.3 Justification of Unequal Distribution A normative justification for measuring exploitation lies in the meaning of the colloquial definition of exploitation: "to take unfair advantage of." Because exploitation is the consequence of inequality in the initial distribution of physical assets, it would seem that its existence indicates unfairness only if the initial unequal distribution of assets is unfair. Marxists argue that all capitalist societies established the takeoff point of unequal capital ownership by processes akin to robbery, slavery, and plunder. If this argument is accepted, the case for unfairness is then clearly made, the unfair nature of the exploitative allocation being inherited, as it were, from the initial unjust distribution. But ideologues of capitalism have argued that the initial distribution of unequal ownership could have arisen (even if actually it did not) in morally respectable ways: as a result of differences in the rates of time preference, or in risk propensities, or in entrepreneurial abilities and skills, or as a result of unanticipated luck. Such a clean beginning would establish the cogency of capitalism as a system against which there is, so they say, no principled ethical argument-although there may be specific arguments against specific historical instances of capitalism. Capitalist ideologues argue from two fronts: that it is necessary to recognize and reward these differential attributes of people 70 The Morality of Exploitation differentially in order for the good attributes to emerge and be available for society, and that the holders of these attributes deserve the fruits that thereby accrue to them in a private ownership system. These arguments are not consistent either with economic theory or with the history of developed capitalism, a history replete with the establishment of fortunes by wars, or through the exercise of monopoly power, or as the consequence of market imperfections. At the most general level, neoclassical economists maintain that (at least in a certain class of economies) all income generated can be viewed as the return to some factor. But it is unclear whether return means an income which that factor must receive to continue to offer its services, or an income that should, on ethical grounds, go to that factor. There is, furthermore, the distinction, not usually made in neoclassical analysis, between the factor and its owner. One cannot in general divide the pie produced by capital goods and labor up into two parts, one of which was produced by labor and one by capital. Nor, even if one could, is it clear that the part produced by the capital should go to the capitalist and the part produced by labor should go to the laborer. The Marxist analysis avoids the notion of returns and argues instead that the cooperation of labor and physical capital and land produces an income that is larger than the income needed to reproduce the factors used up, and is even larger than the income needed to get people to offer those factors for use. There is a genuine surplus, and society must adopt some rules for distributing it. Under capitalism, the distribution of the surplus is decided on the basis of property rights in the ownership of the initial factors. Workers and capitalists may bargain over the property rights in the surplus to which their factor contribution entitles them. The state

takes some of the surplus through taxation; and the tax laws may also be the consequence of interclass bargaining, the state acting as an agent representing one of the classes, or perhaps as an independent agent with its own interests. But the deep justification of capitalism must be based on a justification, either on pragmatic (efficiency) grounds or on ethical grounds, of the initial distribution of ownership in the means of production, a distribution that sets the initial conditions for interclass bargaining over the surplus. There is one particularly opportunistic argument that defenders of unequal ownership make: "What's good for General Motors is good for the country." In other words, capitalists must have the prospect of a sufficiently high profit rate in order to invest (rather than to conThe Morality of Exploitation 71 sume, presumably, or to take their capital elsewhere). So for workers to have jobs it is necessary that profits exist and be high. Neither liberals nor conservatives have a principled disagreement with this statement; they disagree, instead, over the rate at which capital can be taxed before it "goes on strike." Conservatives say, Not very much, and liberals say, Quite a lot. Both of these non-Marxist political viewpoints accept the necessity of returns to capitalists in principle. But the Marxist position need not argue that taxes on profits or wages can be increased substantially under capitalism; it need not favor policies that would lower the rate of profit and cloud an otherwise good investment climate. It can accept the necessity of high profits for the viability of capitalism and use that to argue against the Suitability of an economic system based on private ownership of the means of production. If those who control the capital stock have to be bribed in order to make it available to society, is that an argument for bribing them or an argument against the system that makes such bribes necessary?

6 The Emergence of Class

In the models of Chapter 2, classes emerged, first, in an inessential way when wealth was equally distributed, but then in an essential way when the capital stock was unequally owned. In the second model of that chapter (Section 2.3), three classes existed: capitalists, proletarians, and peasants. In this chapter, I will elaborate more formally on the emergence of class as a consequence of the unequal ownership of the means of production, and I will discuss the relationship of class to both exploitation and wealth. In the interest of simplicity, I will use the one-dimensional com model introduced in Chapter 3. Finally, I will evaluate what the description of an agent's class adds to our understanding of positive and normative issues. 6.1 A Definition of Equilibrium for a Corn Model with Assets Consider an economy that consists, as before, of N agents and a technology for producing com, {a,L}. This model, unlike previous models, contains an explicit specification of the initial com endowment of the ith agent. This endowment, cui, varies from agent to agent. Each agent, as before, is endowed with 1 unit of leisure, which can be converted into labor. And each agent has subsistence preferences: each wishes to work only so long as is necessary to produce an income sufficient to purchase an amount b of com, which I will take to be his subsistence requirement. He will not allow himself to deplete his initial com stock of cui. Under what conditions will this economy reproduce itself and satisfy each agent's needs? The Emergence of Class 73 Suppose there is a labor market. Because only relative prices matter, the wage is normalized at I, and the price of corn is p. An agent can engage in three kinds of activities: she can work up her own com stock, using her own labor to produce com; she can hire others to work up her corn stock, paying them wages; or she can sell her labor power to others at the going wage and work up their corn stock. For agent i, let Xi be the amount of com she produces by working up her own seed com; let yi be the amount of com produced by those whom she hires to work up her seed com; and let Zi be the amount of labor she sells on the labor market. Then her total net revenues will be (p - pa)xi + [p - (pa + L)]yi + Zi. The first term is equal to the net revenues she receives from operating the com activity herself; that is, revenues remaining after paying for the com input she uses. The second term is the net revenues she receives from hiring labor; that is, revenues remaining after paying wages and paying for the capital stock used in the process. The third term is her wage income. The subsistence requirement is that agent i earn sufficient net revenues to purchase her com consumption bundle, that is, (p - pa)xi + [p - (pa + L)]yi + Zi 2: ph. (6.1) What constraint does the agent's initial ownership of the capital stock place on her? Assume that there is a labor market in this economy, but no capital market. No agent can borrow, although she can sell her labor power. Thus, agent i is constrained to choose levels of com production that can be supported by the capital she has available to advance, given her initial stock. I will assume that she need not advance the wage payments to the

labor she hires at the beginning of the period-instead, they are paid at the end of the period out of revenues. (This assumption differs from the one I made in Chapter 4, and I make it here only because it simplifies some of the calculations.) Under this assumption, the amount of finance capital agent i must have in order to operate corn production at level Xi herself and hire others to operate it at level yi is paxi + payi. Her capital constraint is paxi + payi !5 poi. (6.2) Furthermore, agent i is constrained not to use more labor than she possesses: (6.3) 74 The Emergence of Class The first term in (6.3) is the amount of labor agent i expends on her own com stock, and the second term is the amount of labor she sells on the labor market. The right-hand side of (6.3) is her labor endowment. The goal of agent i is to minimize the labor she expends subject to producing a subsistence income and subject to satisfying her capital constraint (6.2) and labor constraint (6.3). Her utility maximization problem can therefore be written as, choose Xi, yi, and Zi to minimize Lxi + Zi subject to (p - pa)xi + [p - (pa + L)]yi + Zi ~ pb paxi + payi :s; pwi Lxi + Zi :s; 1 (6.1) (6.2) (6.3) and subject to the constraint that the variables Xi, yi, and Zi are nonnegative. Call this optimization problem for the agent i, (Pi). In this economy there are N agents, each of whom is trying to solve a program of the type (Pi). Such an economy is in equilibrium if the markets dear. In other words, a wage-price of com, p, will equilibrate the economy if it allows the markets to clear. There are two markets: one for com and one for labor. The com market clears if the net amount of com produced suffices to meet the demand for com, which is Nb; and the labor market clears if the total supply of labor offered for sale by the N agents equals the total demand for hired labor by the N agents. To represent these conditions, it is first convenient to define where x is the total amount of com, gross, produced by agents working for themselves, y is the total amount of com produced by agents who are working as hired labor, and z is the total labor supplied on the labor market. The total amount of com produced in this economy, without taking account of replacing the seed stock, is (x + y); the net com production is (1 - a)(x + y). Hence, the requirement that the supply of com, net of replacement, meet the demand for com is (1 - a)(x + y) ~ Nb. (6.4) The Emergence of Class 75 As defined above, the total supply of labor offered for sale is z; and the total demand for labor by hirers is Ly. Thus, the labor market clears if Ly = z. (6.5) Finally, the production plan of this economy must be feasible, which is to say that the total inputs society has available, w == ~wi, suffice to supply the inputs for the outputs generated; that is, a(x + y) :5 w. (6.6) Definition 6.1 Reproducible Equilibrium A price for corn of p(and a wage of 1) will be said to be a reproducible equilibrium for this economy if the solutions {(Xi,yi,Zi)} to the individual optimization programs (Pi) generated by this price are such that the aggregate quantities x, y, and z satisfy Equations (6.4), (6.5), and (6.6). To summarize, each agent begins with some initial endowment of seed corn. There is a corn market and a labor market. Facing a price for corn and a wage, each agent decides on his best strategy, which will enable him to earn the income necessary for purchasing his required corn consumption while not running down his seed corn stock. This strategy is his labor-minimizing one, because I have assumed that the agents have subsistence preferences. An equilibrium is a price of corn, relative to the wage, having the property that, if each agent pursues his self-interest in this way, markets clear; every individual plan can be realized, and society can reproduce its capital stock. 6.2 Class Formation As a consequence of their optimizing behavior and their initial endowments, agents end up in different class positions. Hence, by this mechanism, classes are

formed. Facing a price of corn p, an agent solves his program (Pi) with a solution (Xi,yi,Zi). Suppose, for example, that for him the optimum involves setting Xi = 0 = Zi (neither does he himself work up any of his seed corn, nor does he sell labor power) but yi > 0 (he hires labor 76 The Emergence of Class power to work up his seed capital). He can be represented as having a solution vector of the form (0, + ,0), where a "0" in a certain place indicates that he does not engage in that kind of activity and a "+" indicates that he does. The agent in this example is a pure capitalist, because he optimizes by hiring labor power only; he neither sells labor power nor works for himself. Suppose that another agent's solution to his program involves setting Xi = ° = yi, but Zi > O. Such a person is represented as having a solution (0,0, +): he is a proletarian, who optimizes by selling labor power only-he neither works for himself nor hires labor power. Definition 6.2 Class Position The class position of an agent is defined by the particular array of D's and +'s in the optimal solution (Xi,yi,Zi) to his program (Pi) at a reproducible equilibrium. In principle, there are eight possible ways of arranging D's and +'s in the three positions of (x,y,z). But one of them can be ruled out immediately: everyone must earn some income to purchase his consumption bundle in this economy, because no one is willing to eat into his capital stock; so the class position (0,0,0) will never occur as a solution. Furthermore, it is not difficult to show that no agent will ever be required both to sell labor and to hire labor at the same time in order to optimize-every agent has an optimal solution in which he does not trade as both a supplier and a demander of labor. This rules out the class positions (0, + ,+) and (+ ,+ ,+) as redundant in a parsimonious representation of the class structure of this economy. There remain five possible class positions; and they all can occur and should be named (Table 6.1). I have assigned both industrial and agricultural names to these classes, for the value these may have as historical mnemonics. The reader should verify that each of these class positions corresponds naturally to the name that identifies it. Table 6.1 Class positions in a corn economy Class position (Xi, yi, Zi) (0, +, 0) (+, +, 0) (+, 0, 0) (+, 0, +) (0, 0, +) Class name in an industrial economy Pure capitalist Small capitalist Petty bourgeois artisan Semiproletarian Proletarian Class name in an agricultural economy Landlord Rich peasant Middle peasant Poor peasant Landless laborer The Emergence of Class 77 How is an agent's class position related to his wealth and how is it related to his being either exploited or exploiting? The important idea to keep in mind during the following analysis is that a person's class position is not exogenously given. Rather, it emerges as a consequence of his optimizing procedure, which is to maximize his utility (in this case, minimize labor expended subject to a subsistence constraint) given his initial endowment. Classes emerge endogenously as a characteristic of agents in the equilibrium of the economy. 6.3 Class and Wealth In this economy wages are paid at the end of the period, so the capital advanced to produce 1 unit of com is just pa. The equation defining the profit rate is 1T = P - (pa + wL) pa' or p = (1 + 1T)pa + wL. (6.7) Equation (6.7) differs from the formulation of the profit rate in Chapter 4 only in that investment capital does not include wages advanced. As I mentioned there, it is a matter of convention whether one chooses to view wages as paid in advance out of capital or at the end of the production period out of revenues, for the results with which I am concerned do not change. Class is related to wealth in the way one might conjecture: the greater an agent's initial endowment of com, the higher he is on the class hierarchy listed in Section 6.2. The richest agents become pure capitalists and the poorest become proletarians.

Theorem 6.1 Class-Wealth Correspondence The greater an agent's initial endowment of com, the "higher" he is on the class hierarchy of Table 6.1. Proof. 1. Let the profit rate, which I assume is positive, be 1T. At the price p, the value of an agent's initial wealth is (6.8) 78 The Emergence of Class If an agent is sufficiently wealthy, then he clearly can generate enough revenue, simply from hiring others to work for him, to end up with profits of at least pb, which is what he requires. Thus, all those whose wealth is sufficiently great will only hire others; they will be in the class of pure capitalists, as they will neither sell labor power nor work for themselves. This establishes that those at the top of the wealth hierarchy belong to the class (0,+,0), as Theorem 6.1 claims. 2. It is similarly clear that the agents who are pure proletarians are precisely those who own zero corn at the beginning. For if an agent had some initial wealth, he could derive profits of 7TWi from hiring others to work it, thus reducing his own necessary work time. It would be wasteful not to use capital he owned. No such agent would, therefore, be a proletarian. Conversely, if an agent owns no corn but only labor power, then his only source of revenues is to sell his labor power; and he optimizes by taking the class position (0,0,+). Hence, those in the class position (0,0,+) are precisely those with zero wealth. 3. It remains to rank by wealth agents who optimize by becoming members of the three "middle classes." These are agents who have some wealth. Let an optimal solution for such an agent i be (Xi,yi,Zi). An agent with some wealth, but not enough to be a pure capitalist, must necessarily engage all his capital in production to optimize, for otherwise he would make more revenue by hiring some labor to operate his unused capital, because 7T > O. Therefore, constraint (6.2) of the agent's program is an equality, and dividing through by pa yields . . wi Xl + yl =_. a 4. Constraint (6.1) of agent i's program can be rewritten as p(l - a)(xi + yi) + (Zi - Lyi) = pb. Substituting from (6.9) into (6.1') yields p(l - a)wi _ + (Zi - Lyi) = pb. a From (6.10), a rearrangement of terms gives [(1 - a)wi] Zi - Lyi = P b - a ' (6.9) (6.1') (6.10) (6.9') from which it follows that Zi - Lyi < ° if and only if Zi - Lyi = ° if and only if Zi - Lyi > ° if and only if The Emergence of Class 79 · ba w'>– 1 - a · ba w'=– 1 - a · ba w'<– 1 - a (6.11a) (6.11b) (6.11c) 5. From the inequalities of (6.11), the rest of the Class-Wealth Correspondence can be derived. Suppose Zi - Lyi = 0; that is, agent i optimizes by selling exactly as much labor power as he hires to work on his own capital stock. Now observe that he could fire all his hired labor and instead work up the capital they were using himself in the same amount of time (by hypothesis), and he would just break even. He would save wages paid out in amount Lyi by firing them, and he would lose wages paid to him in amount Zi by taking himself off the labor market; and these two amounts are equal, by the supposition of this paragraph. Thus, he could just as well operate all his capital himself, neither hiring nor selling labor; and he would make the same revenues for the same amount of labor expended. This shows that if . ba w'=– 1 - a' (6.12) then agent i is a petty bourgeois artisan; he has a solution to his program of the form < + ,0,0). And, according to (6.11b), the wealth given by (6.12) is precisely the wealth associated with Zi - Lyi = 0. 6. Now suppose Zi - Lyi < 0. Then agent i is hiring more labor power than he expends on the labor market. He cannot, therefore, fire all his hired labor and simply replace them with his own labor in the same amount. If he takes himself off the labor market, he can fire some of his hired labor, but to break even in terms of labor expended and revenues earned he must continue to hire labor in the amount (Lyi - Zi). Therefore, such an agent is in the class < +, + ,D)-he can optimize

by working on his own capital stock and hiring others. According to (6.11a), this agent has a wealth . ba w' > –. (6.13) 1 - a 7. Finally, there is the agent whose optimal solution is characterized by Zi - Lyi > 0. Such an agent can fire all his workers and can 80 The Emergence of Class himself work up the capital stock they were employed upon, but he must still supply wage labor to earn the revenues he was making before. He must continue to sell some of his labor power on the labor market, and his class position is therefore (+,0,+). According to (6.l1c), this agent has wealth . ba w'<–. I-a (6.14) 8. The arguments in paragraphs 5, 6, and 7 establish that agents in the three middle classes are ranked according to their wealths; only agents with wealth exactly equal to bal(1 - a) are petty bourgeois artisans, and those with higher wealth must hire labor to optimize while those with lower wealth must sell labor to optimize. This demonstration establishes the Class-Wealth Correspondence. - Table 6.2 summarizes the relationships between class and wealth given in the proof of Theorem 6.1. Thus, only the proletarian has nothing to sell but his labor power-and nothing to lose but his chains. I must reiterate that this relationship between class and wealth is not one that is postulated initially; it emerges as a consequence of economic activity. Agents choose their own class position-not willingly, but under constraint, as a consequence of optimizing, given their initial endowments. Theorem 6.1 demonstrates that the relationship between class and wealth need not be postulated-it can be derived under the assumption that maximizing agents confront one another Table 6.2 Class-Wealth Correspondence Class position (Xi, yi, Zi) Name Wealth (0, +, 0) Pure capitalist . b w'~- 1T (+, +, 0) Small capitalist -b >w. '>b-a - 1T I-a (+, 0, 0) Petty bourgeois artisan w.'=b-a - 1 - a (+, 0, +) Semiproletarian ba . –>w'>O 1 - a (0, 0, +) Proletarian wi = 0 The Emergence of Class 81 in a system of private property and markets. The phenomena of class and exploitation are not residues of market imperfections but are the consequences of a "perfect" market system, where agents are free to choose, constrained by their initial endowments of wealth and labor power. As a historical note, it is worth mentioning that when Lenin wrote The Development of Capitalism in Russia he discussed the class structure in the Russian countryside: In the peasant mass of 97 million, however, one must distinguish three main groups: the bottom group-the proletarian and semi-proletarian strata of the population; the middle-the poor small peasant farmers; and the top group-the well-to-do small peasant farmers. We have analyzed above the main economic features of these groups as distinct class elements. The bottom group is the propertyless population, which earns its livelihood mainly, or half of it, by the sale of labour power. The middle group comprises the poor small peasant farmers, for the middle peasant in the best of years just barely manages to make ends meet, but the principal means of livelihood of this group is "independent" (supposedly independent, of course) smallscale farming. Finally, the top group consists of the well-to-do small peasant farmers, who exploit more or less considerable numbers of allotment-holding farm labourers and day labourers and all sorts of wage-labourers in general. (Lenin, 1899 [1974, p. 508]) Richer than all these peasants, and not discussed in this paragraph from Lenin, were the landlords, who did not work at all by virtue of owning so much land. Similarly, Mao Zedong, in his pamphlet "Analysis of the Classes in Chinese Society," wrote: Although both the overwhelming majority of the semi-owner peasants and the poor peasants belong to the semi-proletariat, they may be further divided into three smaller categories, upper, middle and lower, according to their economic condition. The semi-owner

peasants are worse off than the owner-peasants because every year they are short of about half the food they need, and have to make up this deficit by renting land from others, selling part of their labor power, or engaging in petty trading. In late spring and early summer when the crop is still in the blade and the old stock is consumed, they borrow at exorbitant rates of interest and buy grain at high prices; their plight is naturally harder than that of the owner-peasants who need no help from others, but they are better off than the poor peas82 The Emergence of Class ants. For the poor peasants own no land, and receive only half the harvest or even less for their year's toil, while the semi-owner peasants, though receiving only half or less than half the harvest of land rented from others, can keep the entire crop from the land they own. The semi-owner peasants are therefore more revolutionary than the owner-peasants, but less revolutionary than the poor peasants. (Mao, 1926 [1974, pp. 16-17]) Mao refers to borrowing and lending, which is not part of the model of this chapter-but I will show later that his identification of borrowing with the selling of labor power and lending with the hiring of labor power is borne out. Moreover, he makes some sociological observations about the revolutionary nature of the peasantry as a function of their wealth, a topic that I have not discussed. The salient point is that the model of this chapter seems to capture aspects of historical observation. Textual analysis of Lenin's statement reveals that he is discussing the lower four classes in the five-class hierarchy of my model, whereas Mao discu.sses only the bottom three. He does not make explicit mention of rich peasants who systematically hire labor, or lend money, or rent land to others. 6.4 Class and Exploitation I have identified class position with wealth in an unambiguous way. But how is class position related to exploitation? Theorem 6.2 Class-Exploitation Correspondence Agents who optimize by placing themselves in a labor-hiring class are exploiters, and agents who optimize by selling labor are exploited. Proof. Consider the agent who has wealth that puts him in the petty bourgeois artisan class; his wealth (Equation 6.12) is wi = ba/(l - a). He must utilize all his capital, for otherwise he could earn more revenue by hiring some labor to use his excessive capital and thereby reduce his own work time further. Therefore, if his optimal solution is (xi,O,O), it must be the case that . . ba ax' = w' = – or 1 - a' (6.15) The Emergence of Class 83 . b X, = -1 –a · (6.15') Hence, the amount of time he works is . bL Lx' = – = Ab = SNLT 1 - a ' (6.16) the last equation following because the labor value of corn, A, is equal to L/(1 - a). Equation (6.16) says that agent i works just socially necessary labor time. Now consider an agent j, who is richer than agent i. By Theorem 6.1, agent j must be in a labor-hiring class; and an agent who is richer than agent i will work less time than i works, because his object is to minimize time worked subject only to his wealth constraint and the subsistence constraint. Thus, agent j works less time than Ab and is consequently an exploiter. Similarly, consider an agent k, who is poorer than agent i; agent k will be in a labor-selling class, by Theorem 6.1, and will work more time than Ab. Hence, k is exploited. Thus, every agent in a labor-hiring class works less than the socially necessary labor time, and every agent in a labor-selling class works longer than the socially necessary labor time. This establishes Theorem 6.2 .• Both the exploitation and class status of an agent emerge as endogenous characteristics of agents in the equilibrium of this economy; they are not postulated from the start. Hence, the Class-Exploitation Correspondence is not an obvious fact, because it relates two properties of an individual, both of which emerge as the consequence of economic activity. In the one-good

model, Theorem 6.2 is very easy to prove; in a model with many goods, it remains true but is more difficult to prove. Furthermore, the characterization is not quite so neat. In a model with many goods (like the one of Section 4.3), there is a range of wealths associated with being in the class (+,0,0), not just one number, as there is here. The generalization of Theorem 6.2 to many goods states that any agent in the top two classes is an exploiter and any agent in the bottom two classes is exploited, but it is not the case that all agents in the middle artisan class are exploitationneutral, as in the one-good model. The precise identification of exploitation status with class status, as shown here, is an artifact of the onegood model. 84 The Emergence of Class With Theorems 6.1 and 6.2 I have established a wealth-exploitation correspondence. Table 6.2 shows that any agent whose wealth is greater than a certain amount [Wi> ba/(l - a)] is an exploiter and any agent whose wealth is less than a certain amount [wi < ba/(l - a)] is exploited. In this chapter I have adopted two major simplifications that one might wish to relax in a more general model. First, one should allow for an economy with many goods; second, one should allow for agents to have more complicated preferences than the subsistence preferences they have in this model. And it is necessary to consider how to define exploitation when people have more complicated preferences. Nevertheless, when the model is generalized in this way, Theorem 6.2 remains true. Suppose people have various preferences over goods and leisure, they engage in economic activity to earn income, and they purchase goods. In this case the general definition of exploitation is as follows: an agent is exploited if the labor he expends in economic activity is greater than the labor that is embodied in any bundle of goods he could purchase with his revenues, that is, if any commodity bundle within his budget embodies less labor than he expended. Similarly, an agent is defmed as an exploiter if all bundles of goods that can be purchased with his total revenues from production embody more labor than he expended. This definition allows for the possibility of a significant group of agents who are neither exploited nor exploiters, because the revenues they earn from production enable them to buy a commodity bundle embodying just the amount of labor they expended (although they will not necessarily purchase just that bundle). The Class-Exploitation Correspondence theor,em states that any agent who optimizes by being in a labor-hiring class is an exploiter and any agent who optimizes by being in a labor-selling class is exploited. This is the generalization of Theorem 6.2, and it remains true in the framework of arbitrary preferences and many goods. Does the Class-Wealth Correspondence remain true with general preferences and many goods? Not always. If preferences of agents are bizarre in a certain way (see Chapter 9), then the relationship between class and wealth can fail. This happens only for preferences that are quite unusual. When it happens, the relationship between wealth and exploitation fails as well, for wealth is related to exploitation status by virtue of the class-wealth and class-exploitation correspondences. The consequences will be discussed in Chapter 9. The Emergence of Class 85 6.S The Significance of Class Classes are important in the Marxist theory of historical materialism; class struggle is the midwife of social revolution, the instrument by which property relations are transformed in radical ways-from feudalism to capitalism, from capitalism to socialism. Now that a theory of class formation has been formulated, it is possible to comment briefly on why classes might be interesting and why class struggle is apparently so prevalent, at least in the Marxist theory of history. Theorems 6.1 and 6.i immediately suggest two answers to the question, “Why is there class struggle?” First,

the fight of the working classes against the capitalist class may just be a fight of poor against rich, a fight against the consequences of unequal initial distribution. This position is suggested by the Class-Wealth Correspondence. Or perhaps there is some underlying reason why the exploited should fight the exploiters-this position is associated with the Class-Exploitation Correspondence. There is a third factor that might motivate class struggle: conflict between the dominated and those who dominate. I refer to the domination by the employer of the worker at the point of production, the social relations in the workplace, in which the worker's subservience to the boss is enforced by various extraeconomic means, which I referred to earlier. These three explanations can be labeled, respectively, the wealth, exploitation, and domination accounts of class struggle. How sensible is the explanation that class struggle arises by virtue of the association of class with exploitation as such? That is, do the exploited classes fight the exploiting classes because they can only purchase consumption bundles embodying less labor then they expended in production? I find this account unconvincing. One of the central points of Chapter 4 was that relations of exploitation are obscured by commodity relations and the social division of labor under capitalism. Workers are not so conscious of their exploitation under capitalist property relations. They may feel unfairly taken advantage of, but not by virtue of comparing the socially necessary labor time they consume in goods with the labor they expend. Theorem 6.1 says that class is a good statistic for exploitation, but one cannot use exploitation as an explanation of class struggle unless it is perceived by the workers as an injustice they wish to erase. It is hard to make this case, when one simultaneously wishes to claim that capitalist relations obscure relations of exploitation. 86 The Emergence of Class Of course, to the extent that workers fight for a higher wage, or for a shorter length of the working day for the same wage, they are de facto fighting against exploitation, for victories in those struggles will lower the rate of exploitation (at least in the short run). But in those cases workers are fighting not against their exploitation as such, but because they want a higher real income or more humane conditions of work. It is much more likely that workers struggle against capitalists in part because of the methods of control that are used against them in the workplace, to extract their labor. This struggle takes the form of fighting about the conditions of work. Fights against speedup and the methods used to implement it are an example. The fight against domination has been institutionalized in the American trade union movement, with careful delineation of job rules that prevent the employer from having the freedom to use workers in arbitrary ways; these rules are the consequence of an attempt to limit the arbitrary power of employers to extract labor from labor power on the job. I do not claim that all struggles for better conditions on the job are struggles against domination; but capitalists do use extraeconomic coercion of workers to squeeze more labor out of a day's labor power, a squeezing that often has exhausting and harrowing consequences for the worker. Why is there extraeconomic coercion, or domination, by foremen over workers on the job? The ultra-neoclassical explanation is similar to the North-Thomas explanation for feudal coercion. Recall that the serf was said to have implicitly agreed to a contract with the lord under which he was forced to work, and public goods that otherwise would not have been available were provided. A weaker version of the explanation claims that even if the serf did not so agree, provision of otherwise unavailable public goods was the upshot of feudal coercion. Similarly, if the worker does not work on the job, then profits fall and workers are fired. Thus, the

story goes, workers implicitly contract with employers to have themselves coerced on the job, because otherwise in their myopia they would not work as hard as is necessary to produce the revenues sufficient to pay the wages they want. I do not think the implicit contract explanation of job-site domination is credible. Rather, such domination exists because of the impossibility of writing and enforcing a perfect contract for the exchange of labor for the wage. What the capitalist buys is the worker's capacity to The Emergence of Class 87 work for a day. But it is not easy to delineate his tasks precisely nor to enforce their execution. This difficulty gives rise to a range of acceptable performances: naturally, the capitalist tries to get workers to perform at one end of this range, and if that involves pain and tension, the worker resists. There is also another explanation offered by Marxists for jobsite domination, in which its place is more central in the maintenance of capitalist property relations. Such domination is said to be a method by which the capitalist exerts power over the worker and demoralizes her, keeping her in a subservient position from which it becomes difficult to challenge either the individual boss through collective action on the job or the capitalist system more generally. Domination breaks down the worker's ability and will to resist (a claim that I do not find compelling), and because of that its role is much more central in the maintenance of capitalism than the one assigned to it in the imperfect-contract argument just presented. Is it plausible to argue that class struggle is a direct attack on the wealth differential of capitalists and workers? Certainly the most revolutionary struggles are just that-the working class supporting a call for a massive redistribution of private property or an end to the institution of private property. In our times, this call is typical of the great socialist revolutions. One Soviet slogan of 1917 was "Bread, Land, and Peace." "Land" meant redistribution of land to the peasants. A Chinese slogan was "Land to the tiller." Indeed, socialist revolutions have gone much further than redistributing private property; they have abolished private property in the means of production. In less generalized struggles, such as strikes, it is not plausible to argue that class struggle attacks the wealth differential of capitalists and workers. Trade union struggles do not call for such a redistribution, they only call for better wages and working conditions. Indeed, Marxists have often characterized trade union class struggle as "economist," because it is limited to relatively parochial economic demands instead of taking on the basis of the inequality, the system of private property in the means of production. This is not to say that Marxists oppose trade union struggles, but that they do not view them as necessarily leading to the revolutionary transformation that would be necessary to end the class system and the inequality that lies at its foundation. 88 The Emergence of Class The working class may sometimes become an important historical actor by virtue of the consciousness created among workers of their power, consciousness that arises as a result of the conditions of capitalist production. The factory system brings together many workers and teaches them to work in a disciplined, coordinated fashion in one place. It creates both relations of cooperation among workers and a conception of their power that were lacking in the small-scale private production characteristic of the putting-out system or of artisan work. Having this consciousness, workers see the possibility of changing their conditions through collective action. According to this explanation of class struggle, the combination of having "nothing to lose but one's chains" and being educated with respect to the potential collective power of the class is a by-product of the nature of capitalist production and enables the working class to fight. Thus, although capitalists may

dominate workers in order to demoralize them, the demoralization does not always succeed because of the nature of the industrial (or capitalist?) labor process, which reveals to workers their power and potential. Class struggle takes place only when the members of the working class see a potential for victory. The costs of fighting are too great for an individual, even in a collective mass where he is relatively anonymous, unless there is some expectation of victory. (I do not refer here to the free-rider problem of collective action, in which it is maintained that even if conditions are very bad it is not in the interest of any individual to join a collective struggle. That is a distinct theoretical issue.) It is a classic observation that the absolutely poorest-the unemployed and completely marginalized members of society-are not the most revolutionary. People must have some vision of their power, and this is provided, in the Marxist account, by their class relation to one another, the discipline and cooperation that is a byproduct of capitalist production. Marginalized individuals do not achieve this vision because of their isolation from the cooperative enterprise of capitalist production. There are, then, a variety of sociological and psychological reasons, as well as economic ones, for believing that classes, as 1 have defined them, are important social actors. The economic reason is chiefly the relation of class to wealth. The sociological and psychological reasons are the relations of class to domination, power, discipline, and consciousness. Consciousness, in turn, is determined by the common experiences that members of the same class have, both in production and in consumption. The Emergence of Class 89 6.6 Exploitation Deemphasized Two characteristics of agents have emerged as important to positive and normative concerns: wealth and class. What is surprising is that exploitation, in the technical sense, seems to have fallen out of the picture. Differential initial wealth is of normative interest, as Chapter 5 emphasized, because it may well be the central injustice of a capitalist system, by virtue of the unequal opportunities that it creates. Differential wealth is also of positive significance, to the extent that it explains social rebellion and the transformation of systems of property. But it is more likely that differential wealth works indirectly through the formation of classes. Class is of interest as a positive statistic of class struggle, and hence of social transformation; the reasons for class struggle may not be directly related to the wealth associated with class position but with the consciousness that comes about by virtue of common class membership. But although exploitation is related to both class and wealth, it does not appear to be of direct interest from either the positive or the normative viewpoint. If workers are unfairly taken advantage of, it is not because they are exploited (in the technical sense) but because an unfair wealth distribution produces that exploitation as a by-product; and if workers unite in class struggle, it is not because they are exploited as such, but for the other reasons I have given. Exploitation, in the technical Marxist sense, appears to be an unnecessary appendage to our basic concerns, both ethical and positive. To put this bluntly, some central concepts of classical Marxist economics- the labor theory of value and exploitation-seem not to be of fundamental interest. Analysis with economic tools reveals that much work remains for Marxist ethics and for sociology and history, the first to study the moral legitimacy of private property in the means of production, the second to study the usefulness of class as an explanation for the formation of attitudes and preferences and, ultimately, for the collective action that transforms society. What the economic analysis shows is that class position can be explained endogenously, as the consequence of initial differentiation in wealth, and that the technical

notion of exploitation is closely related to the two more fundamental measures, class and wealth. In Section 9.2 further evidence will be presented for the position that exploitation (always in the technical Marxist sense) does not provide the best measure of the injustice associated with differential ownership of the means of production.