1

On Reading Marx: Method

Marx's philosophical and methodological presumptions are unfamiliar to many readers, and this unfamiliarity leads to unnecessary misreadings of Marx, especially to failures to locate his statements properly in terms of level of abstraction and connection to earlier texts. In this chapter I shall point out a few important characteristics of Marx's way of thinking and writing in an attempt to forestall such misreadings.

A Historical and Changing Reality

Marx conceives of the social reality he is analyzing as a process that evolves in response to its own internal contradictions. In other words, the phenomena he discusses cannot be understood independently of the history that produced them. This approach contrasts with the view that phenomena will tend to reassert themselves regardless of historical context. He sees the relations he is studying as being in a constant process of change, not just unchanging elements undergoing some rearrangement. Thus Marx's aim is not to state universal principles that explain human and social interaction once and for all but to understand the regularities that govern the changes in specific social formations. In fact, those features of human life that do appear to be universal and can be attributed to "human nature" or to the existential situation of human beings are of secondary interest to Marx. He tries to find those aspects of a social situation that uniquely identify it and make it specific in historical terms. In the introduction to the *Grundrisse*, Marx (1939, p. 85) makes this point explicitly in relation to the category of production:

> [Some] determinations will be shared by the most modern epoch and the most ancient. No production will be thinkable without them; however, even though the most developed languages have laws and characteristics in common with the least developed, nevertheless, just those things which determine their development, i.e. the elements which are not general and common, must be separated out from the determinations valid for production as such, so that in their unity . . . their essential difference is not forgotten. The whole profundity of those modern economists who demonstrate the eternity and harmoniousness of the existing social relations lies in this forgetting.

The Human Production of Knowledge

The knowledge people have of social reality is, for Marx, a human product and has no existence outside the activity of living human beings. Knowledge is a cumulative social creation, like a human city, and has many aspects of its production and reproduction: teaching, maintenance, critical correction, wholesale destruction and replacement, opening of new territories, and so on. In particular Marx does not think that knowledge exists somewhere "out there" in the mind of God or in a preexisting library and that human activity simply uncovers it. Human activity creates knowledge in the way that it creates art or products. This activity is social, in that every producer of knowledge begins with knowledge inherited from the past and works in a context of human beings reproducing and altering this knowledge in their own ways.

For Marx no production of knowledge occurs without active intervention in the world. People find out about the world by trying to change or control it (or, at the least, by trying to uncover its secrets through systematic observation), not by a process of abstract speculation. This view of knowledge as historical and changing entails a central role for the method of criticism—the sifting, questioning, and correcting of existing knowledge. Marx in this sense is not particularly interested in being "original." He wants to find the kernel of truth in the knowledge constructed by others. His criticism in this sense is positive—despite the sometimes scornful tone he adopts—in that he believes there is some truth, at some level, in every systematic expression of ideas and the problem is to discover what that truth and its level are.

Thus we must carefully distinguish between instances in which Marx is reporting or reworking ideas he receives from other thinkers and those in which he is proposing a corrected formulation. This care is especially important around central economic problems: the theory of value, which Marx takes largely from Ricardo and Ricardo's correction of Smith; the distinction between productive and unproductive labor, which Marx takes from Smith and gives a historical significance; and the theory of the tendency for the rate of profit to fall in capitalist economies, which Marx views as an accepted discovery of the classical economists and seeks to explain rationally within the context of his understanding of the dynamics of capitalist production.

There are important similarities of form between knowledge and reality in Marx's way of thinking. But it is important to recognize that he never identifies the two, neither along the Hegelian line of seeing reality as the product of thought itself nor along the empiricist line of seeing knowledge as a simple, unmediated reflection of reality.

The Structure of Knowledge

Marx adopts a great part of Hegel's analysis of the structure of human knowledge, a form he views as constant even though its substance is always changing. The basic elements of this structure are what Marx calls *abstractions* or *determinations,* ways of talking about aspects of reality that are separated from and purified of their relations to the whole complex of factors that make up the concrete instance. This idea of abstraction is common in the social sciences, although the specific abstractions that are viewed as relevant, and their status, differ greatly among various theoretical traditions. For example, Marx views "value," "labor," "money," and "commodity" as fundamental abstractions that are vital for understanding the historical specificity of capitalist production; and neoclassical economics sees "tastes," "technology," "resources," and the "market" as fundamental abstractions that are useful in understanding resource allocation in any human society.

The Layering of Determinations

Marx insists on the layering or ordering of abstractions or determinations in theory. For him knowledge is an analyzed mental construct made up of fundamental abstractions or determinations. These abstractions are developed and stated in a particular order and combined to reproduce important features of the real phenomenon in thought. He explains this process very clearly in the introduction to the *Grundrisse* (1939, pp. 100–101):

> It seems to be correct to begin with the real and the concrete, with the real precondition, thus to begin, in economics, with e.g. the population, which is the foundation and the subject of the entire social act of production. However, on closer examination this proves false . . . if I were to begin with the population, this would be a chaotic conception of the whole, and I would then, by means of further determination, move analytically towards ever more simple concepts, from the imagined concrete towards ever thinner abstractions until I had arrived at the simplest determinations. From there the journey would have to be retraced until I had finally arrived at the population again, but this time not as the chaotic conception of the whole, but as a rich totality of many determinations and relations . . . The concrete is concrete because it is the concentration of many determinations, hence unity of the diverse . . . Along the first path the full conception was evaporated to yield an abstract determination; along the second, the abstract determinations lead towards a reproduction of the concrete by way of thought.

This double motion is pervasive in Marx's writing. Thus *Capital* can be seen as a movement to reconstruct in thought the whole complex of capitalist social relations beginning from the simplest abstractions—commodity, value, and money—and eventually arriving at the most complex and distorted forms, for example, the stock market and crisis.

Importance of the Starting Point

Because Marx insists on the ordering of determinations, the starting point of an analysis becomes crucial in establishing the meaning of a theory. The same determinations may appear in very different theories with very different significance because they have a different relation to the whole structure of abstraction. For example, the idea that capitalist competition tends to equalize the rate of profit on capitals engaged in different lines of production appears in essentially the same abstract form in neoclassical and Marxist economic theory, but the significance given to this tendency is quite different in the two theories. In Marxist theory this tendency is an example of the deviation of the money price of commodities from their labor values, as we shall see in Chapter 6, and is an important part of the redistribution of surplus value through exchange relations; in neoclassical theory the equalization of the rate of profit is the core of the idea of efficiency in the allocation of resources achieved by competitive markets.

Modification of Fundamental Determinations by Later Ones

The recreation of a concrete phenomenon by invoking the layered determinations of theory in Marx's thought creates two potentially confusing effects. First, the addition of higher order determinations may produce phenomena that appear to contradict the fundamental determinations. For example, the higher order determination that the equalization of the rate of profit through redistribution of surplus value in exchange obscures the fundamental determinations that labor produces value and that surplus value corresponds to unpaid labor because in the higher order determination the surplus value appropriated by an individual firm may not correspond to the labor exploited by it. But this type of contradiction is only apparent; as long as the explanation is consistent with the structure of the theory, the fundamental determinations continue to be valid and important in the explanation and continue to operate in the more complex situation. This can be seen if the higher order determinations are removed and the fundamental ones allowed to operate without qualification. We do not view the fact that buildings do not fall to the ground as a contradiction of the law of gravity because it is precisely the law of gravity that allows us to understand why the physical properties of beams can hold the building up and because if those physical properties are altered the law of gravity does reassert itself in the collapse of the building.

The fundamental determinations often show themselves in the aggregate or average behavior of a system. Thus the origin of surplus value in unpaid labor may not be very apparent when we look at one capitalist firm, but it becomes much clearer when we look at the ensemble of all the capitalist firms. Fundamental principles often appear in the form of conservation principles that apply to a whole system. The labor theory of value appears at the level of the whole system of commodity production to be such a conservation law—value is produced by labor and conserved in exchange. This principle implies that the factors governing the production of value are quite different from those governing its distribution. Marx often fails to be explicit about the level of aggregation at which he is working. He frequently explains the aggregate behavior of a system by discussing a typical or average element of it. For instance, in the first three chapters of *Capital* he discusses the laws that apply to a typical, or average, commodity. These laws in fact apply to the aggregate of all social production and are unlikely to apply to any particular real individual commodity, which carries with it many peculiar higher level determinations. Likewise, in the whole first volume of *Capital* Marx talks about an average or typical capital, which is in fact the aggregate capital, or a scale model of the aggregate capital.

Self-Determination and Tautology

For Marx the abstractions that constitute a theory define each other. It is impossible to understand one of these abstractions outside the system comprising all of them. The idea of value, for instance, will turn out to comprise many aspects, including exchange value, money, and abstract labor. When we ask what value is, Marx will say it is the form labor takes in a commodity-producing society. When we ask what abstract labor is, Marx answers that it is the aspect of labor in a commodity-producing society that produces value. Thus the whole cluster of ideas concerning value constitute a self-determined system. This strikes some people as circular and tautological, a mere abstract spinning out of logical categories. Indeed, Marx himself comments on the dangers of an excessively "Hegelian" mode of presentation of his theory, in which the structure of ideas seems to construct itself.

It is important to realize that there is nothing illegitimate or irrelevant about Marx's way of thinking. The theory can be tested: the articulation of the concepts developed must be coherent and logical and the development must not be arbitrary or *ad hoc*. Even a well-constructed theory must pass a further test, namely, that its self-determined articulation actually corresponds to and illuminates some class of real phenomena. Marx can demonstrate logically (or dialectically) that in "commodity production" the relations of value, exchange value, and labor necessarily take a certain form. Nevertheless, we still have to be convinced that the society we want to study (probably our own) is in fact an instance of "commodity production," or "capitalist production." If the explanations we get out of Marx's theory seem strained or wrong or unhelpful, we would be justified in arguing that we are not in fact dealing with commodity production as Marx envisions it. The theory becomes tautological only if we begin to invoke *ad hoc* principles to save the fundamental determinations in the face of real anomalies.

In fact, all theories, including those of the physical sciences, have this self-determined character. In Newtonian mechanics, for example, the definitions of the concepts of force and mass are inextricably interdependent. The most important scientific statements about the world are neither tautologies nor statements of empirical fact but helpful theoretical relations that are self-determined and at the same time illuminate a fundamental relation in the world.

Explanation through the Ordering of Determinations

The basic activity of science lies in the explanation of phenomena. In Marx's terms a good explanation consists in locating the phenomenon in relation to the ordered set of determinations the theory proposes in such a way that the phenomenon is reproduced by the combination of the determinations of the theory while the most fundamental determinations continue to operate. Thus Marx's explanation of capitalist production and the origin of surplus value requires not only that the principles of the general theory of commodity and of value continue to hold in capitalist production but also that the appearance of a surplus value be accounted for. His explanation of interest and the interest rate must take as its basis the whole structure of the theory of capitalist production and surplus value and show how the interest rate emerges from the pressure of the development of capitalist profit-seeking.

Explanation, Determination, and Predetermination

When we see a concrete phenomenon, from Marx's point of view we ought to be able to explain it, that is, show its relation to an ordered structure of abstractions. In this sense Marx believes that reality is *determined,* that is, after-the-fact explicable in terms of a scientific theory. Furthermore, the fundamental abstractions of a theory, if they are correct, must continue to operate as long as the phenomenon in question retains its essential character. Marx sometimes refers to this necessity as "inevitability." It is important to recognize that neither of these positions, nor both taken together, implies that the concrete future is *predetermined.* After something has happened, all its determinations have in fact occurred and we have a chance of figuring out exactly what they all were (or enough of them to feel we understand what went on). But in the future we have no way of knowing all of the determinations that will be active, even if we do believe that we know *some* of them. Thus what actually happens must "inevitably" obey certain basic principles (whether they are principles discovered by physical or social science, for example, the law of gravity or the law of value). Such knowledge is of great use but does not enable us to predict the future and does not mean that the future is predetermined.

Laws and Tendencies

Marx uses the terms *law* and *tendency* to refer to the fundamental determinations of a theory. Thus the *law of value* refers to the necessary relations between value, labor, and money and to the conservation principles that arise from these relations. The *tendency for the rate of profit to fall* in capitalist economies, to take another example, is a reflection of the development of productive forces and technical knowledge through capital accumulation. From what we have already understood about Marx's thought, it is clear that we should not expect laws to be empirically confirmed in every concrete instance (for example, that every successive measurement of the average rate of profit should be smaller than the last one) because there may be intervening determinations of a higher order that qualify or even reverse the tendency at the lower level. This does not mean that the underlying tendency is absent or negated by the higher level determination because the higher level determination has to cope with or work through the lower level tendency. If a car has a tendency to swerve to the right when the driver brakes, this tendency is not erased when the driver compensates for it by steering left while braking. The car may seem to go straight as it slows down, but the tendency to swerve is still apparent to the driver in the effort he makes to compensate for it. In the same way, even if the tendency for the rate of profit to fall is offset, say, by the appropriation of surplus value from colonial possessions or neocolonial clients, the significance of the basic law is unchanged.

No Democracy of Determinations

In neoclassical economic theory the determinations that underlie a situation are usually thought of as operating simultaneously; that is, all the determinations are considered to be equally important in producing the final result. An example of this approach can be found in the neoclassical model of general competitive equilibrium. According to this model there is complete symmetry among all the simultaneous market-clearing conditions that define the competitive equilibrium. This way of thinking is foreign to Marx, who always approaches problems by working out a first approximation corresponding to the simplest or most basic determination and then modifying that solution.

Marx's approach is most striking in his treatment of the transformation problem—the problem of reconciling the labor theory of value with the principle of equalization of rates of profit among different sectors in capitalist production. Whereas modern treatments of this problem invariably approach it through the method of solving simultaneous equations, Marx simply analyzes the first-order consequences of trying to equalize the rate of profit without taking into account the feedback of the change in prices on the valuation of capital. Similarly, in Marx's treatment of the tendency for the rate of profit to fall, he identifies the possibilities that a rise in the rate of exploitation or a cheapening of elements of constant capital may retard a fall in the rate of profit due to the rise in the technical composition of capital as *countertendencies*. But some modern writers view these effects as two simultaneous aspects of the process of technical progress under capitalism.

Marx sometimes ends his analysis (especially in sections of *Capital* that he never finished) with the study of the first approximation and does not systematically introduce the higher layers of determination. Still, the transparency of the results he obtains by insisting on the ordering of determinations—in contrast to the inevitably ambiguous results of simultaneous methods—is a great scientific advantage.

Models and Theories

A word is in order on the problem of models and examples in Marx's work. As we have seen, Marx views theory as a complex and ordered structure of abstractions constructed as a way of knowing the world. Theory is itself a contradictory entity because any theory contains within itself the seeds of its own transformation, latent inconsistencies whose development will open the way to new understandings. A model, on the other hand, is a representation of a theory in which these contradictory elements have been suppressed, often to allow a mathematical representation of the ideas. Models are representations not of reality but of a theory. Each theory can generate a large number of models, each of which could claim to represent some aspect of the theory but none of which is identical with the theory. In fact, no model can be identical with the theory it represents precisely because it suppresses contradictions that have a real life in the theory. This approach also contrasts sharply with the methodological practice of neoclassical economics, where the main effort is in the investigation of the properties of abstract models and a central role is played by the problem of the relation of the model to reality.

Dialectics

The dialectical element in Marx's thinking and writing appears in two ways. First, Marx always strives to bring to the surface the dialectical process of critical transformation of ideas that is characteristic of all fertile theoretical work. Whereas many theoretical writers hide the process by which they arrive at their concepts—a process that surely involves the dialectical reworking of existing concepts—Marx brings this process into the foreground of his writing. For example, instead of simply stating the results of his thinking about the theory of money, Marx tries to reproduce the dialectical movement that carries us from the concept of the commodity to the concept of money. This is primarily a matter of style and presentation.

The second, deeper, effect of the dialectic in Marx's work lies in his understanding of the nature of reality and the nature of knowledge. Marx's vision of a reality that is a contradictory process of change rather than a static arrangement of preexisting entities exerts the most profound dialectical influences on his thought. Similarly, Marx accepts as a matter of fact the idea that human knowledge, as a human construct, has these same characteristics of motion and change. These characteristics of Marx's thought are disconcerting and disorienting to those who see knowledge as a collection of truths that never change once they have been discovered or revealed.

2

The Commodity: Labor, Value, Money

Systems of Production

All human societies produce to meet their material needs. In some societies products come into being as the property of particular agents who exchange these products through a process of bargaining. The key element in exchange is the practical control over the product held by the agents, who can refuse to part with it unless their terms are met by other agents. Marx calls products that exist in such a system of ownership and exchange *commodities,* and he begins *Capital* with a discussion of them. The theory of the commodity form of production provides a way of investigating certain aspects of systems of production organized by exchange.

Systems of production that do not have exchange relations at all or exhibit them only marginally are not commodity-producing systems. Many noncapitalist societies produce the bulk of their material needs entirely within household units—through hunting, gathering, and basic agriculture—and distribute these products entirely on the basis of household or family relationships or in accord with custom. Marx believed that among the Incas in Peru all products became the property of the king and were centralized under royal control and redistributed directly by the central regime. In theory, in a socialist or communist society products come into being as the property of the whole society (perhaps formally as the property of the State) and are distributed according to rules and policies established on a social level. In all these cases we can clearly see both production and distribution, but exchange of privately owned products is not the way distribution is accomplished.

Even in a commodity-producing society, an important part of production does not take a commodity form. Indeed, subsistence and household production play a major role in highly developed commodity systems. The preparation of a family meal and the maintenance of a family automobile by its owner are clearly products that go to meet material needs, but these products are not exchanged for other products and therefore do not take the form of commodities.

The Dual Nature of Commodities (*Capital 1.1.1*)

In a commodity-producing society the owner of a product can satisfy her material needs in two ways. She can directly consume the product, or she can meet her need indirectly by exchanging the product for another product to consume. Thus the commodity has two aspects: it is directly useful to someone, or in Adam Smith's words, which Marx takes over, it is a *use-value;* and it can also be exchanged for other commodities. This characteristic of exchangeability Marx calls *value.** It is important to understand that Marx views value as a substance that is contained in definite quantities in every commodity produced in a commodity-producing society. This substance is socially determined because it arises from the fact that the commodity is a product in a system of production organized through exchange. Every commodity contains a certain amount of value, and the mass of all commodities newly produced in a society in a period of time also contains a certain value, the aggregate *value added* of all the newly produced commodities.

As we shall see in more detail in the next section, Marx argues that *money* is an expression of this value that is separated from any particular commodity. The money value added of the mass of newly produced commodities is a measure of the total value contained in them. When we move forward from the value that is contained in commodities, we get to money.

As we shall also see in more detail, Marx accepts the view consolidated by Ricardo that what produces value in commodities is

* References to passages in Marx's *Capital* are in the form 1.1 or 1.1.3; the first numeral specifies the number of the volume, the second the chapter, and the third the section within the chapter.

the expenditure of human labor in their production. Thus when we move backward from the value that is contained in commodities we arrive at labor time.

We can summarize the basic structure of Marx's theory as follows: There are special laws that arise in societies in which production is organized through exchange. These laws pertain to the dual nature of exchanged products (or commodities), which have both a use-value, like all useful products in any human society, and a value (or power to be exchanged with other commodities), which is a characteristic unique to commodity production. Value is created by labor and shows itself in the form of money, which is just value separated from any particular commodity.

The Labor Theory of Value

The labor theory of value can be stated simply as the principle that the source of the value added of the mass of commodities produced is the labor expended in producing them. If we count up the total labor time expended in the actual production of commodities, making appropriate adjustments that will be discussed in more detail later, that labor time must be the substance of the total value added contained in the commodities.

The unit of money—say, the dollar—is the way society measures value when it is separated from particular commodities. Hence we can measure the total value added in the society in monetary units. In the United States in the early 1980s, for example, the aggregate national value added was about \$3 trillion ($\$3 \times 10^{12}$). The employed labor force was about 100 million (1×10^8) persons. If these employed persons had worked a standard 40-hour week for 50 weeks of the year (which is not quite right because many persons were employed part time) and if all had been employed in the actual production of commodities (which is not true because much employment, as we shall see later, is devoted to the distribution rather than to the production of values), then the total labor time expended would have been 200,000 million (2×10^{11}) hours. According to the labor theory of value, this labor time and this value added are two different aspects of the same thing. Labor creates value, which is expressed in money terms. In this example, 1 hour of labor contributed \$15 of value added.

We can give this equivalence another quantitative meaning by calculating the amount of labor time a dollar represents in a particular period. For the example above, a dollar represents 1/15 hour of social labor (or about 4 minutes). This ratio we shall call the *value of money* because it tells us how much labor time the monetary unit represents. We have noted that for the average situation an hour's labor time produces $15 worth of value added. This relation is the reciprocal of the value of money and is called the *monetary expression of value* because it tells us how much value in monetary units an hour of labor time creates. The value of money will change over time because of changes in the productivity of labor and also because of general changes in the prices of all commodities—inflation or deflation.

The value of money must not be confused with the inverse of the *wage rate*. If the average wage rate is $5 an hour, one can buy 1/5 hour of labor-power (the capacity to perform labor) for a dollar, even though the dollar represents only 1/15 hour of social labor.

The basic idea of the labor theory of value is that the mass of newly produced commodities contains the total productive social labor time and that this value is expressed in terms of money, a form of value that is separate from any particular commodity.

Value-Producing Labor (*Capital* 1.1.2)

Marx takes the labor theory of value from Ricardo and makes some important critical corrections to his formulation. The most important correction, which runs through Marx's whole discussion, is the location of the labor theory of value at the level of the aggregate production of commodities (or of the average commodity), not, as Ricardo expressed it, in each particular commodity. Marx also refines the labor theory of value by carefully analyzing the concept of labor that is needed to make the labor theory of value consistent. His critical corrections concerning the concept of labor can be summarized in the following statement: the labor that produces value is *abstract* rather than concrete, *simple* rather than compound, *social* rather than private, and *necessary* rather than wasted.

The most difficult of these ideas is the concept of abstract labor. Marx points out that whenever we see someone working we see them doing some specific task as part of some specific production process. We see someone spinning thread or weaving cloth or punching data or smelting iron. All these acts of labor are *concrete* labors, aimed at producing a particular use-value. But, Marx argues, it would be peculiar to say that weaving labor or dataprocessing labor was *the* labor that produced value, because when we look at a whole commodity-producing society we see that every kind of concrete labor adds value to its product. Marx argues, then, that in a commodity-producing society it is labor in general, or *abstract* labor, that produces value. Another way to understand this point is to see that in a commodity-producing society all types of concrete labor have the capacity to produce value. When we abstract from the concrete peculiarities of specific types of labor, we are left with the common character of production of value.

Marx acknowledges, as Ricardo does, that individuals differ in their capacity to produce value. Whether these differences are innate or the result of different persons having reached different stages of development of their productive powers because of different life experiences is not particularly important in this context. An hour of one person's labor may produce more value than an hour of another's. To cope with this phenomenon within the framework of the labor theory of value, both Marx and Ricardo propose to measure labor time in terms of a basic unit, which Marx calls *simple* labor—the amount of labor expended in an hour by those workers who have no particular advantages of skill or experience in production. The labor of more skilled or experienced workers, which produces more value in an hour, Marx views as being a multiple of simple labor.

Some labor is expended privately in a commodity-producing society. This labor produces use-values just as does the labor expended to produce commodities, and these use-values may be quite essential to the reproduction of the society (think, in particular, of domestic labor in housekeeping and childrearing). But because the products of this private labor are not exchanged on the market, they are not commodities and contain no value in the technical sense. Labor expended privately, then, does not produce value and does not enter directly into the complex social division of labor sustained by the exchange of commodities. Thus Marx argues that only *social* labor—that is, labor devoted to the production of commodities actually exchanged—produces value.

Finally, it is clear that the mere expenditure of labor time does not add to the value of commodities unless that labor time is *necessary* for the production of the commodity at the current level of technical development. Even if someone expends more labor than is necessary for the production of a commodity, the commodity sells for the same price as another produced with less labor time; thus the extra labor produces no value. What regulates the production of value is the amount of labor currently needed to produce the commodities, an amount that is always changing because of technical discoveries and improvements in processes of production and because of exhaustion or discovery of natural resources. Marx makes explicit the point that only labor necessary at the current social level of development of productive technique adds value to the commodity.

These qualifications of the labor theory of value make the theory consistent with the gross features of real commodity production. If we were to try to find operational equivalents for the concepts of the labor theory of value, we would have to devise practical methods to measure abstract, simple, social, and necessary labor time. As is often the case in theoretical–empirical work, many different methods can be proposed to accomplish this. Which method works best in a given context and in the investigation of a particular problem can be discovered only by experimentation and critical evaluation of the results. It is important to realize, however, that the possibility of operationalizing these concepts in several different ways does not mean that they are meaningless or that it is impossible to give them any operational significance. Only if it were impossible to find *any* useful interpretation of these concepts of labor in terms of practically measurable quantities would the labor theory of value lose its scientific interest. It is also important to realize that Marx, in his highly abstract discussion, does not propose any particular method for the measurement of labor time. All he does is to point out the need to make the adjustments we have described.

For example, if we were to study the problem of trade between backward and advanced countries, we would need to establish some equivalence between the labors expended in each country. We cannot simply look at the actual value added created in each country in proportion to labor time because the price system may not accurately reflect relative values (as we shall see in more detail in Chapter 6). But we could try to measure relative labor productivities in a variety of other ways. We could measure the education and training levels characteristic of workers in the two countries. We could also try to match physical productivity measures in those cases in which the same techniques of production were being used in the two places. These techniques could give us some definite idea of how large the gap might be between the value-creating power of labor in the advanced country and in the backward country.

Throughout this book, I shall often use the unqualified word *labor* when the context makes clear that it must mean *abstract, simple, social, and necessary labor time.*

The Money Form of Value (*Capital* 1.1.3, 1.2)

Once we understand that the value contained in the mass of newly produced commodities is an expression of the abstract aspect of the social, necessary labor expended in their production, we next need to consider how this value is expressed in the form of money. Value is the exchangeability of commodities in Marx's theory. It is a social substance that resides in the commodities and is placed there, so to speak, by the labor expended in their production. Conversely, the ability of commodities to establish a relation of equivalence with each other by changing places through exchange is a reflection of the fact that they all contain the same substance, value. The aim of Marx's theory of money is to show how this value substance must find a social expression as money separate from particular commodities.

Marx's development of this idea begins with the simplest expression of equivalence of two commodities. If 20 yards of linen exchange for one coat, we have the relation

$$\text{20 yards of linen} = \text{1 coat} \tag{2.1}$$

In this expression the order of the commodities makes a considerable difference because we think, in this case, of the coat as measuring or expressing the value of the linen. Marx says that the linen is in the *relative* position and the coat in the *equivalent* position. The coat is a particular equivalent for the linen.

As we shall see later, Marx believes that there are many reasons why particular exchanges in reality will not accurately reflect the quantitative relation between the values of the commodities exchanged. In reality a commodity will often sell above or below its value in relation to other commodities. When developing forms of value we generalize from these disturbances and consider the pure situation in which the two commodities exchanged do have the same value. Or we can think of the linen and the coat as average commodities in the whole system of commodity production, knowing that the average of all commodities must sell at a price that reflects the labor time expended in its production.

Marx analyzes this *elementary form* of the expression of value in the relation between two exchanged commodities in great detail. The core of his discussion is an analogy between the value of commodities and weight, which is inherently quantitative and relative but has no natural absolute scale. We can use one object to measure the weight of another, but the establishment of absolute units of weight or mass is a matter of social convention. In the same way, we can use one valuable commodity to measure the value of another, but the absolute units in which we measure value are a matter of social convention.

The elementary form of value quickly develops into the *expanded* form of value, in which one commodity—say, the linen—is successively equated to the whole range of other commodities, each of them in turn expressing its value. This change corresponds to a change in perspective from an individual exchange to a consideration of the whole system of commodity exchange and a recognition that all the commodities participate in it together. Marx expresses the expanded form of value as an endless series:

$$\begin{aligned} \text{20 yards of linen} &= \text{1 coat or} \\ &= \text{10 pounds of tea or} \\ &= \text{1/2 ton of iron or} \\ &= \ldots \end{aligned} \tag{2.2}$$

But this expanded form is unstable in a gestalt sense. It is not closed because it can always be expanded by introducing another commodity to the series. It tends to undergo a figure–ground reversal into the *general* form of value, in which one commodity—say, the linen—simultaneously serves as a measure of the value of all the other commodities.

$$\left.\begin{array}{l} \text{1 coat} \\ \text{10 pounds of tea} \\ \text{1/2 ton of iron} \\ \text{2 ounces of gold} \\ \ldots \end{array}\right\} = \text{20 yards of linen} \tag{2.3}$$

In this form the linen has become the *general equivalent* measure of the value of all the other commodities. This general equivalent form brings us very close to the money form of value. But at this point any commodity could be put on the right-hand side of (2.3).

For example, the arbitrarily chosen *numeraire* of neoclassical economic theory can also be seen as a general equivalent in Marx's sense.

The final step to the full money form of value is taken when some commodity or some abstract unit of account becomes socially accepted as the general equivalent and is commonly used as the measure of value of commodities. Marx, living in the nineteenth century when the gold standard was the dominant monetary form, assumes that the general equivalent must be a commodity produced, like gold, by human labor. In the twentieth century the evolution of monetary systems has been away from a commodity money system and toward a system in which the general equivalent is an abstract unit of account, like the "dollar," which has a social meaning but no definite equivalent in terms of produced commodities.

The conclusion of this first step in Marx's development of the theory of money is that money arises from the commodity relation itself as an expression of the general exchangeability of commodities separate from any particular commodity. Thus we see how the value contained in the mass of newly produced commodities can express itself in monetary units.

This theory constitutes a powerful criticism of monetary theories that posit a "barter" economy preceding the introduction of money. The barter economies in these theories are in fact fully developed models of commodity production and thus implicitly have all the determinants of the money form of value already. They are barter models only because they have simplified reality by ignoring the money aspect of exchange. Once we understand this, we can see why it becomes very awkward to reintroduce money into these models when it is, in a sense, already there but has been removed by abstraction at the start. The Marxist theory of money also suggests that many real exchanges that appear to be barter transactions are in fact monetary transactions in which the transactors find commodities that have the same monetary value to exchange so that no monetary claim has to change hands to complete the transaction.

Money, Prices, and Value

The whole mass of newly produced commodities contains the whole expenditure of social labor in a particular period of time, and this value expresses itself as the money value added of the mass of commodities. This principle of the labor theory of value enables us to calculate a *value of money*, that is, the average amount of social labor time that it takes to add a dollar's worth of value to commodities.

Each particular commodity in a commodity-producing system has a *price*—the amount of money for which it can be bought or sold. On the one hand the commodity contains a certain amount of labor time, and on the other hand the money represents a certain amount of social labor time. We can see a variety of reasons why there might be a difference between these two quantities. A particular commodity might have a price that represents more or less social labor time than is contained in the commodity. For example, suppose that the raw materials and means of production used up in making a table cost $200 and that the labor time expended in its production was 20 hours. If the value of money is 1/15 hour per dollar, this labor time would be the equivalent of $300. If the price of the table is actually $500, then its price accurately reflects its value. But the price of the table might in fact be $400, or $700, either above or below the value of the table.

The reasons for these differences between price and value in the case of individual commodities lie in the relations between buyers and sellers in the markets on which they are exchanged. The ratios at which commodities actually exchange depend on the bargaining power of the buyers and sellers. If sellers have better information, or monopoly power, or State protection, or if there is a shortage of the commodity, the price will tend to be higher. Symmetrically, if buyers have better information or face severe competition among sellers, or if there is a glut of the commodity, the price will tend to be lower. Thus there is no reason to expect the prices of particular commodities to be proportional to their individual labor values, even under conditions of uniform competition among producers. As we shall see in Chapter 8, Marx identifies a powerful and pervasive force in capitalist production that drives prices away from values for particular commodities, namely, the tendency for profit rates to be equalized in different lines of production by competition among capitals. The profit rate is the ratio of the surplus value in the commodity to the value of the capital tied up in its production. Hence, if different products require different amounts of capital for one unit of labor time, prices must differ from values in order for profit rates to become equal.

We can, from the point of view of the labor theory of value, think of these cases in which prices do not accurately reflect values as cases of *unequal exchange of labor times*, because one party to the transaction receives more value than he or she gives up. When prices do accurately represent values, we say we are dealing with a case of *equal exchange of labor times*, because each transactor receives an exact labor equivalent in the exchange. The terms *equal exchange* and *unequal exchange* in this context refer only to the outcome of the exchange process and only to the movement of labor time between exchangers of commodities. Even when exchangers meet on an exactly equal footing, as competitive capitalist firms are assumed to do, the result may be unequal exchange of labor time equivalents. In this book I shall say "equal exchange" and "unequal exchange," with the understanding that I mean equal (or unequal) exchange of labor times.

Notice that unequal exchange does not violate the principle of the conservation of value in exchange, because what one party gains in value is exactly equal to what the other party loses. The total amount of value is unaffected by the fact that the unequal exchange transfers some of it from one agent to another. There is no inconsistency between the possible existence of unequal exchange and the principle that in the aggregate the value added of all the produced commodities expresses the total labor time expended to produce them. When we aggregate or average over all the commodities produced, the instances of unequal exchange cancel out; and in the aggregate the money value added is an accurate expression of the aggregate social labor time.

Forms of Money and the Value of Money (*Capital* 1.3.1)

Once we understand that the money form of value is inherent in commodity relations, we are led to consider the different forms of money, that is, the different social devices that have evolved to perform monetary functions. Marx centers his attention on the problems of systems in which some commodity, such as gold, becomes the general equivalent; such a commodity is called a *money commodity*. When a produced commodity becomes the general equivalent, the monetary unit must be defined as a certain quantity of this money commodity. Marx calls this monetary unit the *standard of price*.

The amount of gold for which any commodity exchanges depends on the relation between the labor time contained in the commodity and the labor time contained in an ounce of gold. Because these labor times are always changing with changes in the technologies of producing commodities and gold, the gold price of commodities will always be in a state of flux.

The amount of gold contained in the standard of price—say, the dollar—is, on the other hand, a matter of social convention, one that (like the regulation of standards of weight and measure) very early comes under the control of the State. In a gold-standard regime the dollar is defined by the State to be, say, 1/20 ounce of gold. To find the dollar price of a commodity we first must find the amount of gold that contains the same amount of labor time as the commodity and then translate that amount of gold into dollars, using the conventionally and legally established relation between the dollar and a certain quantity of gold.

For example, suppose that gold and other commodities exchange at their values (that is, in direct proportion to the amount of labor time contained in them), that an ounce of gold contains 10 hours of labor time, and that a bushel of wheat contains 2 hours of labor. Then 1 ounce of gold will buy 5 bushels of wheat. If the dollar is legally and conventionally defined to be 1/20 ounce of gold, the money price of a bushel of wheat will be $4.

The problem of the determination of the value of money is to a first approximation easily and transparently settled in a commodity money system. The dollar is a certain quantity of gold, which contains a certain amount of labor time, and this definition establishes the relation between the monetary unit, the dollar, and social labor time. (When gold itself sells above or below its value in relation to other commodities because of some intervening factors, this equivalence has to be modified accordingly.) It is important to recognize that this theory of the value of money is incompatible with the quantity of money theory of prices, that is, the idea that the money prices of commodities vary in direct proportion to the quantity of money in existence. For Marx the money prices of commodities vary in inverse proportion to the labor contained in the money commodity and in direct proportion to the labor contained in the particular commodities, regardless of the amount of the money commodity that happens to exist.

In a monetary system in which the general equivalent is an abstract unit of account, for example, a system in which the dollar has no legally or conventionally defined equivalent in gold, the value of money is determined historically, by the pricing decisions of commodity producers themselves.

Circulation of Money and Hoarding (*Capital 1.3.2.a, 2b, 3a, 3b*)

In a commodity money system, how much money is needed to allow the ordinary circulation of commodities? From Marx's point of view the prices of commodities are determined by their conditions of production. Thus the total value of commodities that need to be circulated by money, that is, bought and sold for money, is determined by these production factors and by the amounts of the commodities produced. The amount of money needed to accomplish these transactions in a given period of time depends on how many transactions a typical piece of money—say, a coin—can accomplish in the period—the *velocity of money*. If a coin can participate in an average of 10 transactions in a year (through the agent who receives it in one sale spending it in a purchase) and if the total price of the commodities being circulated is $3 trillion, the system would need $300 billion of money to accomplish the circulation. This relation, called the *quantity equation* in traditional economic language, must be drastically modified when we consider systems in which credit plays an important role in financing transactions.

In the quantity of money theory of prices, the quantity equation is used as the basis for the conclusion that the prices of commodities must rise or fall in direct proportion to the amount of money in the economy, through the assumption that the velocity of money and the value of the commodities produced do not change. Marx, in contrast, argues that the quantity equation determines the amount of money necessary to sustain the circulation of commodities. This line of argument then raises the questions, where can the system get more money if the circulation of commodities increases and where does excess money go if the circulation of commodities slackens or the velocity of money rises?

Marx answers these questions by pointing to the existence of *hoards*—stocks of the money commodity that do not circulate. A change in the amount of money the economy needs to circulate commodities can lead to a change in these hoards, releasing or absorbing enough of the money commodity to allow circulation to continue unhindered. This formulation is in sharp contrast to the quantity of money theory of prices, which posits a stable demand for money that would prevent idle stocks of the money commodity from adjusting in this way.

In a monetary system in which there is no money commodity and the general equivalent measure of value is an abstract unit of account, as in late twentieth-century capitalist economies, the problem of adapting means of payment to the needs of circulation is a problem of the expansion and contraction of credit rather than of the expansion and contraction of hoards. Still, Marx's approach to the quantity equation is theoretically important. It suggests that even in a monetary system with an abstract unit of account, that is, in a system in which forms of credit act as means of payment, the correct order of explanation for monetary phenomena runs from the needs of circulation to the mechanisms that meet those needs. This order contrasts with that arising from the quantity theory hypothesis, according to which the needs of circulation adapt to the quantity of money through changes in average money prices.

It is important to realize that in Marx's analysis the determinants of the *value of money* are quite different from the determinants of the *quantity of money*. In a commodity money system the value of money is determined by the labor time required to produce the money commodity and by the standard of price that translates a certain amount of the money commodity into monetary units. The quantity of money is determined by the requirements of circulation through the quantity equation. A larger or smaller quantity of money, in Marx's theory, will have in itself no systematic effect on the value of money.

Paper Money in a Commodity Money System *(Capital 1.3.2c)*

Marx uses the general equivalent theory of money to analyze several outstanding problems in monetary theory of the nineteenth century. Some of these, such as the problem of maintaining a full-weight gold coinage in the face of the inevitable wear and tear on coins in circulation, need not detain us. But Marx's treatment of the problem of paper money issued by the State without any guarantee of convertibility into gold at a fixed rate is of considerable interest.

The phenomenon in question arises when the State, usually under the pressure of war finance, begins to print paper money to pay its bills but suspends its promise to redeem this paper in gold at a fixed rate of exchange. The two leading nineteenth-century examples are the issue of paper pounds by the British government during the Napoleonic wars and greenback dollars by the Union during the American Civil War. Marx analyzes these cases, following the arguments of the Banking School of monetary theory, on the assumption that gold continues to function as the general equivalent commodity and to be the standard of price. Thus the gold prices of commodities continue to be regulated by the relative conditions of production of gold and of the commodities, regardless of the issue of paper money by the State. Marx argues that a small issue of paper money can be absorbed by the needs of circulation because agents can re-spend the paper they receive almost immediately. A small issue of paper will circulate at par, that is, the greenback dollar will have the same value as a gold dollar. If the State issues more paper than can be absorbed by circulation, agents will try to get rid of the excess paper money by using it to buy gold. This attempt creates a market for the exchange of paper money and gold and a price in that market, usually called the *discount of paper against gold.* The price of the paper dollar might fall to 50% of the gold dollar, for example, so that it would require two paper dollars to buy the amount of gold contained in the gold dollar. Under these circumstances the prices of commodities in terms of paper money will reflect the discount between the paper money and gold. If the gold price of a bushel of wheat is $4 and the discount of paper against gold is 50%, $8 in paper dollars will buy a bushel of wheat.

In the example above, the excess issue of paper money by the State raises the prices of commodities in terms of paper money through the mechanisms of the discount between paper and gold. This conclusion may appear at first to be the same as that reached by the quantity theory—that an expansion of the money supply forces up the prices of commodities. But there are important differences in the analyses. The quantity theory claims that this effect will occur regardless of whether the expansion in the supply of money is in gold or paper. Furthermore, the quantity theory attributes the rise in commodity prices to excess demand in the market for all commodities as agents try to spend excess money holdings. Marx's analysis applies only to paper money, not to gold; and, in fact, the issue of paper money has no effect on the gold prices of commodities. The mechanism of paper money price changes in Marx's theory has nothing to do with excess demand in the markets for commodities in general because it works through the market in which the paper money exchanges against gold; thus the change in paper money prices are merely a reflection of the discount between paper and gold.

This analysis cannot, however, be the basis of an explanation of the value of money in contemporary monetary systems where there is no money commodity. The essence of Marx's treatment of this problem is that gold continues to function as the general equivalent commodity when the paper money is issued. In contemporary monetary systems there is no comparable money commodity against which paper money can be discounted.

International Monetary Relations *(Capital 1.3.3c)*

Marx concludes his treatment of money in Volume 1 of *Capital* by showing that the general equivalent theory actually leads to the establishment of a world money once all countries adopt the same commodity as the general equivalent. The labor times of productive workers in different countries are all expressed in terms of a certain quantity of gold, for instance. Thus the money commodity also serves to equalize labor times across national borders and to extend the law of value to the world market.

In contemporary systems in which the value of each country's monetary standard depends on the pricing decisions of commodity producers within that country, there is no comparable single world measure of value. The task of equalizing labor times across national boundaries falls to the international exchange markets, in which the moneys of different countries are traded against each other.

The theory of money is important for the rest of Marx's analysis primarily because it defines the equivalence between money measures of value and labor time. The purpose of Marx's discussion of the theory of money is to show that it is possible to view money as representing labor time and to explain apparent contradictions to this principle. Marx generally assumes that there is a functioning commodity money system and that the labor requirements of the production of the money commodity establish the value of money. Then he translates freely back and forth between money expressions of value and labor time. In this way Marx's theory of money is intended to demystify the appearances of the monetary system.

Things That Have a Price but Contain No Labor (*Capital* 1.3.1)

The theory of the commodity and the labor theory of commodity value form a compact and consistent account of basic features of economic relations in commodity-producing societies. But some common features of economic life in such societies at first appear to be in contradiction to the labor theory of value. The most important of such anomalies is the existence of things that are not produced by labor but still have a price. Land is a leading example; the owner of land can appropriate a rent by threatening to exclude other agents from the land, even when the land is totally unimproved by any labor inputs. The positive price of reserves of natural resources (minerals, petroleum, and so on) in the ground, even if they have not been developed in any way, is a special case of land rent in this sense.

The general approach of the labor theory of value to these anomalies is to argue that the origin of value and money forms lies in production and in the commodity form of production. Once money and value forms exist and are developed, agents may transfer value among themselves for reasons other than the buying and selling of commodities. These transfers create no new value; hence they constitute merely a redistribution of the claims on the produced value among the economic agents.

Land rent, from this point of view, arises because the ownership of land gives its owner the power to exclude other agents from the productive use of that land. This power allows the owner of land to bargain with producing agents to secure a certain part of the value added produced, which is the *rent* on the land.

Thus the labor theory of value as developed by Marx suggests that superficially similar phenomena, such as the sale of a produced commodity and the leasing of land, in fact have different theoretical statuses and that different explanatory principles will prove useful in studying them. If we want to understand value relations in commodity production, we should center our attention first of all on conditions of production, on factors such as labor productivity. If we want to understand value relations involving nonproduced things, we should look, not to production, but to the rights involved in ownership of these things and to the bargaining position these rights give their possessors. The value of a commodity reflects something about the real production process of the society, whereas the rent of land reflects primarily the struggle over the distribution of control over the product of social labor.

The Fetishism of Commodities (*Capital* 1.1.4)

The commodity form of production imposes a paradoxical consciousness on the human beings who live through it. On the one hand, the commodity form of production is a social form of production because in practice the exchange of products establishes an extensive social division of labor and makes every person highly dependent on a multitude of other people for means of subsistence and means of production. The commodity form creates a vast web of cooperation and interdependence of people. On the other hand, the exchange process creates an illusion of privacy and individual self-reliance; it allows and forces people to construe their existence subjectively as a matter of relations between themselves and things rather than as a matter of relations between themselves and other people. The result is that things are treated as people, and people as things. Commodity relations tend to make people view others instrumentally rather than intersubjectively and to induce people to enter into personal and emotional relations with things.

This curious and pervasive distortion is what Marx means by the *fetishism of commodities*. This idea is the culminating formulation of Marx's lifelong concern with the phenomenon of alienation in modern society. The theory of commodity fetishism allows him to treat alienation as an effect of the specific social relations of commodity-producing societies.

The recognition of commodity fetishism as a pervasive, distorting influence on people's consciousness, however, leads to far-reaching conclusions. It suggests, as Marx himself emphasizes in various places, especially in the *Grundrisse*, that a thorough transformation of social relations will require people to discover social relations of production that transcend the commodity form itself, not just the special distributional consequences of the commodity form that are peculiar to capitalism. For Marx the ultimate aim of revolutionary socialism is the creation of new and workable social relations of production that do not depend on the commodity form and money to mediate people's relation to social production. When we consider how helplessly and deeply dependent we are on commodity forms to meet our needs and mediate our conflicts, we see how radical this view is. Such new social relations would be workable only for people whose characters had changed in essential ways from the personalities typical of highly developed commodity production. In place of the pervasive concern for personal development and personal aggrandizement that motivates commodity producers, there would have to be an instinctive understanding and loyalty to the reproduction of the society in a large sense. People would have to engage routinely in social production, not under the compulsion of threats to their biological or social survival, or under the inducement of bribes of prestige, status, or material comfort, but with a prosaic and transparent understanding that social life requires the performance of social labor. The contradictions between such attitudes and the necessities imposed by the realities of commodity production explain much of the pain and conflict of our epoch. To this Marx offers only the consolation that it is a necessary pain of human growth.

3

The Theory of Capital and Surplus Value

The Theory of Capital and the Theory of Value

Marx develops the labor theory of value and the theory of the commodity as the conceptual space within which the peculiarities of specifically capitalist production can be studied. Capitalist production as a way of organizing human labor socially through exchange is a special form of commodity production, and it depends on the emergence of the money form of value. The problem now is to see exactly how capitalist production relates to the general form of commodity production.

Capitalist firms operate to make a profit. They sell commodities for more money than they pay for the inputs that produce them. Over the whole system, capitalists thus appropriate a surplus value. Can we explain this on the basis of the labor theory of value?

Circulation of Commodities *(Capital 1.4)*

When we try to think of the capitalist system of production purely in terms of commodities, we reach several analytical paradoxes. Consider a system of commodity production in which independent producers buy inputs to production, add their own labor to commodities, and sell the commodities for prices that in the aggregate reflect the labor time expended in the value added to the commodities. We could represent the movement of money and commodities in such a system by the diagram:

$$C - M - C' \qquad (3.1)$$

where the producer starts with the commodities he has produced (C) and sells them for money (M) as a way of buying another bundle of commodities (C') that better suit his needs. The commodities purchased (C') have the same value as the commodities sold (C). The motive behind this transformation is not any change in the value owned by the producer but the qualitative change in the use-values he consumes.

When we think of the commodity circulation in this way, we realize that the process comes to an end after one round of exchange. Once the producer has exchanged the commodities he initially owns for the bundle he chooses, there is no reason for any further exchange to take place. If the economic process is to continue, the reason for its continuation must be sought outside the process itself, for example, in the external assumption that the next day the producer will once again find himself with commodities C that are not the ones he wants to consume and will be forced to exchange again.

Furthermore, there could be no social surplus value in this system. An individual trader might cleverly manage to buy some commodities below their real values and sell them at or above their real values and in this way appropriate a surplus value through unequal exchange. But whatever these agents gain in surplus value, some other agents must lose, because of the conservation of value in exchange. Producers add value to commodities by expending labor on them, but in general they receive in exchange no more than the equivalent of this labor time. Thus there appears to be no way to explain the pervasive appropriation of surplus value as the basis of economic life within this conception.

Notice also that the only conception of accumulation of value in such a system is for an agent to realize more value by selling commodities than he spends in buying them over a period. The difference must take the form of an accumulation of money by the agent. But this accumulated value is simply withdrawn from commodity circulation through the agent's abstinence from consumption. When the agent finally spends the hoard he has accumulated, he simply returns the money value to circulation and withdraws commodities from circulation of the same value (assuming that the value of money has not changed in the meantime). There is in this conception no systematic process of accumulation.

Capitalist Production (*Capital* 1.4, 1.5)

Consider, in contrast, capitalist production as we observe it. A capitalist firm begins with value in money form and uses it to buy commodities, which are combined in production to yield a new commodity, one that is sold for more money than the capitalist advanced to begin with. Marx represents this motion in the diagram

$$M - C - M' \tag{3.2a}$$
$$M - C\{MP,LP\} \ldots (P) \ldots C' - M' = M + \Delta M \tag{3.2b}$$

The first form is the simplest form of the capitalist movement of value; it shows the capitalist buying in order to sell and realizing in the sale of commodities more money value than he began with. The second is a more complete description; the commodities bought are inputs to the production process (P), which consists of means of production, MP, and labor-power, LP, and the commodities sold are different, produced commodities, which still sell for more money (the initial outlay, M, and the surplus value ΔM) than the capitalist initially laid out.

This diagram of capitalist circulation corresponds directly to the income, or profit and loss statement, of a capitalist firm:

Sales	$M' = M + \Delta M = C'$	(3.3)
Less costs of inputs	$M = C$	
Equals gross profit	ΔM	

The motive behind the circuit of capital is clearly the fact that M' is bigger than M, that is, that the value at the end of the process is larger than the value at the beginning. The capitalist is in fact indifferent to the particular use-values that are involved in this process because his proximate aim is the surplus value to be gained from the whole cycle.

It is interesting to note, even at this first stage, that the $M-C-M'$ circuit does not reach an ending point but recreates its own initial conditions. The circuit begins with the sum of money M in tension with the possibility of expanding by entering the circuit of capital. The circuit ends with the sum of money M' once again in tension with the possibility of expanding by entering the circuit once more. There is no need to appeal to any external condition to explain why this process repeats itself indefinitely.

The critical questions are where the surplus value in the circuit of capital comes from and how it can be explained within the labor theory of value. Furthermore, it is not enough to explain how individual capitalists might make a surplus value through gaining from unequal exchange. To explain capitalist production as a system of organization of social production, we have to explain how a net social surplus value emerges from this process, a net social surplus value that is not offset by the losses of any group of agents. The commodities the capitalist buys at the outset of the circuit of capital must be, on average, purchased at their values, and the commodities he sells must, on average, be sold at their values.

The only resolution of this puzzle is to suppose that among the commodities the capitalist buys there is one that has the power of creating value as that commodity is used up. If that special commodity's use creates more value than the value of the special commodity itself, that is, if it adds more value to the product than the capitalist had to pay for it, then we have a possible explanation of the origin of a social surplus value. The labor theory of value immediately suggests what this value-creating commodity must be—the capacity of workers to do useful work.

Labor-Power as a Commodity (*Capital* 1.6)

Marx insists that we must distinguish between *labor-power*—the capacity or potential to do useful labor in production—and *labor* itself—the actual expenditure of human energy with the aim of achieving a productive end. If labor-power were to appear on the market as a commodity and if it were possible to extract more labor from labor-power than the value the capitalist had to pay for the labor-power, then we can understand where the surplus value comes from. This explanation is perfectly consistent with the principles of the labor theory of value, because, in the aggregate, commodities, including labor-power, are bought and sold at their values and value is created only through the expenditure of labor in production.

This analysis enables us to understand exactly what happens between the capitalist and the worker when the capitalist purchases labor-power. The capitalist buys the worker's capacity to do useful labor in exchange for a sum of money, the *wage*, which must in general reflect the value of labor-power. Once this agreement has been reached, the worker has no claim to any part of the product or to any part of its value. The capitalist and the worker do face a further negotiation, however, which concerns the exact conditions under which the capitalist will ask the worker to expend labor: how hard the work will be, at how fast a tempo, how unsafe or toxic the work environment will be, and so on.

It is all very well to show how labor-power has been determined theoretically to explain surplus value in capitalist production. But the appearance of labor-power as a commodity on the market was also a historical event that involved tremendous upheaval and conflict.

Marx explains the *historical* conditions for the appearance of labor-power as a commodity as a twofold liberation of the worker. In the first place the worker must be free to dispose of his or her own labor-power. Thus the worker cannot be bound to a particular labor process, as the serf is in feudal production, or to a particular master, as the slave is in slave production. The emergence of labor-power as a commodity is thus the result of the historical destruction of old and powerful forms of bondage.

But there is another side to the freedom of the worker. A worker will sell her own labor-power to someone else only if she cannot exercise that labor-power on her own behalf. Thus the worker must also be freed in the sense of being denied access to means of production that would allow her to produce a product that she could own and exchange herself. In historical terms this means the appearance of a class of human beings who cannot provide themselves with their own means of production and are forced to sell their labor-power to someone who can provide them with the necessary means of production. The most important aspect of this process has been the displacement of peasants from traditional access to land through enclosures, land reforms, green revolutions, and the like.

The Value of Labor-Power *(Capital 1.6, 1.7, 1.9)*

The capitalist buys the worker's capacity to labor for a certain sum of money—the wage, or the price of labor-power. As we have seen, money is a form of value; thus we can regard the money paid in wages as the equivalent of a part of the social labor time expended by the society. The *value of labor-power* in this sense is the labor time equivalent of the wage:

$$w^* = mw \tag{3.4}$$

where w^* is the value of labor-power, the number of hours of social labor a worker receives in exchange for an hour of his labor-power; m is the value of money as defined in Chapter 2; and w is the money wage, the amount of money the worker receives for an hour of labor-power. For example, if the wage is \$5 per hour and the value of money 1/15 hour per dollar, then the value of labor-power is (\$5/hour) $\times$ (1/15 hour /\$) = 1/3 hour of social labor time per hour of labor-power.

This equivalence between money wages and the value of labor-power holds in an average or after-the-fact sense. There might be circumstances in which actual wages differed from what we would view as their normal level. In that case it would make sense to say that the value of labor-power equaled the normal level of wages multiplied by the value of money and that the actual wage was above or below the value of labor-power. In such a case there would be unequal exchange in the buying and selling of labor-power. Marx does not rule out the possibility of unequal exchange in the market for labor-power, but he is careful to explain the appropriation of surplus value on the basis of the assumption that labor-power, like other commodities, exchanges at its value.

The wage bargain provides a particular capitalist's workers with only the money wage agreed on, not with any claim to a part of that capitalist's product. Workers as a class, on the other hand, spend their wages to buy some part of the total product. Thus the value added in capitalist production must be thought of as being split between a fraction that workers receive in the form of wages and the surplus value that passes into the hands of the capitalists. The value of labor-power expresses this division of value added by measuring the fraction of value added that workers receive. We can also express this division of value added by the ratio of surplus value to wages, which Marx calls the *rate of surplus value, e:*

$$\begin{aligned} e &= \text{surplus value / wages} && \text{(3.5a)} \\ &= (1-w^*)/w^* = (1-mw)/mw && \\ w^* &= 1/(1+e) && \text{(3.5b)} \end{aligned}$$

This division of value added between wages and surplus value is characteristic of capitalist production. All commodity production exhibits the category of value added, which reflects the fact that in commodity production social labor takes the form of value. But it is only in capitalist production that the value added splits into these two fundamental parts, reflecting the fact that labor-power has become a commodity that is bought and sold on the market.

Surplus Value and Unpaid Labor *(Capital 1.10)*

Marx proposes a powerful metaphor to help us understand the social significance of the emergence of labor-power as a commodity and the fact that the value of labor-power is "normally" less than 1, that is, that the rate of surplus value is normally greater than 0. He asks us to imagine the whole social labor time as one great "working day," which represents the social labor of the society, although we can also think of it as the day of the average laborer. This working day consists of a certain number of hours of social labor actually expended in production. Because labor time corresponds to value added in the aggregate in Marx's theory, the working day can also be thought of as the aggregate value added.

Because the value of labor-power equals less than 1 hour of social labor time equivalent received by workers per hour of social labor actually expended, we can think of the value of labor-power as dividing the working day, or the aggregate value added, into two parts (Figure 3.1). If we think of this division in terms of the value added, it is a division between wages on the one hand and surplus value on the other. If we think of it as a division of the working day, the first part of the working day is labor expended by workers for which they receive an equivalent in the wage. The second part of the working day (corresponding to surplus value) is labor expended by workers for which they receive no equivalent in the form of wages. Marx refers to these two parts as *paid labor time* and *unpaid labor time,* respectively. Thus the surplus value is the result of unpaid labor time.

Marx does not mean, of course, that in an hourly wage system workers are forced to work some hours for zero wages. Every hour of *labor-power* is paid for in the sense that the worker receives the hourly value of labor-power. But not every hour of *labor* is paid for

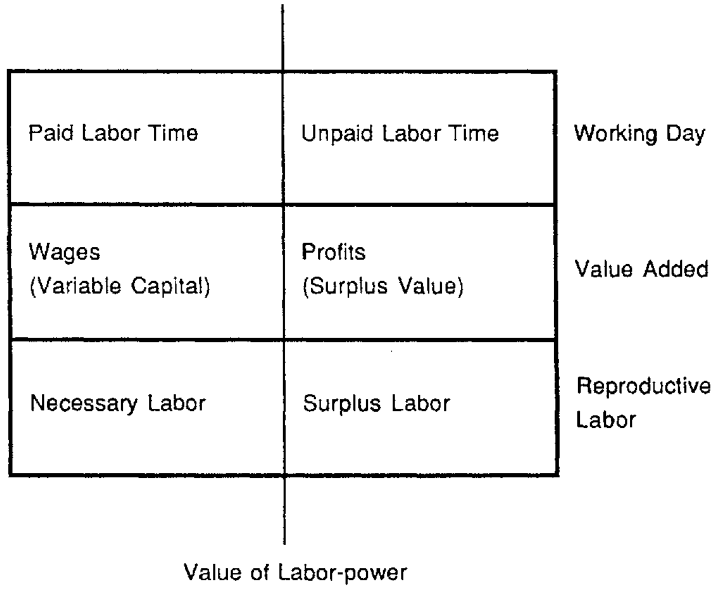

Figure 3.1. Capitalist labor time

because the value of labor-power is less than one. Suppose that the value of money is 1/15 hour per dollar and that the average wage is $7.50 per hour. Then the value of labor-power is 1/2 hour of social labor per hour of labor-power sold. An average worker in an 8-hour day would produce $120 (8 hours × $15 per hour) of value added and receives $60 (8 hours × $7.50 per hour) in wages. Workers earning the average wage receive the equivalent of 4 hours of social labor per day in the form of the wage and work for 4 hours without receiving an equivalent compensation, even though every hour of labor-power is duly paid for at the average wage rate.

Marx implicitly assumes that the whole of social reproduction is mediated through the exchange of commodities, including the reproduction of labor-power, that is, the reproduction of people themselves. We can view the labor that produces what productive workers consume as the labor *necessary* for the reproduction of society and the labor that capitalists appropriate in the form of surplus value as the *surplus labor time* of the society, in the sense that only the necessary labor time would be required to enable reproduction of people and productive facilities on the same scale. Thus the wage-labor mechanism allows capitalists as a class to appropriate the surplus labor time of the society without giving workers as a class any equivalent.

A situation in which one person gives another something for which the giver receives no equivalent is commonly called *exploitation*. Because this is exactly the situation in capitalist production, Marx argues that, from the point of view of the labor theory of value, the source of surplus value lies in the exploitation of the laborer.

If you do not accept the postulate that labor produces the whole value added, you will not see much basis for the claim that wage-labor is exploitative. I think this is the main reason that the labor theory of value has fallen into disrepute among orthodox economists. To avoid the characterization of capitalist social relations as exploitative requires the construction of some other theory of value that makes the wage seem to be a complete social equivalent for the labor that workers actually perform.

Surplus, Exploitation, Class, and Surplus Value

There is considerable confusion about the relation between the concepts of social surplus product (or surplus), surplus value, and capitalist exploitation, so it is worth a moment's thought to clarify this issue.

Every human society that is capable of development and change produces a surplus product. If the productive powers of a society only allow it to produce what is necessary for its reproduction at the same level of development, there is no room for change or advance.

In many human societies, especially those that have left written historical records, the social surplus product is appropriated by one class of people through some specific mechanism. For example, in societies based on slavery, the entire labor of the slave is at the disposal of the master; hence the slave's surplus labor and the product it produces become the direct property of the master. In feudal society the surplus labor time of the serfs was appropriated by the lords through the requirement that serfs work a certain number of days a year on the lord's fields. The lord then directly appropriated the surplus labor through owning the product of those fields. Societies that are based on the appropriation of surplus product by a particular group of people Marx calls *class soci-*

eties. It is clear that class societies are based on one or another form of exploitation of workers.

Marx analyzes capitalist society as a class society. The specific mechanism by which the capitalists appropriate the surplus labor of the workers is the wage-labor system. Because the distinction between labor time and labor-power is subtle, the wage-labor form tends to obscure the fact that its result is exploitation. The capitalists as a class wind up with control over the surplus labor time of the society because they own the surplus value.

Two quite different senses can be attached to the idea of ending exploitation in capitalist society. If we were to try to end exploitation by raising the value of labor-power so that workers received in their wages the whole value added, we would destroy the capacity of the system to produce a social surplus product, because surplus value is the form the surplus product takes in a capitalist society. If, on the other hand, we wanted to maintain or strengthen the ability of the society to produce a surplus product, and at the same time end exploitation, we would have to alter the fundamental organization of production in such a way that the surplus no longer took the form of a surplus value appropriated by a particular class. This distinction was extremely important for Marx, who spent a lot of his political life fighting against socialists who wanted to solve the problem of exploitation without altering the wage-labor form of production.

A viable and developing socialist society would have to produce a surplus product, both to provide for social needs and to provide for expansion of productive resources. As a result, workers in a viable socialist society could not receive directly a claim to the whole product. Whether or not this constitutes exploitation of the workers in a socialist society depends on one's analysis of the mechanisms of control of the social surplus. Is it appropriated privately by a particular class or controlled, more or less effectively, by the workers as a whole? The mere fact that workers fail to receive the whole product directly does not constitute evidence of exploitation.

The Reproduction of Capital and the Reproduction of Society

As I mentioned earlier, in *Capital* Marx seems to assume that commodity relations are the only processes involved in the reproduction of capitalist society. This point is particularly clear in his willingness to identify the paid part of the capitalist working day with the labor time necessary for social reproduction. The difference between social reproduction as a whole and the part of social reproduction directly mediated by capitalist relations of production has become the focus of important political movements in the twentieth century. An important part of social reproduction is carried on outside capitalist relations of production. In advanced capitalist societies the most important part of this extra-capitalist labor is in household production and domestic labor, whereas in less developed capitalist societies an important part is in traditional peasant production. Furthermore, an important part of the consumption of workers in advanced capitalist societies has come to be mediated by the State; hence social consumption (public education, welfare and retirement benefits, public health, state-financed medical care, and so on) plays an important role in the reproduction of workers.

We need to modify Marx's diagram of the working day to reflect these developments. In Figure 3.2 the whole social working day is now divided into a wage-labor part and a non-wage-labor part. The value of labor-power in the narrow sense now divides only the wage-labor part of the working day into paid and unpaid fractions (remember that non-wage-labor is not the same as un-

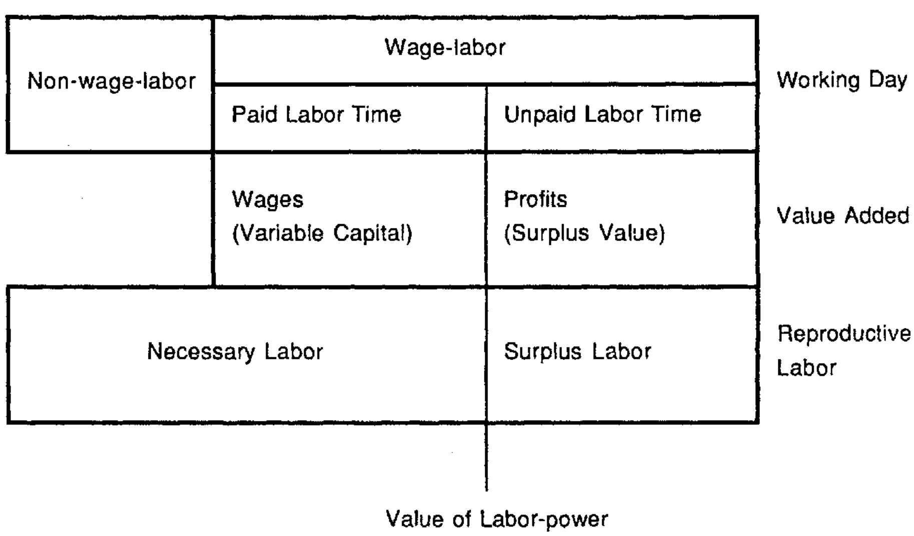

Figure 3.2. Social labor time

paid wage-labor). The necessary labor time of the society now includes necessary non-wage-labor and thus is larger than just the paid part of the wage-labor time. Some part of the paid wage-labor is consumed socially by workers, through paying taxes to the State and consuming State-provided goods. This portion is part of the paid, waged working day.

The Value of Labor-Power Again *(Capital 1.6)*

One other point in Marx's treatment of the value of labor-power has produced considerable misunderstanding. We have expressed the value of labor-power as the amount of social labor time workers receive, in the form of the wage, in exchange for their labor-power. Marx, making (as he often does) the assumption that commodities exchange at prices that reflect the labor time expended on each commodity individually (equal exchange), emphasizes the idea that this labor time is directly embodied in the commodity labor-power:

> The value of labour-power is determined, as in the case of every other commodity, by the labour-time necessary for the production, and consequently also the reproduction, of this special article. So far as it has value, it represents no more than a definite quantity of the average labour of society incorporated in it. Labour-power exists only as a capacity, or power of the living individual . . . Given the individual, the production of labour-power consists in his reproduction of himself or his maintenance. For his maintenance he requires a given quantity of the means of subsistence. Therefore the labour-time requisite for the production of labour-power reduces itself to that necessary for the production of those means of subsistence; in other words, the value of labour-power is the value of the means of subsistence necessary for the maintenance of the labourer. (1867, pp. 170–171)

Under the assumption of equal exchange, there are no problems with this formulation. Workers receive a certain amount of money in their wages, which is the equivalent (through the value of money) of a certain amount of labor time. Whatever commodities they spend their wages on contain an amount of labor exactly proportionate to their prices, because of the assumption of equal exchange; hence the workers actually consume in commodities the same amount of labor as that represented by their wages.

If we have a situation of unequal exchange, however, it is no longer certain that the commodities workers purchase with their wages will have prices that accurately represent the amount of labor they contain. Workers may wind up consuming somewhat more or somewhat less labor time in commodities than the equivalent of the wage, because they, like all other agents in a commodity economy, may gain or lose from unequal exchange.

Thus it is important to think of the value of labor-power first as the amount of average social labor workers receive a claim to in the wage for each hour they actually work—that is, as the average wage multiplied by the value of money—rather than as the labor contained in the commodities workers consume.

In a long-run perspective it is reasonable to suppose that the main determinant of the value of labor-power is the cost of maintaining the average social standard of living of the workers, as Marx goes on to suggest:

> the number and extent of [the worker's] so-called necessary wants, as also the modes of satisfying them, are themselves the product of historical development, and depend therefore to a great extent on the degree of civilisation of a country, more particularly on the conditions under which, and consequently on the habits and degree of comfort in which, the class of free labourers has been formed. In contradistinction therefore to the case of other commodities, there enters into the determination of the value of labour-power a historical and moral element. Nevertheless, in a given country, at a given period, the average quantity of means of subsistence necessary for the labourer is practically known. (1867, p. 171)

And, we might add, the cost of those means of subsistence, given the patterns of unequal exchange prevalent in that country, is also known.

It is important to be cautious with Marx's formulation that labor-power is like any other commodity. From the point of view of the capitalist, this is largely true, because the capitalist's only interest in labor-power is its money cost and the value it can produce. But even for the capitalist there are important differences between labor-power and other commodities, especially the fact that even after the wage bargain has been struck, there continues to be a conflict between worker and capitalist over the intensity and conditions of labor. From a social point of view, labor-power is emphatically not like other commodities. It is produced in very different relations of production—normally, for example, without the appropriation of surplus value by anybody in the process of its production. The production of labor-power viewed socially is the reproduction of people and their talents, capacities, and consciousness, a much more complex and awesome phenomenon even than the production of commodities.

Expanding (Variable) and Nonexpanding (Constant) Capital *(Capital 1.8)*

The capitalist advances capital both to buy labor-power and to buy nonlabor means of production, including investment in long-lived equipment and buildings. From the capitalist's point of view, both outlays are equally necessary for profitable production.

The labor theory of value, on the other hand, suggests that these two types of advance are different from a social point of view. The value of nonlabor means of production appears unchanged in the price of the finished commodity. The value advanced to purchase labor-power, on the other hand, reappears in the price of the finished commodity expanded by the amount of surplus value the unpaid labor of the workers has added to it. Marx calls the capital advanced for nonlabor means of production *constant capital*, because it does not expand in the process of production; and he calls the capital advanced to purchase labor-power *variable capital*, because this value does expand through production.

For example, suppose that in a certain year an average capitalist firm spent \$100 million on nonlabor inputs to production, of which \$20 million was depreciation on long-lived plant and equipment, \$80 million was spent on raw materials used up in the production process, and \$50 million was spent on the wages of production workers. If the firm sold its finished commodities for \$200 million, we would view \$100 million of that total price as a recovery of the costs of nonlabor inputs, or constant capital, \$50 million as the equivalent of the wages paid, or variable capital, and \$50 million as surplus value. The value added would be \$200 million less \$100 million purchased inputs, or \$100 million. Thus Marx expresses the total price of commodities as:

$$c + v + s \tag{3.6}$$

where c is constant capital (in this case, \$100 million), v is variable capital (in this case, \$50 million) and s is surplus value (in this case, also \$50 million). The value added is $v + s$, or \$100 million in the example.

The capitalist expresses the surplus value as a percentage of the total capital advanced and calls this percentage the *markup on costs.* The markup on costs is

$$q = s/(c+v) \tag{3.7}$$

which in this example is 1/3 = \$50 million/\$150 million.

From the point of view of the labor theory of value, the capacity of the capitalist system to produce surplus value depends on the rate of surplus value, $e = s/v$ (because that measures the amount by which variable capital expands in the production process), and on the *composition of capital,* $k = v/(c + v)$ (because that number expresses the proportion of the total capital outlays that actually go to purchase labor-power and hence the proportion of each dollar of capital that actually expands in the production process). (Marx often refers to the ratio $c/v = (1-k)/k$ as the *organic composition of capital.* A *fall* in k, the composition of capital, corresponds to a *rise* in c/v.) There is an identity relating the markup to the rate of surplus value and the composition of capital:

$$q = s/(c+v) = (s/v)[v/(c + v)] = ek \tag{3.8}$$

It is important not to confuse constant capital and variable capital with *fixed capital* (capital tied up in long-lived plant and equipment) and *circulating capital* (capital that turns over rapidly in production, such as wages and the value of raw materials). The depreciation on fixed capital is part of constant capital, but by no means all of it, because capital advanced to buy raw materials and other rapidly used inputs to production are also part of constant capital. The wages of production workers are a part of circulating capital, but not the whole, because circulating capital also includes the value of raw materials.

To get some sense of the magnitudes of these variables in contemporary capitalist production, we can look at the U.S. Census Bureau's *Annual Survey of Manufactures.* This survey asks every U.S. manufacturing establishment to report the value of its total output, its production wages, its nonproduction wages, its spending on purchased inputs to production, and its new investment in plant and equipment each year. From these figures it is possible to calculate the division of the price of manufactured products among the c, v, and s categories. For 1974, for example, we have, in billions of dollars,

Value of finished commodities	$c+v+s$	\$1034.2
Wages of production workers	v	125.0
Purchases of inputs	c_1	581.7
Depreciation (estimated)	c_2	13.4
Constant capital ($c_1 + c_2$)	c	595.1
Surplus value	s	314.1
Value added	$s+v$	439.1

where c_1 is the part of constant capital that goes to rapidly used-up inputs and c_2 is the part that represents the depreciation of long-lived plant and equipment.

The rate of surplus value (s/v) in U.S. manufacturing in 1974 was 2.51 (251%); the value of labor-power ($v/(s + v)$) in the narrow sense was 0.28; the composition of capital ($v/(c + v)$) was 0.17 (17% of capital outlays went to production labor); and the markup ($s/(c + v)$) was 0.44 (44%) = 2.51 × 0.17. Production workers worked about 11.2 hours of a standard 40-hour week for themselves and about 28.8 hours to produce surplus value. But only about 1/6 of the total capital advanced went to purchase labor-power; hence the overall rate of expansion of capital was 44%: each \$1 advanced resulted in \$1.44 returning to the capitalist firms in sales.

Historical changes in the rate of surplus value and in the composition of costs play a major role in the evolution of the total profitability of the system of capital and reflect basic changes in the standard of living of workers, the productivity of labor, and the technology of production.

The Explanation of Surplus Value

Marx's explanation of the origin of surplus value within the framework of the labor theory of value is of central importance to his analysis of capitalist production. Essentially, the rest of his work consists of an attempt to apply this theory to explain the actual phenomena of capitalist production.

The basic points in this explanation are, first, the idea that in the aggregate, commodities exchange at their values so that value is conserved in exchange; and, second, the distinction between labor-power (the commodity that is available to capitalists on the market) and labor (the actual expenditure of human effort in production that adds value to commodities). Surplus value is possible in the system as long as the value of labor-power is less than 1. Under these circumstances, which emerge historically through the creation of a mass of workers free to sell their labor-power and with no access to their own means of production, the surplus value appropriated by the capitalists is the result of exploitation. Workers work more hours than they receive an equivalent for in the form of the wage.

Thus the capitalist system of production, although appearing on the surface to establish an equality between all individuals as property owners (even if their property consists only of their own labor-power), rests on the private appropriation of the social surplus product by a particular class. The form through which this exploitation takes place, the selling of labor-power for a wage and the appropriation of surplus value, is specifically characteristic of capitalist production. Capitalist society develops and reproduces itself through this fundamentally contradictory process.

Neoclassical Theories of Surplus Value

It is interesting to note that neoclassical economic theory tries to explain surplus value in capitalist production within a framework of exchange of equivalents. In neoclassical economic theory, surplus value (or the profit of capital) is merely a special case of the exchange of goods and services between different time periods. The capitalist is merely, in this theory, buying labor today and selling output tomorrow. Because people prefer to consume earlier rather than later, the price of a commodity today is higher than the price of the same commodity tomorrow. Thus, if one unit of labor exchanges for one unit of output today and one unit of output today exchanges for two units of output tomorrow because of time preference, the capitalist who buys one unit of labor, uses it in production, and as a result has two units of output (worth two units of labor) tomorrow will be no better off than the worker who simply consumes a unit of output today. Because the two units of output (which include the Marxian surplus value) exist in a different time period, they are viewed as the equivalent of one unit of output in the present.

It is not clear that these two analyses are contradictory, although they give different interpretations of the same situation. The question is why there should be a discount of future goods and services against present ones. Neoclassical economic theory attributes this to the psychology of the agents, especially of the capitalists, in a context of full employment of all resources. Marxist theory argues that, on the contrary, there is no tendency for capitalist systems to employ all available resources and that the psychology of capitalists is determined by the possibility of appropriating surplus value, not the other way around. The root of this disagreement lies in the different theories of value adopted by the two schools and in the consequent different interpretations of equivalence among commodities. Neoclassical theory sees goods and services as equivalents from the subjective point of view of the consumer; Marx sees them as equivalents in the objective sense that they carry a certain part of the social labor time of the society. The same phenomenon (appropriation of surplus value) can be seen as the exchange of subjective equivalents and as objective exploitation.