Time, labor, and social domination

A reinterpretation of Marx's critical theory

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For my parents, Abraham and Evelyn Postone

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The magnitude of value

In examining Marx's analysis of the essential structuring social forms of capitalist society, I have focused thus far on his category of abstract labor and on some basic implications of his argument that the social relations characteristic of capitalism are constituted by labor. What also characterizes these social forms, according to Marx, is their temporal dimension and quantifiability. Marx introduces these aspects of the commodity form early in his discussion, when he considers the problem of the magnitude of value.[1] In discussing his treatment of that problem, I shall show its central significance in Marx's analysis of the nature of capitalist society. On this basis, I will consider more closely the differences between value and material wealth, and begin examining the issue of capitalism and temporality—which will lay the groundwork for my consideration, in the last part of this book, of Marx's conception of the trajectory of capitalist development. In the process, I shall also develop further aspects of the sociohistorical theory of knowledge and subjectivity outlined above. This will set the stage for a critical examination of Jürgen Habermas's critique of Marx, which will conclude my discussion of the trajectory of Critical Theory as an attempt to formulate a social critique adequate to the twentieth century. At that point I will be in a position to begin reconstructing Marx's category of capital.

The problem of the magnitude of value appears, at first glance, to be far simpler and more direct than that of the categories of value and abstract human labor. It has been treated by Franz Petry, Isaak Illich Rubin, and Paul Sweezy, for example, as the "quantitative theory of value" in contradistinction to the "qualitative theory of value."[2] They draw this distinction to emphasize that Marx's intention in developing his theory of value was not merely economic, in the narrower sense, but to elucidate the structure of social relations in capi-

1. Marx, *Capital,* vol. 1, trans. Ben Fowkes (London, 1976), pp. 129ff.
2. Franz Petry, *Der soziale Gehalt der Marxschen Werttheorie* (Jena, 1916), pp. 3–5, 16; Isaak Illich Rubin, *Essays on Marx's Theory of Value,* trans. Milos Samardzija and Fredy Perlman (Detroit, 1972), pp. 67, 119, 173; Paul Sweezy, *The Theory of Capitalist Development* (New York, 1969), p. 25.

talism. Leaving aside critical considerations of their specific analyses of these social relations, though, such theories do not go far enough. They undertake a qualitative analysis of the social content of value but treat the magnitude of value only in quantitative terms. The analysis of value as a historically specific social form should, however, change the terms with which the magnitude of value is considered.[3] Marx not only writes—as has frequently been cited—that political economy "has never once even asks the question why labour is expressed in value," but he also asks why "the measurement of labour by its duration is expressed in the magnitude of the value of the product."[4] The second question implies that it is not enough to undertake a qualitative examination of the form of value alone, and thereby to exclude the problem of the magnitude of value—for the latter problem also entails a qualitative social analysis.

The above-mentioned interpretations of Marx do not, to be sure, treat the problem of the magnitude of value in a narrow quantitative sense—that is, in terms of the problem of relative exchange values alone—as does political economy. They do, however, treat it only as the quantification of the qualitative dimension of value, rather than as a further qualitative determination of the social formation. Sweezy, for example, writes, "Beyond the mere determination of exchange ratios . . . the quantitative value problem . . . is nothing more or less than the investigation of the laws which govern the allocation of the labor force to different spheres of production in a society of commodity producers."[5] If, for Sweezy, the task of qualitative value theory is to analyze these laws in terms of the nature of social relations and modes of consciousness, that of quantitative value theory is to consider their nature in purely quantitative terms.[6] In a similar fashion, Rubin states:

> The basic error of the majority of Marx's critics consists of: 1) their complete failure to grasp the qualitative sociological side of Marx's theory of value and 2) their confining the quantitative side to the examination of exchange ratios. . . . [T]hey ignore the quantitative interrelations among the quantities of social labor distributed among the different branches of production and different enterprises. [The] magnitude of value [is] a regulator of the quantitative distribution of social labor.[7]

3. Generally, the point of departure for positions that emphasize a qualitative analysis of the category of value has been Marx's criticism of classical political economy for neglecting such an analysis: "It is one of the chief failings of classical political economy that it has never succeeded, through an analysis of the commodity, and in particular, of its value, in discovering the form of value. . . . Even its best representatives, Adam Smith and Ricardo, treat the form of value as something of indifference, something external to the nature of the commodity itself. The explanation for this is not simply that their attention is entirely absorbed by the analysis of the magnitude of value" (*Capital,* vol. 1, p. 174n34 [translation amended]). This, however, does not mean that political economy's analysis of the magnitude of value can be retained and simply supplemented by a qualitative analysis of the value form.
4. *Capital,* vol. 1, p. 174.
5. Sweezy, *The Theory of Capitalist Development,* pp. 33–34.
6. Ibid., p. 41.
7. Rubin, *Essays on Marx's Theory of Value,* pp. 73–74.

Petry, on the other hand, sees the "quantitative value problem" in terms of the distribution of the total value produced by the proletariat among the various classes of society in the form of revenue.[8]

These interpretations of the quantitative value problem emphasize exclusively the nonconscious regulation of the social distribution of commodities and labor (or of revenue). Such approaches, which interpret the categories of value and the magnitude of value solely in terms of the lack of conscious social regulation of distribution in capitalism, implicitly conceive of the historical negation of capitalism only in terms of public planning in the absence of private property. They do not provide an adequate basis for a categorial critique of the capital-determined form of production. The Marxian analysis of the magnitude of value is, however, an integral element of precisely such a critique: it entails a qualitative determination of the relation of labor, time, and social necessity in the capitalist social formation. By investigating the temporal dimension of Marx's categories, I shall be able to demonstrate my earlier assertion that the law of value, far from being a theory of equilibrium market mechanisms, implies both a historical dynamic and a particular material form of production.

The measure of value, according to Marx, is of a very different sort than that of material wealth. The latter form of wealth, created by the action of various sorts of concrete labor on raw materials, can be measured in terms of the objectifications of those labors, that is, by the quantities and qualities of the particular goods produced. This mode of measurement is a function of the qualitative specificity of the product, the activity that produces it, the needs it may satisfy, as well as custom—in other words, the mode of measurement of material wealth is particular and not general. For it to be the dominant measure of wealth, it therefore must be mediated by various sorts of social relations. Material wealth does not mediate itself socially; where it is the dominant social form of wealth, it is "evaluated" and distributed by overt social relations—traditional social ties, relations of power, conscious decisions, considerations of needs, and so forth. The dominance of material wealth as the social form of wealth is related to an overtly social mode of mediation.

Value, as we have seen, is a peculiar form of wealth inasmuch as it is not mediated by overt social relations but, rather, *is itself a mediation:* it is the self-mediating dimension of commodities. This is expressed by its measure, which is not a direct function of the amount of goods produced. Such a material measure, as noted, would imply a manifestly social mode of mediation. Although value, like material wealth, is an objectification of labor, it is an objectification of abstract labor. As that which constitutes a general, "objective" social mediation, abstract labor is neither expressed in terms of the objectifications of

8. Petry, *Der soziale Gehalt,* pp. 29, 50. Marx deals with the distribution of total value among the various classes in the form of revenue, however, on the logical level of price and profit, not that of value.

particular concrete labors nor measured by their quantity. Its objectification is value—a form separable from that of objectified concrete labor, that is, particular products. Similarly, the magnitude of value, the quantitative measure of the objectification of abstract labor, differs from the various physical quantities of the various commodities produced and exchanged (50 yards of cloth, 450 tons of steel, 900 barrels of oil, and so on). Yet that measure can be translated into such physical quantities. The consequent qualitative and quantitative commensurability of the commodities is an expression of the objective social mediation: it constitutes and is constituted by this mediation. Value, then, is measured not in terms of the particular objectifications of various labors, but in terms of what they all have in common, regardless of their specificity—the expenditure of labor. The measure of the expenditure of human labor that is not a function of the quantity and nature of its products is, in Marx's analysis, time: "How, then, is the magnitude of this value to be measured? By means of the quantity of the 'value-forming substance', the labour, which it contains. This quantity is measured by its duration, and the labour-time is itself measured on the particular scale of hours, days, etc."[9]

Thus, when labor itself acts as the general quasi-objective means of mediating products, this constitutes a general quasi-objective measure of wealth which is independent of the particularity of the products and, hence, of overt social ties and contexts. This measure, according to Marx, is the socially necessary expenditure of human labor time. This time, as we shall see, is a determinate, "abstract" form of time. Because of the mediating character of labor in capitalism, its measure has a socially mediating character as well. The form of wealth (value) *and* its measure (abstract time) are constituted by labor in capitalism as "objective" social mediations.

The category of abstract human labor refers to a social process that entails an abstraction from the specific qualities of the various concrete labors involved, as well as a reduction to their common denominator as human labor.[10] Similarly, the category of the magnitude of value refers to an abstraction from the physical quantities of the products exchanged as well as a reduction to a nonmanifest common denominator—the labor time involved in their production. In Chapter Four, I touched upon some social-epistemological implications of Marx's analysis of the commodity form understood as an analysis of structured forms of everyday practice that involve an ongoing process of abstraction from the concrete specificity of objects, activities, and persons, and their reduction to a general "essential" common denominator. I indicated that the emergence of the modern opposition between abstract universalism and concrete particularism could be understood in terms of that analysis. This social process of abstraction to which the commodity form refers also entails a determinate process of

9. *Capital,* vol. 1, p. 129 (translation amended).
10. Ibid., pp. 159–60.

quantification. I shall address this dimension of the commodity form of social relations in the course of investigating time itself as measure.

It is important to note at this point that Marx's assertion, in Chapter One of *Capital,* that socially necessary labor time expenditure is the measure of value, is not his full demonstration of that position. As I pointed out in Chapter Four, Marx's argument in *Capital* is immanent to his mode of presentation, to the full unfolding of the categories, wherein what is unfolded is intended to justify retroactively that which preceded it, and from which it logically was developed. We shall see that Marx seeks to support retroactively his assertion that the magnitude of value is determined in terms of socially necessary labor time by analyzing, on the basis of his initial determinations of value and its measure, the process of production in capitalism and its trajectory of development. His argument thereby seeks to justify the temporal determination of the magnitude of value as a categorial determination of both production and the dynamic of the whole, and not—as it might seem at first—simply as one of the regulation of exchange.

Abstract time and social necessity

Because abstract human labor constitutes a general social mediation, in Marx's analysis, the labor time that serves as the measure of value is not individual and contingent, but *social* and *necessary:*

> The total labour-power of society, which is manifested in the values of the world of commodities, counts here as one homogeneous mass of human labour-power. . . . Each of these individual labour-powers is the same as the others, to the extent that it has the character of socially average labour-power . . . i.e., only needs, in order to produce a commodity, the labour-time which is necessary on an average, or in other words is socially necessary.[11]

Marx defines socially necessary labor time as follows: "Socially-necessary labour-time is the labour-time required to produce any use-value under the prevailing socially normal conditions of production and with the prevalent socially average degree of skill and intensity of labour."[12] The value of a single commodity is a function not of the labor time expended on that individual object but of the amount of labor time that is socially necessary for its production: "What exclusively determines the magnitude of the value of any article is therefore the amount of labour socially necessary, or the labour-time socially necessary for its production."[13]

The determination of a commodity's magnitude of value in terms of socially necessary, or average, labor time indicates that the reference point is society as a whole. I shall not, at this point, address the problem of how this average is constituted—that it is the result of a "social process that goes on behind the backs of the producers," and that "these proportions therefore appear to the producers to have been handed down by tradition"[14]—other than to note that this "social process" involves a socially general mediation of individual action. It entails the constitution by individual action of a general external norm that acts reflexively on each individual.

The sort of necessity expressed by the term "socially necessary labor time" is a function of this reflexive, general mediation. Only at first glance does it seem to be simply a descriptive statement of the average amount of time required to produce a particular commodity. Closer consideration, however, reveals that the category is a further determination of the form of social domination constituted by commodity-determined labor—what I have termed "historically determinate" social necessity, over and against transhistorical, "natural" social necessity.

The time expended in producing a particular commodity is mediated in a socially general manner and transformed into an average that determines the magnitude of the value of the product. The category of socially necessary labor time, then, expresses a general temporal norm resulting from the action of the producers, to which they must conform. Not only is one compelled to produce and exchange commodities in order to survive, but—if one is to obtain the "full value" of one's labor time—that time must equal the temporal norm expressed by socially necessary labor time. As a category of the totality, socially necessary labor time expresses a quasi-objective social necessity with which the producers are confronted. It is the temporal dimension of the abstract domination that characterizes the structures of alienated social relations in capitalism. The social totality constituted by labor as an objective general mediation has a temporal character, wherein *time becomes necessity.*

I noted above that the level of logical abstraction of Marx's categories in Volume 1 of *Capital* is very high; it deals with the "essence" of capitalism as a whole. One strategic intention of his categorial analysis in that volume is to ground historically, in terms of the forms of social relations in capitalism, the modern opposition between the free, self-determining individual and society as an extrinsic sphere of objective necessity. This opposition is intrinsic to the value form of wealth and of social relations. Although value is constituted by the production of particular commodities, the magnitude of value of a particular commodity is, reflexively, a function of a constituted general social norm. The value of a commodity, in other words, is an individuated moment of a general social mediation; its magnitude is a function not of the labor time actually required to produce that particular commodity but of the general social mediation expressed

11. Ibid., p. 129 (translation amended).
12. Ibid. (translation amended).
13. Ibid.
14. Ibid., p. 135.

by the category of socially necessary labor time. Unlike the measure of material wealth, which is a function of the quantity and quality of particular goods, then, the measure of value expresses a determinate *relation*—namely, a relation between the particular and the abstract-general that has the form of a relation between moment and totality. Both terms of this relation are constituted by labor functioning as a productive activity and as a socially mediating activity. This double character of labor underlies the quasi-objective, abstract temporal measure of social wealth in capitalism; and it also gives rise to an opposition between the range of particular products or labors and an abstract general dimension that constitutes and is constituted by those particular labors.

On another level, the commodity as a dominant social form necessarily implies a tension and opposition between individual and society which points to a tendency toward the subsumption of the former by the latter. When labor mediates and constitutes social relations, it becomes the central element of a totality that dominates individuals—who, nevertheless, are free from relations of personal domination: "Labour, which is thus measured by time, does not seem, indeed, to be the labour of different subjects, but on the contrary the different working individuals seem to be mere organs of the labour."[15]

Capitalist society is constituted as a totality that not only stands opposed to the individuals but also tends to subsume them: they become "mere organs" of the whole. This initial determination of the subsumption of individuals by the totality in Marx's analysis of the commodity form foreshadows his later critical investigation of the process of production in capitalism as the concrete materialization of this subsumption. Far from criticizing the atomized character of individual existence in capitalism from the standpoint of the totality, as traditional interpretations imply, Marx analyzes the subsumption of individuals under abstract objective structures as a feature of the social form grasped by the category of capital. He sees this subsumption as the antinomic complement of individual atomization and argues that both moments, as well as their opposition, are characteristic of the capitalist formation. Such an analysis reveals the dangerous one-sidedness of any notion of socialism that, equating capitalism with the bourgeois mode of distribution, posits socialist society as the totality openly constituted by labor, under which individuals are subsumed.

This discussion of the temporal determination of value has been preliminary; I shall develop it more fully when I consider Marx's category of capital. Nevertheless, I can at this point consider more adequately the significance of the difference between value and material wealth in Marx's analysis. I shall then return to examining capitalism and temporality by investigating the sort of time expressed by the category of socially necessary labor time, and the more general implications of this category for a theory of social constitution.

15. Marx, *A Contribution to the Critique of the Political Economy,* trans. S. W. Ryazanskaya (Moscow, 1970), p. 30 (translation amended).

Value and material wealth

In distinguishing value from material wealth, I have analyzed the former as a form of wealth that is also an objectified social relation—which is to say, it mediates itself socially. On the other hand, the existence of material wealth as the dominant form of wealth implies the existence of overt social relations that mediate it. As we have seen, these two forms of social wealth have different measures: the magnitude of value is a function of the expenditure of abstract labor time, whereas material wealth is measured in terms of the quantity and quality of products created. This difference has significant implications for the relationship between value and the productivity of labor, and, ultimately, for the nature of the fundamental contradiction of capitalism.

The magnitude of the value of an individual commodity is, as noted, a function of the socially necessary labor time required for its production. An increase in average productivity increases the average number of commodities produced per unit of time. It thereby decreases the amount of socially necessary labor time required for the production of a single commodity and, hence, the value of each commodity. In general, "the magnitude of value of a commodity, therefore, varies directly with the quantity, and inversely with the productivity, of the labour which is realized within the commodity."[16]

Increased productivity leads to a decrease in the value of each commodity produced because less socially necessary labor time is expended. This indicates that the total value yielded in a particular period of time (for example, an hour) remains constant. The inversely proportional relationship between average productivity and the magnitude of value of a single commodity is a function of the fact that the magnitude of total value produced depends only on the amount of abstract human labor time expended. Changes in average productivity do not change the total value created in equal periods of time. Thus, if average productivity doubles, twice as many commodities are produced in a given time period, each with half the previous value, because the total value in that time period remains the same. The only determinant of total value is the amount of abstract labor time expended, measured in constant temporal units. It is, therefore, independent of changes in productivity: "The same labour, therefore, performed for the same length of time, always yields the same amount of value, independently of any changes in productivity. But it provides different quantities of use-values during equal periods of time; more, if productivity rises; fewer, if it falls."[17]

We shall see that the question of the relationship between productivity and abstract time is more complicated than indicated by this initial determination. It has, nevertheless, become clear that the Marxian category of value is not merely

16. *Capital,* vol. 1, p. 131 (translation amended).
17. Ibid., p. 137.

material wealth that, in capitalism, is mediated by the market. Qualitatively and quantitatively, value and material wealth are two very different forms of wealth, which can even be opposed: "In itself, an increase in the quantity of use-values constitutes an increase in material wealth. Two coats will clothe two men, one coat will only clothe one man, etc. Nevertheless, an increase in the amount of material wealth may correspond to a simultaneous fall in the magnitude of its value."[18]

This examination of the category of value has shown that the dominant form of social wealth in capitalism is nonmaterial, although it must be expressed in the commodity as its materialized "carrier."[19] It is an immediate function not of the use value dimension—of the material mass or quality of goods—but of the expenditure of labor time. Thus, Marx has shown that the statement with which *Capital* begins—"[t]he wealth of societies in which the capitalist mode of production prevails, appears as an 'immense collection of commodities' "[20]—is only apparently valid. In capitalism, abstract temporal measure rather than concrete material quantity is the measure of social wealth. This difference is the first determination of the possibility in capitalism that, not only for the poor, but for society as a whole, poverty (in terms of value) can exist in the midst of plenty (in terms of material wealth). Material wealth in capitalism is, ultimately, only apparent wealth.

The difference between material wealth and value is central to the Marxian critique of capitalism. It is rooted, according to Marx, in the double character of labor in that social formation.[21] Material wealth is created by concrete labor, but labor is not the sole source of material wealth;[22] rather, this form of wealth results from the transformation of matter by people with the aid of natural forces.[23] Material wealth, then, arises from the interactions of humans and nature, as mediated by useful labor.[24] As we have seen, its measure is a function of the quantity and quality of what is objectified by concrete labor, rather than of the temporal expenditure of direct human labor. Consequently, the creation of material wealth is not bound necessarily to such labor time expenditure. Increased productivity results in increased material wealth, whether or not the amount of labor time expended is increased.

It is important to note that the concrete or useful dimension of labor in capitalism has a social character different from that of the historically specific dimension of labor as socially constituting activity, that is, of abstract labor. Marx

18. Ibid., pp. 136–37.
19. Ibid., p. 126.
20. Ibid., p. 125.
21. Ibid., p. 137.
22. Ibid., pp. 134, 136–37.
23. Ibid.
24. Marx, "Critique of the Gotha Program," in Karl Marx and Frederick Engels, *Collected Works*, vol. 24: *Marx and Engels: 1874–1883* (New York, 1975), p. 81.

analyzes productivity, the "force of production of labor" [*Produktivkraft der Arbeit*] as the productivity of useful, concrete labor.[25] It is determined by the social organization of production, the level of the development and application of science, and the acquired skills of the working population, among other factors.[26] In other words, the concrete dimension of labor, as conceived by Marx, has a social character that is informed by, and encompasses aspects of, social organization and social knowledge—what I have termed the "social character of labor as productive activity"—and is not restricted to the expenditure of direct labor. Productivity, in Marx's analysis, is an expression of that social character, of the acquired productive abilities of humanity. It is a function of the concrete dimension of labor, and not of labor as it constitutes a historically specific social mediation.

The determinations of value, the dominant form of wealth in capitalism, are very different from those of material wealth. Value is peculiar in that, though a form of wealth, it does not express directly the relation of humans to nature but the relations among people as mediated by labor. Hence, according to Marx, nature does not enter directly into value's constitution at all.[27] As a social mediation, value is constituted by (abstract) labor alone: it is an objectification of the historically specific social dimension of labor in capitalism as a socially mediating activity, as the "substance" of alienated relations. Its magnitude is, then, not a direct expression of the quantity of products created or of the power of natural forces harnessed; it is, rather, a function only of abstract labor time. In other words, although increased productivity does result in more material wealth, it does not result in more value per unit of time. As a form of wealth that is also a form of social relations, value does not express directly the acquired productive abilities of humanity. (Later, in discussing Marx's conception of the category of capital, I shall examine how these productive abilities, which are determinations of the use value dimension of labor, become attributes of capital.) If value is constituted by labor alone, and the only measure of value is direct labor time, it follows that the *production of value, unlike that of material wealth, necessarily is bound to the expenditure of direct human labor.*

This distinction between value and material wealth is, as we shall see, crucial to Marx's analysis of capitalism. However, before proceeding, I should note that Marx also argues that, on the level of immediate experience, this distinction is not evident. We have seen that one of Marx's intentions in the manuscript, posthumously published and edited as Volume 3 of *Capital* is to show, on the basis of his theory of value itself, that this theory does not seem to be valid—in particular, that labor alone appears not to constitute value. One aim of Marx's discussion in Volume 3 of ground rent, for example, is to show how nature

25. *Capital*, vol. 1, p. 137.
26. Ibid., p. 130.
27. Ibid., p. 138.

can seem to be a factor in the creation of value; as a result, the distinction between the specific character of labor in capitalism and labor in general becomes unclear, as does the difference between value and material wealth.[28]

(A full exposition of Marx's analysis of the nature and development of capitalism's contradictory character should, therefore, elucidate how a categorial distinction—such as that between value and material wealth—is indeed operative socially, although the actors may be unaware of it. One would need to show how people, acting on the basis of forms of appearance that disguise the underlying essential structures of capitalism, reconstitute these underlying structures. Such an exposition would also show how these structures, as mediated by their forms of appearance, not only constitute practices that are socially constituting, but do so in a way that imparts a determinate dynamic and particular constraints to the society as a whole. However, because I seek only to clarify the nature of Marx's critical analysis of capitalist society in terms of his basic categories, I cannot address these questions fully in this work.)

The differences between value and material wealth, as expressions of the two dimensions of labor, bears on the problem of the relation between value and technology and the question of the basic contradiction of capitalism. Marx's treatment of machines should be seen in the context of his analysis of value as a historically specific form of wealth, different from material wealth. Although machines do yield increased material wealth, according to Marx, they do not create new value. Rather, they only transmit the amount of value (direct labor time) that went into their production, or they indirectly decrease the value of labor power (by decreasing the value of workers' means of consumption), and thereby increase the amount of value appropriable as surplus by the capitalists.[29] That machines create no new value is neither a paradox nor an indication of a reductionist insistence on Marx's part to posit the primacy of direct human labor as the essential social constituent of wealth, regardless of technological developments. Rather, it is based upon the difference between material wealth and value, a difference that lays the basis for what Marx analyzes as a growing contradiction between the two social dimensions expressed by the commodity form. Indeed, as we shall see, the potential of machine production plays an important role in Marx's understanding of that contradiction.

In Chapter One, I examined passages in the *Grundrisse* which indicate that capitalism's basic contradiction is not between industrial production and bourgeois relations of distribution, according to Marx, but lies within the sphere of production itself. On that basis, I argued that his analysis is a critique of labor and of production in capitalism, not a critique from the standpoint of "labor." The distinction Marx makes at the beginning of *Capital* between value and

28. Marx, *Capital,* vol. 3, trans. David Fernbach (Harmondsworth, England, 1981), pp. 751–970.
29. Marx, *Grundrisse: Foundations of the Critique of Political Economy,* trans. Martin Nicolaus (London, 1973), p. 701.

material wealth is completely consonant with, and reinforces, this interpretation. Indeed, one can infer the basic contradiction presented in the *Grundrisse* from his distinction between these two forms of wealth, as well as from the complex relationship entailed between value, productivity, and material wealth.

On the one hand—as I shall elucidate more thoroughly later—Marx's analysis indicates that the system of production grounded in value gives rise to ever-increasing levels of productivity based on changes in the organization of labor, technological developments, and the increased application of science to production. With advanced technological production, material wealth becomes a function of a high level of productivity, which depends on the wealth-creating potential of science and technology. The expenditure of direct human labor time no longer stands in any meaningful relationship to the production of such wealth. Nevertheless, according to Marx, the greater mass of material wealth produced does not, in and of itself, mean that a greater amount of the determining form of social wealth in capitalism—that is, value—has been created. Indeed, the difference between the two is crucial to Marx's argument regarding the fundamental contradiction of capitalism. Increased productivity does not, as noted, yield greater amounts of value per unit of time. For this reason, all means of increasing productivity, such as applied science and technology, do *not* increase the amount of value yielded per unit of time, but they *do* increase greatly the amount of material wealth produced.[30] What underlies the central contradiction of capitalism, according to Marx, is that value remains the determining form of wealth and of social relations in capitalism, regardless of developments in productivity; however, value also becomes increasingly anachronistic in terms of the material wealth–producing potential of the productive forces to which it gives rise.

A central moment of this contradiction is the role that direct human labor plays in the process of production. On the one hand, by inducing an enormous increase in productivity, the social forms of value and capital give rise to the possibility of a new social formation in which direct human labor would no longer be the primary social source of wealth. On the other hand, these social forms are such that direct human labor remains necessary to the mode of production and becomes increasingly fragmented and atomized. (I shall discuss the structural grounds for that persisting necessity, together with its implications for an analysis of the material form of the process of production, in Part III of this work.) According to this interpretation, Marx does not posit a necessary connection between direct human labor and social wealth, regardless of technological developments. Rather, his immanent critique claims that it is capitalism itself that does so.

The contradiction of capitalism Marx outlines in the *Grundrisse* can thus be

30. For purpose of simplicity and clarity, I am not considering questions of surplus value or the intensification of labor at this point.

understood in terms of a growing contradiction between value and material wealth—one, however, that does not appear to be such, inasmuch as the difference between these two forms of wealth is blurred on the "surface" of society, the level of immediate experience. Ultimately, one can grasp Marx's analysis of this contradiction—as should now be clear—only if one understands value as a historically specific form of wealth, measured by the expenditure of human labor time. The distinction Marx draws between value and material wealth supports my contention that his category of value is not intended to show that social wealth is always and everywhere a function of direct human labor; nor that, in capitalism, this transhistorical "truth" is veiled by various forms of mystification; nor that, in socialism, this "truth" of human existence will emerge openly. Marx *does* seek to show that, beneath the surface of appearances, the dominant social form of wealth in capitalism is indeed constituted by (abstract) labor alone—but this "essential" form itself, and not simply the surface forms that veil it, is the object of his critique. By drawing attention to the distinction between value and material wealth, I have begun to show that the critical function of Marx's "labor theory of value" is not simply to "prove" that the social surplus in capitalism is created by means of the exploitation of the working class. Rather, it provides a historical critique of the socially synthetic role played by labor in capitalism so as to point to the possibility of its abolition.

By now it should be clear that much of the discussion on how applicable Marx's categories are to the analysis of contemporary developments has been limited by the failure to distinguish between value and material wealth. This is particularly true regarding the question of the relationship between technology and value. Because the category of value has frequently been equated with that of social wealth in general, prevailing tendencies have tended to argue either that labor always is the sole social source of wealth, thereby subsuming material wealth under value, or that value is not a function of labor alone, but can be created directly by the application of science and technological knowledge, thereby subsuming value under material wealth. Paul Walton and Andrew Gamble, for example, have defended Marx's approach by emphasizing labor's unique value-creating ability. However, rather than taking into account the particularity of this form of wealth, they argue as if labor, by virtue of its special qualities, were transhistorically a unique source of social wealth.[31] Why machines do not produce value—understood simply as wealth—cannot, however, be explained convincingly. Conversely, in an attempt to account for the obvious wealth-creating possibilities of science and technology today, Joan Robinson criticizes Marx for maintaining that only human labor produces surplus value.[32] Robinson, however, also interprets the Marxian categories of value and capital in terms of

31. P. Walton and A. Gamble, *From Alienation to Surplus Value* (London, 1972), pp. 203–204.
32. Joan Robinson, *An Essay on Marxian Economics* (2d ed., London, Melbourne, Toronto, 1967), p. 18.

wealth in general, rather than as specific forms of wealth and of social relations. Hence she does not distinguish between what produces material wealth and what produces value. Instead, she reifies capital as wealth per se: "It is more cogent to say that capital, and the application of science to industry, are immensely productive, and that the institutions of private property, developing into monopoly, are deleterious precisely because they prevent us from having as much capital, and the kind of capital, that we need."[33] By equating value and capital with material wealth, Robinson's approach necessarily identifies the social relations of capitalism in a traditional manner, with private property.

Interpretations that posit the Marxian category of value as a transhistorically valid category of wealth or, conversely, interpret its increasingly anachronistic character as an indication of the theoretical inadequacy of the category, conflate value and material wealth. Such approaches empty Marx's category of value of its historical specificity and cannot grasp his conception of the contradictory character of the basic social forms underlying capitalist society. They tend to view the mode of production as an essentially technical process impinged upon by social forces and institutions; and they tend to see the historical development of production as a linear technological development that may be restrained by extrinsic social factors such as private property, rather than as an intrinsically technical-social process whose development is contradictory. Such interpretations, in short, fundamentally misunderstand the nature of Marx's critical analysis.

Marx's analysis of the differences between value and material wealth is central to his conception of the contradictory character of capitalist society. He argues that value indeed is not adequate to the wealth-producing potential of science and technology and, yet, that it remains the basic determination of wealth and social relations in capitalism. This contradiction is ultimately rooted in the duality of labor in capitalism. It structures a growing internal tension that gives form to a broad range of historical developments and social phenomena in capitalist society. In Part III of this work, I shall address the questions of the intrinsic dynamic of capitalist society, and of the concrete configuration of capitalism's process of production in terms of this internal tension. I shall argue that the mode of production in capitalism should be understood not in terms of technical "forces of production" separate from social "relations of production" but in terms of the contradiction between value and material wealth, that is, as a materialized expression of both dimensions of labor in capitalism and, hence, of both the forces and the relations of production.[34] (I shall also suggest that

33. Ibid., p. 19.
34. In his attempt to conceptualize recent changes in capitalist society, Claus Offe treats the two dimensions of labor in capitalism as two different sorts of labor, which he distinguishes on the basis of whether their products are created for the market. (See Claus Offe, "Tauschverhältnis und politische Steuerung: Zur Aktualität des Legitimationsproblems," in *Strukturprobleme des kapitalistischen Staates* [Frankfurt, 1972], pp. 29–31.) He defines abstract labor as "produc-

that contradiction provides a point of departure for analyzing, on a very abstract level, the problem of the historical transformation of needs and consciousness as expressed, for example, by different social movements.)

I shall interpret the dynamic of capitalism in terms of a dialectic of labor and time which is rooted in the duality of the structuring social forms of this society. In order to do so, however, I must first examine the abstract form of time associated with socially necessary labor time and consider the social-epistemological implications of my discussion of the temporal dimension of Marx's categories.

Abstract time

In discussing the magnitude of value, I have examined the "social" as well as the "necessary" aspects of socially necessary labor time. But which sort of time are we dealing with? As is well known, notions of time vary culturally and historically—the most commonly expressed distinction being that between cyclical and linear conceptions of time. For example, G. J. Whitrow points out that time understood as a kind of linear progression measured by the clock and calendar generally superseded cyclical conceptions of time in Europe only within the past several centuries.[35] I shall consider various forms of time (as well as various conceptions of time) and distinguish them in another way—namely,

tive," that is, surplus value–producing labor, and concrete labor as "nonproductive" labor. Offe argues that the growth of state and service sectors in late capitalism involves an increase of "concrete labor" that neither produces commodities nor is a commodity. This results in a dualism of capitalist and noncapitalist elements (p. 32). According to Offe, although such forms of "concrete labor" may ultimately be functional for the creation of value, they are not bound to the commodity form and, thus, lead to an erosion of social legitimation based on the exchange of equivalents.

Offe's approach differs from Marx's in several important respects. The Marxian categories of abstract and concrete labor do not refer to two different kinds of labor; moreover, the category of productive labor and that of labor power as a commodity are not identical. Whereas the Marxian dialectic of the two dimensions of labor in capitalism points to the historical possibility of a society based on very different forms of labor, what Offe calls noncapitalist labor does not represent such a qualitatively different form. It seems that Offe's intention is to account for popular dissatisfaction with existing forms of labor by arguing that greater identification with, and importance of, job content characterizes the service sector (p. 47). While this may be true of some very specific parts of that sector, this thesis is questionable as a general explanation in light of the fact that the greatest increases in the service sector apparently have been in the areas of janitorial, cleaning, kitchen, and domestic work (see Harry Braverman, *Labor and Monopoly Capitalism* [New York and London, 1974], p. 372). The main thrust of Offe's argument is that the essential determinant of capitalism and the basis of its social legitimation is the market, which is increasingly undermined with the growth of the state and service sectors. His basic assumption is that the Marxian critique of capitalism can be adequately grasped as a critique of its form of legitimation—and that the basis of that legitimation can be identified with the market.

35. G. J. Whitrow, *The Nature of Time* (Harmondsworth, England, 1975), p. 11.

whether time is a dependent or an independent variable—in order to investigate the relation of the category of socially necessary labor time to the nature of time in modern capitalist society and to the historically dynamic character of that society.

I shall term "concrete" the various sorts of time that are functions of events: They are referred to, and understood through, natural cycles and the periodicities of human life as well as particular tasks or processes, for example, the time required to cook rice or to say one *paternoster*.[36] Before the rise and development of modern, capitalist society in Western Europe, dominant conceptions of time were of various forms of concrete time: time was not an autonomous category, independent of events, hence, it could be determined qualitatively, as good or bad, sacred or profane.[37] Concrete time is a broader category than is cyclical time, for there are linear conceptions of time which are essentially concrete, such as the Jewish notion of history, defined by the Exodus, the Exile, and the coming of the Messiah, or the Christian conception in terms of the Fall, the Crucifixion, and the Second Coming. Concrete time is characterized less by its direction than the fact that it is a dependent variable. In the traditional Jewish and Christian notions of history, for example, the events mentioned do not occur within time, but structure and determine it.

The modes of reckoning associated with concrete time do not depend on a continuous succession of constant temporal units but either are based on events—for example, repetitive natural events such as days, lunar cycles, or seasons—or on temporal units that vary. The latter mode of time reckoning—which probably was first developed in ancient Egypt, spread widely throughout the ancient world, the Far East, the Islamic world, and was dominant in Europe until the fourteenth century—used units of variable length to divide day and night into a fixed number of segments.[38] That is, daily periods of daylight and darkness were each divided equally into twelve "hours" that varied in length with the seasons.[39] Only on the equinoxes was a daylight "hour" equal to a

36. E. P. Thompson, "Time, Work-Discipline and Industrial Capitalism," *Past and Present* 38 (1967), p. 58. Thompson's article, which is rich in ethnographic and historical materials, is an excellent account of the changes in time apprehension, time measure, and the relation of labor and time concomitant with the development of industrial capitalism.
37. Aaron J. Gurevich, "Time as a Problem of Cultural History," in L. Gardet et al., *Cultures and Time* (Paris, 1976), p. 241.
38. Whitrow, *The Nature of Time*, p. 23; Gustav Bilfinger, *Die mittelalterlichen Horen und die modernen Stunden* (Stuttgart, 1892), p. 1.
39. The Babylonians and the Chinese apparently had a system of subdividing the day into constant temporal units: see Joseph Needham, Wang Ling, and Derek de Solla Price, *Heavenly Clockwork: The Great Astronomical Clocks of Medieval China* (2d ed., Cambridge, England, 1986), p. 199ff.; Gustav Bilfinger, *Die babylonische Doppelstunde: Eine chronologische Untersuchung* (Stuttgart, 1888), pp. 5, 27–30. Nevertheless, as I shall briefly explain later, these constant time units cannot be equated with modern constant hours and do not imply a conception of time as an independent variable.

nocturnal "hour." These variable time units are frequently referred to as "variable" or "temporal" hours.[40] Such a form of time reckoning seems to be related to modes of social life strongly dominated by agrarian, "natural" rhythms of life and work that depend on the cycles of the seasons and of day and night. A relationship exists between the measure of time and the sort of time involved. The fact that the time unit is not constant, but itself varies, indicates that this form of time is a dependent variable, a function of events, occurrences, or actions.

"Abstract time," on the other hand, by which I mean uniform, continuous, homogeneous, "empty" time, is independent of events. The conception of abstract time, which became increasingly dominant in Western Europe between the fourteenth and seventeenth centuries, was expressed most emphatically in Newton's formulation of "absolute, true and mathematical time [which] flows equably without relation to anything external."[41] Abstract time is an independent variable; it constitutes an independent framework within which motion, events, and action occur. Such time is divisible into equal, constant, nonqualitative units.

The conception of time as an independent variable with phenomena as its function was developed only in modern Western Europe, according to Joseph Needham.[42] Such an understanding, which is related to the idea of motion as a change of place functionally dependent on time, did not exist in ancient Greece, the Islamic world, early medieval Europe, India, or China (although constant time units did exist in the latter). The division of time into commensurable, interchangeable segments would have been alien to the world of antiquity and the early Middle Ages.[43] Abstract time, then, is historically unique—but under what conditions did it emerge?

The origins of abstract time should be sought in the prehistory of capitalism, in the late Middle Ages. It can be related to a determinate, structured form of social practice that entailed a transformation of time's social significance in some spheres of European society in the fourteenth century and, by the end of the seventeenth century, was well on its way to becoming socially hegemonic. More specifically, the historical origins of the conception of abstract time should be seen in terms of the constitution of the social reality of such time with the spread of the commodity-determined form of social relations.

40. Whitrow, *The Nature of Time,* p. 23; Bilfinger, *Die mittelalterlichen Horen,* p. 1.
41. Isaac Newton, *Principia,* as quoted in L. R. Heath, *The Concept of Time* (Chicago, 1936), p. 88. Newton did, to be sure, distinguish between absolute time and relative time. He referred to relative time as "some sensible and external . . . measure of duration by the means of motion . . . which is commonly used instead of true time, such as the hour, a day, a month, a year" (ibid.). The fact that he did not distinguish among those units, however, implies that Newton considered relative time to be a mode of sensuous approximation to absolute time, rather than another form of time.
42. Joseph Needham, *Science in Traditional China* (Cambridge, Mass., and Hong Kong, 1981), p. 108.
43. Gurevich, "Time as a Problem of Cultural History," p. 241.

As noted, in medieval Europe until the fourteenth century, as in antiquity, time was not conceptualized as continuous. The year was divided qualitatively according to the seasons and the zodiac—whereby each time period was considered to exert its own particular influence[44]—and the day was divided into the variable hours of antiquity, which served as the basis for the *horae canonicae,* the canonical hours of the Church.[45] To the extent that time was kept in medieval Europe, then, it was the Church's time that was kept.[46] This mode of time reckoning was transformed dramatically in the course of the fourteenth century: according to Gustav Bilfinger, modern, or constant, hours began to appear in European literature in the first half of that century and, by the beginning of the fifteenth century, generally had displaced the variable hours of classical antiquity and the canonical hours.[47] This historical transition from a mode of time reckoning based on variable hours to one based on constant hours implicitly marks the emergence of abstract time, of time as an independent variable.

The transition in time reckoning to a system of commensurable, interchangeable, and invariable hours is very closely related to the development of the mechanical clock in Western Europe in the very late thirteenth century or the early fourteenth century.[48] The clock, in Lewis Mumford's words, "dissociated time from human events."[49] Nevertheless, the emergence of abstract time cannot be accounted for solely with reference to a technical development such as the invention of the mechanical clock. Rather, the appearance of the mechanical clock itself must be understood with reference to a sociocultural process that it, in turn, strongly reinforced.

Many historical examples indicate that the development of a mode of time reckoning based upon such interchangeable and invariable time units must be understood socially and cannot be understood in terms of the effects of technology alone. Until the development of the mechanical clock (and its refinement in the seventeenth century by Christiaan Huygens's invention of the pendulum clock), the most sophisticated widely known form of timekeeper was the clepsydra, or water clock. Various kinds of water clocks were used in Hellenistic

44. Whitrow, *The Nature of Time,* p. 19.
45. David S. Landes, *Revolution in Time* (Cambridge, Mass., and London, 1983), p. 403n15; Bilfinger, *Die mittelalterlichen Horen,* pp. 10–13. According to Bilfinger, the origins of the canonical hours are to be sought in the Romans' division of the day into four watches, which were based on the "temporal" hours and to which an additional two time points were added in the early Middle Ages.
46. Landes, *Revolution in Time,* p. 75; Jacques Le Goff, "Merchant's Time and Church's Time in the Middle Ages," in *Time, Work, and Culture in the Middle Ages,* trans. Arthur Goldhammer (Chicago and London, 1980), pp. 29, 30, 36.
47. Bilfinger, *Die mittelalterlichen Horen,* p. 157.
48. Landes, *Revolution in Time,* pp. 8, 75; Bilfinger, *Die mittelalterlichen Horen,* p. 157; Le Goff, "Labor Time in the 'Crisis' of the Fourteenth Century," in *Time, Work, and Culture in the Middle Ages,* p. 43.
49. Lewis Mumford, *Technics and Civilization* (New York, 1934), p. 15.

and in Roman society and were widespread in both Europe and Asia.[50] What is significant for our purposes is the fact that, although water clocks operated on the basis of a roughly uniform process—the flow of water—they were used to indicate variable hours.[51] This generally was effected by constructing those parts of the clock that indicated the time in such a way that, although the rate of the water's flow remained constant, the indicator varied with the seasons. Less frequently, a complicated mechanism was devised that allowed the flow of water itself to be varied seasonally. On this basis, complex water clocks that marked the (variable) hours with ringing bells were constructed. (Such a clock apparently was sent as a gift by Caliph Haroun al-Rashid to Charlemagne in 807.)[52] In either case, it would have been technically simpler to mark constant uniform hours with water clocks. That variable hours were marked was, therefore, clearly not because of technical constraints. Rather, the grounds seems to have been social and cultural: variable hours apparently were significant, whereas equal hours were not.

The example of China clearly indicates that the problem of the emergence of abstract time and the mechanical clock is a social and cultural one, and not merely a matter of technical ability or of the existence of any sort of constant time units. In many respects, the level of technological development in China was higher than that of medieval Europe prior to the fourteenth century. Indeed, some Chinese innovations such as paper and gunpowder were seized upon by the West, with important consequences.[53] Yet the Chinese did not develop the mechanical clock or any other timekeeping device that both marked equal hours *and* was used primarily for that purpose in organizing social life. This seems particularly puzzling inasmuch as the older system of variable hours, which had been in use after about 1270 B.C. in China, had been superseded by a system of constant hours: one system of time reckoning used in China after the second century B.C. was the Babylonian system of dividing the full day into twelve equal, constant "double hours."[54] Moreover, the Chinese developed the technical ability to measure such constant hours. Between A.D. 1088 and 1094, Su Sung, a diplomat and administrator, coordinated and planned the construction of a gigantic water-driven astronomical "clocktower" for the Chinese emperor.[55] This "clock" was perhaps the most sophisticated of various clockwork drive mechanisms developed in China between the second and the fifteenth

50. Landes, *Revolution in Time,* p. 9.
51. Bilfinger, *Die mittelalterlichen Horen,* p. 146; Landes, *Revolution in Time,* pp. 8, 9.
52. Bilfinger, *Die mittelalterlichen Horen,* pp. 146, 158–59; Landes, *Revolution in Time,* fig. 2 (following p. 236).
53. Needham, *Science in Traditional China,* p. 122.
54. See Needham et al., *Heavenly Clockwork,* pp. 199–203; Bilfinger, *Die babylonische Doppelstunde,* pp. 45–52. (I am indebted to Rick Biernacki for drawing my attention to the problem of the constant hours used in China.)
55. Landes, *Revolution in Time,* pp. 17–18; Needham et al., *Heavenly Clockwork,* pp. 1–59.

centuries.[56] It was primarily a mechanism for displaying and studying the movements of the heavenly bodies, but it also showed constant hours and "quarters" (*k'o*).[57] Nevertheless, neither this device nor its marking of equal hours seems to have had much social effect. No such devices—not even smaller and modified versions—were produced on a large scale and used to regulate daily life. Neither a lack of technological sophistication nor ignorance of constant hours, then, can account for the fact that the mechanical clock was not invented in China. What seems more important is that the constant "double hours" were apparently not significant in terms of the organization of social life.

According to David Landes, there was little social need in China for time expressed in constant units, such as hours or minutes. Life in the countryside and in the cities was regulated by the diurnal round of natural events and chores, and the notion of productivity, in the sense of output per unit time, was unknown.[58] Moreover, to the extent that urban timekeeping was regulated from above, it seems to have been with reference to the five "night watches," which were variable time periods.[59]

If this was the case, what was the significance of the constant "double hours" used in China? Although a full discussion of this problem lies beyond the bounds of this work, it is significant that those time units were not numbered serially, but bore names.[60] This not only meant that there were no unambiguous ways to announce each hour (for example, by drum or gong), but suggests that those time units, although equal, were not abstract—that is, commensurable and interchangeable. This impression is reinforced by the fact that the twelve "double hours" were linked in a one-to-one correspondence with the astronomical succession of signs of the zodiac, which are certainly not interchangeable units.[61] There was a conscious paralleling of the daily and yearly course of the sun, with the "months" and the "hours" bearing the same names.[62] Together, this system of signs designated a harmonious, symmetrical cosmic system.

It seems, however, that this "cosmic system" did not serve to organize what we would regard as the "practical" realm of everyday life. We have already seen that the Chinese waterwheel towers were intended not primarily as clocks but as astronomical devices. Hence, as Landes notes, their accuracy was checked "not by comparing the time with the heavens, but a copy of the heavens with the heavens."[63] This apparent separation between that aspect of the cosmic system inscribed in the Chinese clockwork mechanisms and the "practical"

56. Needham et al., *Heavenly Clockwork,* pp. 60–169.
57. Landes, *Revolution in Time,* pp. 18, 29–30.
58. Ibid., p. 25.
59. Ibid., p. 26, p. 396n24; Needham et. al., *Heavenly Clockwork,* pp. 199, 203–5.
60. Landes, *Revolution in Time,* p. 27.
61. Needham et al., *Heavenly Clockwork,* p. 200.
62. Bilfinger, *Die babylonische Doppelstunde,* pp. 38–43.
63. Landes, *Revolution in Time,* p. 30.

realm is also suggested by the fact that, although the Chinese measured the solar year, they used a lunar calendar to coordinate social life.[64] They also did not use the twelve "houses" of their "Babylonian" zodiac to locate the position of heavenly bodies, but used a twenty-eight-part "moon-zodiac" to that end.[65] Finally, as already noted, the constant "double hours" used in China apparently did not serve to organize everyday social life; that Su Sung's technical device made no difference in this regard suggests, therefore, that the constant "Babylonian" time units used in China were not the same sorts of constant time units as those associated with the mechanical clock. They were not really units of abstract time, of time as an independent variable with phenomena as its function; rather, they might best be understood as units of "heavenly" concrete time.

The origin of abstract time, then, seems to be related to the organization of social time. Abstract time, apparently, cannot be understood solely in terms of invariable time units any more than its origins can be attributed to technical devices. Just as the Chinese waterwheel towers effected no change in the temporal organization of social life, the introduction of mechanical clocks into China in the late sixteenth century by the Jesuit missionary Matteo Ricci was without effect in this regard. Large numbers of European clocks were imported into China for members of the Imperial Court and other high-ranking persons, and inferior copies even were produced there. However, they apparently were regarded and used essentially as toys; they seem not to have acquired practical social significance.[66] Neither life nor work in China had been organized on the basis of constant time units or became so organized because of the introduction of the mechanical clock.[67] The mechanical clock, then, does not, in and of itself, necessarily give rise to abstract time.

This conclusion is further reinforced by the example of Japan. There, the older, variable hours were retained after the mechanical clock was adopted from the Europeans in the sixteenth century. The Japanese even modified the mechanical clock by constructing movable numerals on the dials of their clocks, which were adjusted to indicate the traditional variable hours.[68] When constant hours were adopted in Japan in the latter third of the nineteenth century, it was not as a result of the introduction of the mechanical clock, but as part of the program of economic, social, and scientific adjustment to the capitalist world which marked the Meiji Restoration.[69]

One final example from Europe should suffice to demonstrate that the historical emergence of constant hours of abstract time should be understood in terms

64. Bilfinger, *Die babylonische Doppelstunde,* pp. 33, 38.
65. Ibid., p. 46.
66. Landes, *Revolution in Time,* pp. 37–52; Carlo M. Cipolla, *Clocks and Culture, 1300–1700* (London, 1967), p. 89.
67. Landes, *Revolution in Time,* p. 44.
68. Ibid., p. 77.
69. Ibid., p. 409n13; Wilhelm Brandes, *Alte japanische Uhren* (Munich, 1984), pp. 4–5.

of their social significance. The *Libros del Saber de Astronomia,* a book prepared for King Alfonso X of Castile in 1276, describes a clock that was to be driven by a weight attached to a wheel internally divided into compartments partially filled with mercury, which would act as an inertial brake.[70] Although the mechanism was such that this clock could have shown invariable hours, the dial was to be constructed to indicate variable hours.[71] And although the bells that were to be attached to this clock would, because of the nature of the mechanism, have struck regular hours, the book's author did not see these as meaningful time units.[72]

The dual problem of the origins of time understood as an independent variable and of the development of the mechanical clock should, then, be examined in terms of the circumstances under which constant invariable hours became meaningful forms of the organization of social life.

Two institutionalized contexts of social life in medieval Europe were characterized by a heightened concern with time and its measurement: monasteries and the urban centers. In the monastic orders in the West, prayer services had been temporally ordered and bound to the variable hours by the Benedictine rule in the sixth century.[73] This ordering of the monastic day became established more firmly, and the importance of time discipline became emphasized more strongly in the eleventh, twelfth, and thirteenth centuries. This was particularly true of the Cistercian order, founded at the beginning of the twelfth century, which undertook relatively large-scale agricultural, manufacturing, and mining projects, and which emphasized time discipline in the organization of work as much as in the organization of prayer, eating, and sleeping.[74] Time periods were marked off for the monks by bells, which were rung by hand. There seems to have been a relation between this increased emphasis on time and an increased demand for, and improvements in, water clocks in the twelfth and thirteenth centuries. The water clocks presumably were needed in order to ascertain more accurately when the (variable) hours should be struck. In addition, crude forms of "timers," outfitted with bells, which may have been mechanically driven, were used to awaken the monks who rang the bells for the night service.[75]

In spite of the monastic emphasis on time discipline and the improvements of timekeeping mechanisms associated with it, however, the transition from a system of variable hours to one of constant hours, and the development of the mechanical clock, apparently did not originate in the monasteries, but in the urban centers of the late Middle Ages.[76] Why was this the case? By the begin-

70. Landes, *Revolution in Time,* p. 10.
71. Bilfinger, *Die mittlelalterlichen Horen,* p. 159.
72. Ibid., p. 160.
73. Landes, *Revolution in Time,* p. 61.
74. Ibid., pp. 62, 69.
75. Ibid., pp. 63, 67–69.
76. Ibid., pp. 71–76; Bilfinger, *Die mittelalterlichen Horen,* pp. 160–65; Le Goff, "Labor Time in the 'Crisis,' " pp. 44–52.

ning of the fourteenth century, the urban communes of Western Europe, which had grown and benefited greatly from the economic expansion of the previous centuries, began using a variety of striking bells to regulate their activities. City life was increasingly marked by the pealings of a broad array of bells that signaled the opening and closing of various markets, indicated the beginning and end of the workday, heralded various assemblies, marked the curfew and the time after which alcohol no longer could be served, and warned of fire or danger, and so on.[77] Like the monasteries, the towns, then, had developed a need for greater time regulation.

However, the fact that a system of *constant* hours arose in the towns but not in the monasteries indicates a significant difference. That difference, according to Bilfinger, was rooted in the very different interests involved with regard to maintaining the older system of time reckoning. At issue was the relation of the definition and social control of time to social domination. Bilfinger argues that the Church may have been interested in measuring time, but was not at all interested in changing the old system of variable hours (the *horae canonicae*), which had become closely tied to its dominant position in European society.[78] The towns, on the other hand, had no such interest in maintaining that system and, therefore, were able to exploit fully the invention of the mechanical clock in introducing a new system of hours.[79] The development of constant hours, then, was rooted in the transition from a churchly division of time to a secular one, according to Bilfinger, and was related to the flowering of the urban bourgeoisie.[80] This argument, in my opinion, is underspecified. Bilfinger focuses on the factors that hindered the Church's adoption of a system of constant hours, and notes the lack of such constraints among the urban bourgeoisie. This implies that the system of constant hours resulted from a technical innovation in the absence of social constraints. As I have indicated, however, the technical means for measuring constant hours existed long before the fourteenth century. Moreover, the mere absence of reasons not to adopt constant hours does not seem sufficient to explain why they were adopted.

David Landes has suggested that the system of constant hours was rooted in the temporal organization of the "man-made" day of town dwellers, which differed from that of the "natural" day of peasants.[81] However, the differences between an urban and a rural environment, and between the sorts of work done in each, are an insufficient explanation: after all, large cities existed in many parts of the world long before the rise of a system of constant hours in Western European cities. Landes himself notes of China, that the pattern of life and work in the cities and the countryside were regulated by the same diurnal round of

77. Bilfinger, *Die mittelalterlichen Horen,* pp. 163–65.
78. Ibid., pp. 158–60.
79. Ibid., p. 163.
80. Ibid., p. 158.
81. Landes, *Revolution in Time*, p. 72.

natural events.[82] Moreover, the urban workday in medieval European towns until the fourteenth century—which was marked off approximately by the *horae canonicae*—was also defined in terms of variable "natural" time, from sunrise until sunset.[83]

The transition from variable to constant time units in the European urban centers in the fourteenth century cannot, then, be understood adequately in terms of the nature of town life *per se.* Rather, a more specific reason, one that can ground this transition socially, is needed. The different relationship to time implied by the two systems is not only a matter of whether or not time discipline plays an important role in structuring the daily course of life and work; such discipline, as we have seen, was very much a feature of monastic life. Rather, the difference between a system of variable hours and one of constant hours also is expressed in two different sorts of time discipline. Although the form of life developed in the medieval monasteries was regulated strictly by time, this regulation was effected in terms of a series of time points, which marked when various activities were to be done. This form of time discipline does not demand, imply, or depend upon constant time units; it is quite distinct from a form of time discipline in which time units serve as the *measure* of activity. As I shall show, the transition to constant time units should be further specified in terms of a new form of social relations, a new social form that cannot be grasped fully in terms of sociological categories such as "peasant life" and "urban life," and that is bound to abstract time.

Jacques Le Goff, in his investigation of this transition—which he describes as the transition from Church's time to merchants' time,[84] or from medieval time to modern time[85]—focuses on the proliferation of various sorts of bells in medieval European towns, especially the work bells, which appeared and spread quickly in the cloth-producing towns of the fourteenth century.[86] On the basis of Le Goff's discussion, I shall briefly suggest how the work bells might have played an important role in the emergence of a system of constant time units and, relatedly, of the mechanical clock. The work bells themselves were an expression of a new social form that had begun to emerge, particularly within the medieval cloth-making industry. This industry did not produce primarily for the local market, like most medieval "industries," but, along with the metal industry, was the first that engaged in large-scale production for export.[87] The craftsmen of most other industries sold what they produced, but in the textile industry there was a strict separation between the cloth merchants, who distrib-

82. Ibid., p. 25.
83. Le Goff, "Labor Time in the 'Crisis,' " p. 44.
84. Le Goff, "Merchant's Time," pp. 29–42.
85. Le Goff, "Labor Time in the 'Crisis,' " pp. 43–52.
86. Ibid., pp. 47–48. David Landes also focuses on the significance of the work bells: See *Revolution in Time,* pp. 72–76.
87. Henri Pirenne, *Belgian Democracy,* trans. J. V. Saunders (Manchester, 1915), p. 92.

uted the wool to the workers, collected the finished cloth from them and sold it, and the workers, many of whom were "pure" wage earners, possessing only their labor power. The work generally was done in small workrooms that belonged to master weavers, fullers, dyers, and shearmen, who owned or rented the equipment, such as the looms, received the raw material as well as the wages from the cloth merchants, and supervised the hired workers.[88] The organizing principle of the medieval cloth industry, in other words, was an early form of the capital–wage labor relationship. It was a form of relatively large-scale, privately controlled production for exchange (that is, for profit) based upon wage labor, and it both presupposed and contributed to the growing monetarization of some sectors of medieval society. Implicit in this form of production is the importance of productivity. The merchants' goal, profit, depended in part on the difference between the worth of the cloth produced and the wages they paid—that is, on the productivity of the labor they had hired. Thus, productivity—which, according to Landes, had been an unknown category in China (as opposed to "busyness")[89]—was constituted, at least implicitly, as an important social category in the textile industry of medieval Western Europe.

The productivity of labor depended, of course, on the degree to which it could be disciplined and coordinated in a regularized fashion. This, according to Le Goff, became an increasingly contentious issue between textile workers and employers as a result of the economic crisis of the late thirteenth century, which strongly affected the cloth-making industry.[90] Because workers were paid by the day, conflict became focused on the length and definition of the work day.[91] It seems that it was the workers who, at the beginning of the fourteenth century, demanded initially that the work day be lengthened in order to increase their wages, which had declined in real value as a result of the crisis. Very quickly, however, the merchants seized upon the issue of the length of the work day and tried to turn it to their advantage by regulating it more closely.[92] It was in this period, according to Le Goff, that work bells, which publicly marked the beginning and end of the work day, as well as the intervals for meals, spread throughout the textile-producing towns of Europe.[93] One of their primary functions was to coordinate the working time of large numbers of workers. The cloth-producing towns of Flanders of the time were like large factories. Their streets were filled in the morning with thousands of workers on their way to the workshops, where they began and ended their work to the stroke of the municipal work bell.[94]

88. Ibid., pp. 92, 96, 97.
89. Landes, *Revolution in Time,* p. 25.
90. Le Goff, "Labor Time in the 'Crisis,' " pp. 45–46.
91. Landes, *Revolution in Time,* pp. 73–74.
92. Le Goff, "Labor Time in the 'Crisis,' " p. 45.
93. Ibid.
94. Eleanora Carus-Wilson, "The Woolen Industry," in M. Postan and E. E. Rich, eds., *The Cambridge Economic History of Europe* (Cambridge, 1952), vol. 2, p. 386.

Equally important, the work bells marked a time period—the work day—that previously had been determined "naturally," by sunrise and sunset. The workers' demands for a longer work day (that is, longer than the daylight period), already implied a loosening of the tie to "natural" time and the emergence of a different measure of duration. To be sure, this did not mean that a system of standard, equal hours was introduced immediately; there was a transition period during which it is not clear whether the hours of the working day continued to be the older variable hours, which changed with the seasons, or were standardized initially at a summer length and a winter length.[95] Nevertheless, it could be argued that the move toward equal time units was potentially present once a regularized and standardized work day no longer bound directly to the diurnal cycle was constituted historically. The work day had come to be defined in terms of a temporality that was not a dependent variable of the seasonal variations in the length of daylight and darkness. This is the significance of the fact that the focal issue of workers' struggles in the 14th century was the duration of the work day.[96] The length of the work day is not an issue when it is determined "naturally," by sunrise and sunset; that it became an issue and was determined by the outcome of struggle rather than by tradition implies a transformation in the social character of temporality. The struggle over the length of the work day not only is, as Anthony Giddens notes, "the most direct expression of class conflict in the capitalist economy,"[97] but it also expresses and contributes to the social constitution of time as an abstract measure of activity.

Temporality as a measure of activity is different from a temporality measured by events. It implicitly is a uniform sort of time. The system of work bells, as we have seen, developed within the context of large-scale production for exchange, based upon wage labor. It expressed the historical emergence of a de facto social relationship between the level of wages and labor output as measured temporally—which, in turn, implied the notion of productivity, of labor output per unit time. In other words, with the rise of early capitalist forms of social relations in the cloth-producing urban communes of Western Europe, a form of time emerged that was a measure of, and eventually a compelling norm for, activity. Such a time is divisible into constant units; and within a social framework constituted by the emerging commodity form, such units also are socially meaningful.

I am suggesting, then, that the emergence of such a new form of time was related to the development of the commodity form of social relations. It was rooted not only in the sphere of commodity production but in that of commodity circulation as well. With the organization of commercial networks in the Med-

95. Sylvia Thrupp, "Medieval Industry 1000–1500," in Carlo M. Cipolla, ed., *The Fontana Economic History of Europe* (Glasgow, 1972), vol. 1, p. 255.
96. Le Goff, "Labor Time in the 'Crisis,' " p. 47.
97. Anthony Giddens, *A Contemporary Critique of Historical Materialism* (London and Basingstoke, 1981), p. 120.

iterranean and the region dominated by the Hanseatic League, increased emphasis was placed on time as a measure. This occurred because of the crucial question of the duration of labor in production, and because factors such as the duration of a commercial voyage or the fluctuation of prices in the course of a commercial transaction became increasingly important objects of measurement.[98]

It was within this social context that mechanical clocks were developed in Western Europe. The introduction of striking clocks placed on towers and owned by the municipalities (not the Church) occurred shortly after the system of work bells had been introduced, and spread very rapidly throughout the major urbanized areas of Europe in the second quarter of the fourteenth century.[99] Mechanical clocks certainly did contribute to the spread of a system of constant hours; by the end of the fourteenth century the sixty-minute hour was firmly established in the major urbanized areas of Western Europe, replacing the day as the fundamental unit of labor time.[100] This account has suggested, however, that the origins of such a temporal system and the eventual emergence of a conception of abstract mathematical time cannot be attributed to the invention and spread of the mechanical clock. Rather, this technical invention itself, as well as the conception of abstract time, must be understood in terms of the "practical" constitution of such time, that is, with reference to an emergent form of social relations that gave rise to constant time units and, hence, abstract time, as socially "real" and meaningful.[101] As A. C. Crombie notes, "By the time Henri de Vick's mechanical clock, divided into 24 equal hours, had been set up on the Palais Royale in Paris in 1370, the time of practical life was on the way to becoming abstract mathematical time of units on a scale that belongs to the world of science."[102]

Although abstract time arose socially in the late Middle Ages, it did not become generalized until much later. Not only did rural life continue to be governed by the rhythms of the seasons, but even in the towns, abstract time impinged directly upon only the lives of merchants and the relatively small number of wage earners. Moreover, abstract time remained local time for centuries; that large areas share the same time is a very recent development.[103] Even

98. Le Goff, "Merchant's Time," p. 35; Kazimierz Piesowicz, "Lebensrhythmus und Zeitrechnung in der vorindustriellen und in der industriellen Gesellschaft," *Geschichte in Wissenschaft und Unterricht* 31, no. 8 (1980), p. 477.
99. Le Goff, "Labor Time in the 'Crisis,' " p. 49.
100. Ibid.
101. David Landes, for example, seems to have grounded the change in the units of time in the mechanical clock itself: see *Revolution in Time,* pp. 75–78.
102. A. C. Crombie, "Quantification in Medieval Physics," in Sylvia Thrupp, ed., *Change in Medieval Society* (New York, 1964), p. 201. E. P. Thompson also notes that the timing of work preceded the diffusion of the clock: see "Time, Work-Discipline, and Industrial Capitalism," p. 61.
103. Le Goff, "Labor Time in the 'Crisis,' " p. 49.

the zero hour, the beginning of the day, varied widely after the spread of the mechanical clock, until it finally was standardized at midnight, that is, at an "abstract" time point independent of the perceptible transitions of sunrise and sunset. It was the standardization of this abstract zero hour which completed the creation of what Bilfinger calls the "bourgeois day."[104]

The "progress" of abstract time as a dominant form of time is closely tied to the "progress" of capitalism as a form of life. It became increasingly prevalent as the commodity form slowly became the dominant structuring form of social life in the course of the following centuries. It was only in the seventeenth century that Huygens's invention of the pendulum clock made the mechanical clock into a reliable measuring instrument, and that the notion of abstract mathematical time was formulated explicitly. Nevertheless, the changes in the early fourteenth century that I have outlined did have important ramifications then. The equality and divisibility of constant time units abstracted from the sensuous reality of light, darkness, and the seasons became a feature of everyday urban life (even if it did not affect all town dwellers equally), as did the related equality and divisibility of value, expressed in the money form, which is abstracted from the sensuous reality of various products. These moments in the growing abstraction and quantification of everyday objects—indeed, of various aspects of everyday life itself—probably played an important role in changing social consciousness. This is suggested, for example, by the new significance accorded time, the increased importance of arithmetic in fourteenth-century Europe,[105] and

104. G. Bilfinger, *Der bürgerliche Tag* (Stuttgart, 1888), pp. 226–31, cited in Kazimierz Piesowicz, "Lebensrhythmus und Zeitrechnung in der vorindustriellen und in der industriellen Gesellschaft," p. 479.
105. Landes makes this point but concentrates only on the equality of time, which he grounds in the mechanical clock itself (see *Revolution in Time,* pp. 77–78). He thereby overlooks the other dimensions of the emerging commodity form. I have suggested some other implications of Marx's categorial analysis for a sociohistorical theory of knowledge. Consideration of the relationship between forms of social relations and forms of subjectivity need not be limited to forms of thought; it can be extended to other dimensions of subjectivity and to historical changes in modes of subjectivity. The effects of the processes of abstraction and abstract quantification as everyday processes, and of the related forms of rationality that became prevalent with the growing domination of the commodity form, could also, for example, be examined with reference to the form of schooling and the changed determinations of childhood which emerged in the early modern period (see Philippe Ariès, *Centuries of Childhood* [New York, 1962]). Additional dimensions of historical changes in subjectivity that could be examined with reference to a categorial analysis of capitalist civilization include the psychic and social-habitual changes in the same period, such as the lowering of the threshold of shame, described by Norbert Elias in *The Civilizing Process* (New York, 1982), or those encompassed by Marcuse's thesis that the performance principle is the specific historical form of the reality principle in capitalist society (*Eros and Civilization* [New York, 1962]). In general, it seems to me that a theory of social forms could be useful in approaching the social and historical constitution of subjectivity on the level of psychic structures and tacit ways of being in the world, as well as of forms of thought.

the beginnings of the modern science of mechanics, with the development of the impetus theory by the Paris School.[106]

The abstract form of time associated with the new structure of social relations also expressed a new form of domination. The new time proclaimed by the clocktowers—which frequently were erected opposite the church belltowers—was the time associated with a new social order, dominated by the bourgeoisie, who not only controlled the cities politically and socially but also had begun to wrest cultural hegemony away from the Church.[107] Unlike the concrete time of the Church, a form of temporality controlled overtly by a social institution, abstract time, like other aspects of domination in capitalist society, is "objective." It would, however, be mistaken to regard this "objectivity" as no more than a veil that disguises the concrete particularistic interests of the bourgeoisie. As with the other categorial social forms investigated in this work, abstract time is a form that emerged historically with the development of the domination of the bourgeoisie and has served the interests of that class; but it has also helped to constitute those interests historically (indeed, the very category of "interests"), and it expresses a form of domination beyond that of the dominating class. The temporal social forms, as I shall show, have a life of their own, and are compelling for all members of capitalist society—even if in a way that benefits the bourgeois class materially. Although constituted socially, time in capitalism exerts an abstract form of compulsion. As Aaron Gurevich puts it:

> The town had become master of its own time . . . in the sense that time had been wrestled from the control of the Church. But it is also true that it was precisely in the town that man ceased to be master of time, for time, being now free to pass by independently of man and events, established its tyranny, to which men are constrained to submit.[108]

The tyranny of time in capitalist society is a central dimension of the Marxian categorial analysis. In my consideration of the category of socially necessary labor time thus far, I have shown that it does not simply describe the time expended in the production of a particular commodity; rather, it is a category that, by virtue of a process of general social mediation, determines the amount of time that producers *must* expend if they are to receive the full value of their labor time. In other words, as a result of general social mediation, labor time expenditure is transformed into a temporal norm that not only is abstracted from, but also stands above and determines, individual action. Just as labor is transformed from an action of individuals to the alienated general principle of the totality under which the individuals are subsumed, time expenditure is transformed from a result *of* activity into a normative measure *for* activity. Although, as we shall see, the magnitude of socially necessary labor time is a dependent variable of society as a whole, it is an independent variable with regard to individual activity. This process, whereby a concrete, dependent variable of human activity becomes an abstract, independent variable governing this activity, is real and not illusory. It is intrinsic to the process of alienated social constitution effected by labor.

106. Le Goff, "Labor Time in the 'Crisis,' " p. 50.
107. Le Goff, ibid., p. 46; Bilfinger, *Die mittelalterlichen Horen,* pp. 142, 160–63; Gurevich, "Time as a Problem of Cultural History," p. 241.
108. Gurevich, "Time as a Problem of Cultural History," p. 242. See also Guy Debord, *Society of the Spectacle* (Detroit, 1983).

I have suggested that this form of temporal alienation involves a transformation of the nature of time itself. Not only is socially necessary labor time constituted as an "objective" temporal norm, which exerts an external compulsion on the producers, but time itself has been constituted as absolute and abstract. The amount of time that determines a single commodity's magnitude of value is a dependent variable. The time itself, however, has become independent of activity—whether individual, social, or natural. It has become an independent variable, measured in constant, continuous, commensurable, and interchangeable conventional units (hours, minutes, seconds), which serves as an absolute measure of motion and of labor qua expenditure. Events and action in general, labor and production in particular, now take place within and are determined by time—a time that has become abstract, absolute, and homogeneous.[109]

The temporal domination constituted by the forms of the commodity and capital is not restricted to the process of production but extends into all areas of life. Giddens writes:

> The commodification of time . . . holds the key to the deepest transformations of day-to-day social life that are brought about by the emergence of capitalism. These relate both to the central phenomenon of the organization of production processes, and to the "workplace", and also the intimate textures of how daily social life is experienced.[110]

I shall not, in the present work, address the effects of this temporal domination on the texture of experience in everyday life.[111] Instead, I shall discuss some of

109. Lukács also analyzes abstract time as a product of capitalist society. He considers such time to be essentially spatial in character: "Thus time sheds its qualitative, variable, flowing nature; it freezes into an exactly delimited, quantifiable continuum filled with quantifiable 'things' . . . in short, it becomes space" (*History and Class Consciousness,* trans. Rodney Livingstone [London, 1971], p. 90). The problem with Lukács's analysis is that he opposes the static quality of abstract time to historical process, as if the latter, in and of itself, represents a noncapitalist social reality. However, as I shall discuss in Part III, capitalism is characterized not only by unchanging abstract time but also by a historical dynamic beyond human control. Historical process as such cannot be opposed to capitalism. Lukács's position indicates the degree to which his understanding of the category of capital is inadequate and is related to his identification of Hegel's identical subject-object with the proletariat.
110. Giddens, *A Contemporary Critique,* p. 131.
111. David Gross, following Lukács in some respects, considers the effects of abstract time on everyday life in terms of the "spatialization of thought and experience," by which he means

the social-epistemological implications of our investigation of temporality thus far; then, in Part III, I shall return to the question of the social constitution of time in capitalist society by investigating the temporal dualism of the underlying social forms of capitalism and, on that basis, outlining the conception of history implied by Marx's categorial theory.

The opposition between abstract and concrete time overlaps, but is not fully identical, with the opposition between time in capitalist society and time in precapitalist societies. The rise of capitalism does, to be sure, entail the supersession of earlier forms of concrete time by abstract time. E. P. Thompson, for example, describes the domination of a task-oriented notation of time in preindustrial societies, and its supersession by the timing of labor with the development of industrial capitalism.[112] In the former case, time is measured by labor, whereas in the latter it measures labor. I have chosen to speak of concrete and abstract time in order to emphasize that two different sorts of time are involved rather than merely two different modes of measuring time. Moreover, as I shall elaborate in Chapter Eight, abstract time is not the only form of time that is constituted in capitalist society; a peculiar form of concrete time is constituted as well. We shall see that the dialectic of capitalist development is, on one level, a dialectic of the two sorts of time constituted in capitalist society and, therefore, cannot be understood adequately in terms of the supersession by abstract time of all forms of concrete time.

Forms of social mediation and forms of consciousness

Marx's determination of the magnitude of value, in my interpretation, implies that time as an independent variable, the homogeneous, absolute mathematical time that has come to organize much of social life in our society, has been constituted socially. This attempt to relate abstract mathematical time as well as its concept to the commodity-determined form of social relations is an instance of the sociohistorical theory of knowledge and subjectivity presented in this

"the tendency to condense time relations . . . into space relations" ("Space, Time, and Modern Culture," *Telos* 50 [Winter 1981–82], p. 59). Gross regards the social consequences of this "spatialization" as extremely negative, entailing the loss of historical memory and the progressive destruction of the possibilities of social critique in contemporary society (pp. 65–71). Gross's critical description is illuminating, but he does not ground the historical constitution of "spatialization" in the forms of social relations characteristic of capitalism. Instead, because he understands these relations only as class relations, he attempts to ground spatialization in the development of urbanization and technology per se (p. 65), and in the interests of controlling elites (p. 72). However, as I have sought to show, consideration of the former alone, without reference to forms of social relations, does not suffice; it cannot, for example, account adequately for the origins of abstract time. Moreover, recourse to considerations of the interests of the ruling strata cannot explain the genesis, nature, and social efficacy of forms that may very well constitute and serve those interests.

112. Thompson, "Time, Work-Discipline, and Industrial Capitalism," pp. 58–61.

work, which analyzes both social objectivity and social subjectivity as socially constituted by historically specific structured forms of practice. Such a theory transforms the classical epistemological problem of the subject-object relation, and entails a reconceptualization and critique of the terms of that problem itself.

The notion of the constitution by the subject of the object of knowledge is central to Kant's "Copernican turn" from examining the object to considering the subjective conditions of knowledge, which he undertakes after elucidating the antinomies generated by the subject-object problematic, as classically conceived. Kant conceives of constitution in terms of the constituting role of the subject. Arguing that reality in itself, the noumenon, is not available to human knowledge, Kant maintains that our knowledge of things is a function of transcendental *a priori* categories with which perception is organized. That is, to the degree that our knowledge and perception are organized by such subjective categories, we co-constitute the phenomena we perceive. This process of constitution, however, is not a function of action and does not refer to the object; rather, it is a function of the subjective structures of knowing. Time and space, according to Kant, are such transcendental *a priori* categories.

Hegel, criticizing Kant, claims that his epistemology results in a dilemma: it requires knowledge of the cognitive faculties as a precondition of knowledge.[113] Using a different theory of the constitution by the subject of the object of knowledge, Hegel seeks to overcome the subject-object dichotomy by demonstrating their intrinsic connection. I have discussed how he treats all of reality, including nature, as constituted by practice—as an externalization, a product and expression, of the world-historical Subject: the *Geist,* in its unfolding, constitutes objective reality as a determinate objectification of self, which, in turn, reflexively effects determinate developments in consciousness of self. The *Geist,* in other words, constitutes itself in the process of constituting objective reality: it is the identical subject-object. Adequate categories, according to Hegel, do not express the subjective forms of finite cognition and the appearances of things, as Kant would have it; they grasp, instead, the identity of subject and object as the structures of absolute knowing. The Absolute is the totality of the subjective-objective categories; it expresses itself and prevails in individual consciousness. Hegel's notion of the identical subject-object is central to his attempt to solve the epistemological problem of the possible relation of subject and object, consciousness and reality, with a theory of the constitution of objectivity and subjectivity which would avoid the dilemma of having to know the cognitive faculty before knowing.

Marx also seeks to establish the intrinsic connectedness of objectivity and subjectivity by means of a theory of their constitution through practice. The universe so constituted, however, is social. Unlike Hegel, Marx rejects the idea

113. See Jürgen Habermas, *Knowledge and Human Interests,* trans. Jeremy Shapiro (Boston, 1971), p. 7.

of absolute knowledge and denies that nature as such is constituted. Marx's theory of constitution through practice is social, but not in the sense that it is a theory of the constitution of a world of social objectivity by a human historical Subject. Rather, it is a theory of the ways in which humans constitute structures of social mediation which, in turn, constitute forms of social practice. Thus, as we have seen, although Marx does posit the existence in capitalism of what Hegel identified as a historical Subject—that is, an identical subject-object—he identifies it as the form of alienated social relations expressed by the category of capital rather than as a human subject, whether individual or collective. He thereby shifts the problem of knowledge from the possible correlation between "objective reality" and the perception and thought of the individual or supra-individual subject, to a consideration of the constitution of social forms. His approach analyzes social objectivity and subjectivity not as two ontologically different spheres that must be related but as intrinsically related dimensions of the forms of social life that are grasped by his categories. By transforming the ways in which constitution and constituting practice are understood, this shift of focus transforms the problem of knowledge into one of social theory.

I have shown, for example, that Marx's determination of the magnitude of value implies a sociohistorical theory of the emergence of absolute mathematical time as a social reality and as a conception. In other words, this approach implicitly treats as socially constituted the level of structured preknowledge that Kant interprets as a transcendental *a priori* condition of knowledge.[114] Marx's theory of social constitution tries to overcome what Hegel identifies as the circular dilemma of Kant's transcendental epistemology—that one must know (the cognitive faculties) as a precondition of knowing—without, however, taking recourse to Hegel's notion of absolute knowledge. Marx's theory implicitly analyzes as social the condition of self-knowledge (that is, in order to know explicitly, one already must have known). It grasps this preknowledge as a preconscious structure of consciousness which is socially formed, and neither posits it as a universal, transcendental *a priori* nor bases it on an assumed absolute knowledge. This sociohistorical theory of knowledge is not restricted to examining the social and historical determinations of the subjective conditions of perception and knowledge. Although Marx's critical theory rejects the possibility of absolute knowledge, it does not imply a sort of socially and historically relativized Kantian epistemology, for it seeks to grasp the constitution of forms of social objectivity along with their related forms of subjectivity.

The Marxian critique, then, does not imply a theory of knowledge in the proper sense but, rather, one of the constitution of historically specific social forms that are forms of social objectivity and subjectivity simultaneously. Within

114. Jacques Le Goff makes a similar argument regarding the social constitution of three-dimensional space as well: see "Merchant's Time," p. 36.

the framework of such a theory, categories of apprehending the world and norms of action can be seen as connected inasmuch as both ultimately are rooted in the structure of social relations. This interpretation suggests that epistemology becomes, in Marx's theory, radical as social epistemology.[115]

The unfolding of the categorially grasped social forms in Marx's *Capital* is the full elaboration of the theory of social practice he had only posited earlier, in the "Theses on Feuerbach":

> The chief defect of all previous materialism . . . is that the object, actuality, sensuousness is conceived only in the form of the *object, or of contemplation* [*Anschauung*], but not as *sensuous human activity, practice* [*Praxis*], not subjectively.
>
> The question whether objective [*gegenständliche*] truth can be attributed to human thinking is not a question of theory but is a practical question.
>
> All social life is essentially *practical.*[116]

115. This interpretation of the epistemological implications of Marx's theory differs from Habermas's, which I shall outline in Chapter Six. On a more general level, my interpretation of the Marxian categories—as expressions of the intrinsic connectedness of historical forms of social being and consciousness—implicitly separates objective validity from any notion of the absolute and historically relativizes it. Yet because this position relativizes both the objective as well as subjective dimensions, it rejects the notion of an opposition between historical relativity and objective validity. The criterion of the latter is social, rather than absolute, validity. Thus Marx can say that "forms of this kind constitute the categories of bourgeois economics. They are forms of thought which are socially valid, and hence objective, for the relations of production of this historically determinate mode of social production, i.e., commodity production" (*Capital,* vol. 1, p. 169 [translation amended]).

The question of the standards by which that which exists can be criticized cannot be fully dealt with here. It should be clear, however, that in Marx's approach the source and standards of critique also must be a function of existing forms of social reality. It could be argued that an understanding of historical relativity as implying that "anything goes" is itself bound to the assumption that objective validity requires an absolute grounding. In this sense, the opposition of the two can be conceived as similar to that between abstract rationalism and skepticism. In both cases, the turn to social theory illuminates the intrinsic relation of the terms of the opposition, indicates that they do not define the universe of possibilities, and transforms the terms of the problem. For a powerful critique of the assumptions that underlie such abstract oppositions different from, but consonant with, the critique suggested in this work, see Ludwig Wittgenstein, *Philosophical Investigations,* trans. G. E. M. Anscombe (New York, 1958).

The problem for social theory of the standards of critique is, of course, difficult. Yet the Marxian approach does offer the possibility of consistent epistemological self-reflection on the part of the theory, which thereby avoids the pitfalls of those forms of critical social thought which presume to view society with a set of standards outside of their social universe—and which therefore cannot explain themselves. Indeed, the Marxian approach implies that the attempt to ground critique in an extrasocial, immutable realm (as, for example, in the classical tradition of Natural Law theory) can itself be analyzed in terms of social forms that present themselves as nonsocial and transhistorical.

116. "Theses on Feuerbach," in Karl Marx and Frederick Engels, *Collected Works,* vol. 5: *Marx and Engels: 1845–1847* (New York, 1976), pp. 3–5 (translation amended).

The mature Marxian critique analyzes the relation of objectivity and subjectivity in terms of structures of social mediation, determinate modes of constituting and constituted social practice. The "praxis" to which Marx refers, as should be clear, is not only revolutionary practice but practice as socially constituting activity. Labor constitutes the forms of social life grasped by the categories of Marx's critique. However, this socially constituting practice cannot be understood adequately in terms of labor per se, that is, concrete labor in general. It is not concrete labor alone that creates the world Marx analyzes, but the mediating quality of labor, which constitutes alienated social relations characterized by an antinomy of an abstract, general, objective dimension and a concrete, particular dimension, even as it objectifies itself in products. This duality gives rise to a sort of unified field of social being in capitalism. An identical subject-object (capital) exists as a totalizing historical Subject and can be unfolded from a single category, according to Marx, because two dimensions of social life—the relations among people and the relations between people and nature—are conflated in capitalism inasmuch as both are mediated by labor. This conflation shapes both the form of production and the form of social relations in capitalism, and it relates them intrinsically. That the categories of Marx's critique of political economy express both dimensions of social life in a single unified form (which is, nevertheless, intrinsically contradictory) stems from this real conflation.

Marx's mature theory of social practice in capitalism, then, is a theory of labor's constitution of social forms that mediate people's relations with each other and with nature, and are, at once, forms of being and consciousness. It is a theory of the social and historical constitution of determinate, structured forms of social practice as well as of social knowledge, norms, and needs that shape action. Although the social forms Marx analyzes are constituted by social practice, they cannot be grasped on the level of immediate interaction alone. Marx's theory of practice is a theory of the constitution and possible transformation of forms of social mediation.

This interpretation of Marx's theory transforms the traditional problem of the relation between labor and thought by formulating it in terms of the relation between labor-mediated forms of social relations and forms of thought, rather than between concrete labor and thought. I have argued that, just as social constitution is not a function of concrete labor alone, in Marx's analysis the constitution of consciousness by social practice should not be understood solely in terms of the labor-mediated interactions of individual subjects or social groupings with their natural environment. This applies even to conceptions of natural reality: they are not won pragmatically, merely from struggles with and transformations of nature, but, as I have tried to indicate, also are rooted in the character of the determinate social forms that structure these interactions with nature. In other words, labor as productive activity does not, in and of itself, accord meaning; rather, as I have argued, even labor acquires its meaning from

the social relations in which it is embedded. When these social relations are constituted by labor itself, labor exists in "secular" form and can be analyzed as instrumental action.

The notion that labor is socially constitutive is not, then, based on a reduction by Marx of social praxis to labor qua material production, whereby the interaction of humanity with nature becomes the paradigm of interaction.[117] This would, indeed, have been the case if Marx had understood praxis in terms of "labor." However, Marx's conception in his mature works of labor as socially constituting practice is linked to his analysis of labor's mediation of dimensions of social life that, in other societies, are not so mediated. This analysis, according to Marx, is the sine qua non of an adequate critical understanding of the specificity of the forms of social relations, production, and consciousness in the capitalist social formation. The above-mentioned conflation of two dimensions of social life in capitalism allows Marx to analyze social constitution in terms of one form of practice (labor) and to investigate the intrinsic relation of social objectivity and subjectivity in terms of a single set of categories of structured practice. It is conceivable that in another society, where production and social relations are not constituted as a totalizing sphere of social objectivity by a single structuring principle, the notion of a single form of constituting practice would have to be modified and the relationship between forms of consciousness and forms of social being would have to be grasped differently.

Jürgen Habermas and Alfred Schmidt have also argued that Marx's analysis entails a theory of the constitution of social objectivity and social subjectivity. Although they evaluate Marx's theory of practical constitution very differently, both consider this process of constitution only in terms of "labor," that is, in terms of the transformation of external physical nature and, reflexively, of humans themselves, as a result of concrete labor.[118]

The traditional notion, mistakenly attributed to Marx, that labor is socially constituting solely by virtue of its function as productive activity can itself be

117. Albrecht Wellmer formulates this critique in his essay, "Communication and Emancipation: Reflections on the Linguistic Turn in Critical Theory," in John O'Neill, ed., *On Critical Theory* (New York, 1976), pp. 232–33.

118. See Habermas, *Knowledge and Human Interests*, pp. 25–63; Alfred Schmidt, *Der Begriff der Natur in der Lehre von Marx* (Frankfurt, 1971), pp. 107–28. Schmidt's position is very similar to that of Horkheimer in "Traditional and Critical Theory" (in *Critical Theory*, trans. Matthew J. O'Connell et al. [New York, 1972]). He emphasizes the role of concrete labor in constituting both the subjective human capacity for knowledge as well as the experiental world. Schmidt does, to be sure, cite approvingly statements by Arnold Hauser, Ernst Bloch, and Marx to the effect that the concept of nature is also a function of the structure of society (p. 126). This position, however, is not systematically integrated into the body of his argument. In discussing the natural sciences, Schmidt focuses on experimentation and applied natural science, to the exclusion of a consideration of paradigms of natural reality (pp. 118–19). The latter, I have argued, cannot be derived from concrete social labor alone but must be elucidated in terms of the forms of social relations which serve as the context of their emergence.

explained by the Marxian critique in terms of the specificity of the social forms in capitalism. As we have seen, although commodity-determined labor is marked by a peculiar, historically specific dimension, it can seem to both the theorist and the social actor to be "labor." This is also true of the epistemological dimension of labor as social practice. I have maintained, for example, that two moments of humans' relation to nature must be distinguished: the transformation of nature, materials and the environment, as a result of social labor, and people's conceptions of the character of natural reality. The second, I have argued, cannot be explained as a direct consequence of the first alone, that is, of the labor-mediated interactions of humans with nature, but also must be considered with reference to the forms of social relations within which such interactions take place. In capitalism, however, both moments of people's relation to nature are a function of labor: the transformation of nature by concrete social labor can, therefore, seem to condition the notions people have of reality, as though the source of meaning is the labor-mediated interaction with nature alone. Consequently, the undifferentiated notion of "labor" can be taken to be the principle of constitution, and knowledge of natural reality can be presumed to develop as a direct function of the degree to which humans dominate nature. The fact that this position, which was held by Horkheimer in 1937, has been attributed to Marx stems in part from the affirmation by traditional socialist working class parties of "labor," and in part from Marx's immanent mode of presentation.

What I have presented as the traditional Marxist theory of social constitution by "labor" can be understood, on one level, as an attempt to resolve the opposition of objectivity and subjectivity. That is, it remains ultimately within the framework of the terms of the problem as formulated by classical modern philosophy. Marx's approach, as I have presented it, however, is not an attempt to resolve this opposition. Rather, it transforms the terms of the problem by analyzing socially the relation of objectivity and subjectivity so as to ground the presuppositions of the classical problematic itself—the opposition of an external lawlike sphere of objectivity and the individual, self-determining subject—in the social forms of modern capitalist society.[119]

Further differences between these two approaches to the problem of social constitution are expressed in their divergent understandings of the process of alienation and its relation to subjectivity. The understanding commonly associated with the notion of social constitution by "labor" can be seen in Hilferding's reply to Böhm-Bawerk, which I cited earlier. Hilferding posits "labor" as the regulatory principle of human society which is veiled in capitalism and which,

119. In this sense, the Marxian approach differs from other critiques of the subject-object dichotomy which maintain that the idea of a knowing, decontextualized, and decorporealized subject makes no sense, and that people are always embedded in a preconscious background. While it is also critical of the subject-object dichotomy, the Marxian approach does not simply refute positions that posit a decontextualized subject but seeks to account for such positions by analyzing apparent decontextualization as a characteristic of the determinate context of capitalist society.

in socialism, will emerge openly as the causal principle of human life. Inasmuch as "labor" remains the constant substratum of society, the form in which it appears in capitalism is separable from its content, from "labor" itself.

This conception of social constitution effected by "labor" implies the existence of a concrete historical Subject, and is related to an understanding of alienation as the estrangement of what already exists as a property of this Subject. That is, alienation is treated as a process entailing the simple reversal of subject and object. This is also the case regarding perception and consciousness. In describing the mystification of the commodity form, Hilferding writes, "The social characters of persons appear as the objective [*gegenständliche*] attributes of things, just as the subjective forms of human perception (time and space) appear as objective [*objektive*] attributes of things."[120]

The analogy Hilferding draws between "the social characters of persons" and the Kantian transcendental *a priori* categories ("the subjective forms of human perception") indicates that in both cases he presupposes a preexisting, rather than a socially constituted, structure of subjectivity. Capitalism's specificity seems, then, to lie in the fact that what already exists as a property of the subjective dimension appears to be a property of the objective dimension. Hilferding thus understands the Marxian theory of alienation as "the exchange of the subjective with the objective and vice-versa."[121] This position implicitly understands Marx's notion of the fetish of commodities as referring to a sort of illusion, whereby attributes of the subjects appear to be attributes of that which they create. This relates directly to Hilferding's notion that the commodity form is simply a mystified form of "labor." When labor in capitalism is analyzed in transhistorical terms as "labor," its specificity is understood only extrinsically, in terms of the mode of distribution, and alienation is apprehended as a reversal that mystifies what already exists. Overcoming alienation, within such a framework, is seen as a process of demystification and reappropriation, as the re-emergence of that which is socially ontological from behind the veil of its mystified form of appearance. Overcoming alienation, in other words, entails the historical Subject's realization of itself.

In the interpretation I present here, the categories of Marx's critique do not express the "exchange" of the subjective with the objective but, rather, the constitution of each of these dimensions. As I argued in the case of abstract time, determinate subjective forms, together with the objectivity they grasp, are constituted with determinate alienated forms of social relations; they are not preexistent, universal forms that, because they are alienated, appear to be the objective attributes of things. This further reinforces my contention that, with

120. Hilferding, "Böhm-Bawerk's Criticism of Marx," in Paul M. Sweezy, ed., *"Karl Marx and the Close of His System" by Eugen Böhm-Bawerk and "Böhm-Bawerk's Criticism of Marx" by Rudolf Hilferding* (New York, 1949), p. 195 (translation amended).

121. Colletti, "Bernstein and the Marxism of the Second International," in *From Rousseau to Lenin,* trans. John Merrington and Judith White (London, 1972), p. 78.

his analysis of the twofold character of labor in capitalism, Marx developed the theory of alienation as one of a historically specific mode of social constitution, whereby determinate social forms—characterized by the opposition of an abstract universal, objective, lawlike dimension and a "thingly," particular dimension—are constituted by structured forms of practice and, in turn, shape practice and thought in their image. These social forms are contradictory. It is this quality that renders the totality dynamic and gives rise to the possibility of its critique and possible transformation.

Integral to this theory of the socially and historically determinate constitution of social objectivity and subjectivity by a process of alienation is a critical analysis of the specificity of the various dimensions of social life in capitalism. This theory does not simply condemn the estrangement from the Subject—or subjects—of what already had existed as their property. Rather, it analyzes the historical constitution of human powers in alienated form. Overcoming alienation, in this view, involves the *abolition of the self-grounding, self-moving Subject* (capital) and of the form of labor that constitutes and is constituted by structures of alienation; this would allow humanity to appropriate what had been constituted in alienated form. Overcoming the historical Subject would allow people, for the first time, to become the subjects of their own social practices.

Marx's notion of the fetish is centrally related to his theory of alienation as social constitution. This notion does not refer merely to socially constructed illusions, but attempts to socially account for various forms of subjectivity. It is integral to Marx's theory of social constitution, which relates forms of thought, worldviews, and beliefs to the forms of social relations and the ways in which they appear to immediate experience. In *Capital,* Marx tries to grasp the constitution of historically specific deep social structures by forms of social practice that, in turn, are guided by beliefs and motivations grounded in the forms of appearance engendered by these structures. The whole, however, is not statically circular and doxic, but dynamic and contradictory. An adequate elaboration of Marx's theory of the constitution of forms of subjectivity and objectivity in capitalism would analyze the interaction of structure and practice in terms of the nature of the contradictory dynamic of the totality; on this basis, one could develop a theory of the historical transformation of subjectivity that would elucidate the social constitution and historical development of needs and perceptions—both those that tend to perpetuate the system and those that call it into question.

Such a theory of the constitution of consciousness and social being has little in common with interpretations in which "labor" or the economy form the "base" of society and thought is a "superstructural" element. It is a nonfunctionalist social theory of subjectivity which, ultimately, is based on an analysis of the forms of social relations, rather than on considerations of social position and social interest, including class position and class interest. The former analysis provides the general, historically changing framework of forms of consciousness within which the latter considerations can be examined. Such an

approach assumes that if social meaning and social structure are to be related, the categories that grasp them must be related intrinsically—in other words, that the pervasive theoretical dichotomy of the material and cultural dimensions of social life cannot be overcome extrinsically, on the basis of concepts that already contain within them that opposition.[122] This position distinguishes the social and historical theory of subjectivity presented here from those attempts to relate thought and "social conditions" which can explain the social function and social consequences of a particular form of thought, but cannot ground socially the specificity of this thought and relate it intrinsically to its context. The Marxian theory attempts to do so. In general, it treats meaning neither in a reductive materialist manner, as an epiphenomenal reflex of a physical material base nor—of course—in an idealist manner, as a self-grounded and completely autonomous sphere. Rather, it seeks to grasp social life with categories that allow it to treat the structure of meaning as an intrinsic moment of the constituted and constituting structure of social relations.[123]

122. This approach is very different than that expressed by Max Weber in his well-known metaphor that ideas create world-images that determine, like switchmen, the tracks along which action is pushed by the dynamic of interest (see "The Social Psychology of the World Religions," in H. H. Gerth and C. W. Mills, eds., *From Max Weber* [New York, 1958], p. 280). This metaphor relates the social, or material, dimension and the cultural dimension only extrinsically and contingently. To the extent that the position it expresses does recognize a subjective aspect of material life, it does so in a way similar to many economistic theories—it identifies this dimension with considerations of interest alone. As a result, what should be analyzed as a specific, socially, and historically constituted form of subjectivity ("interest") is presupposed as given, while other forms of subjectivity are treated in an idealist manner. This inability to grasp the intrinsic relation of forms of subjectivity and forms of social relations is related to an approach which does not grasp material life in terms of the determinate forms by which social life is mediated.

123. Émile Durkheim, in *The Elementary Forms of the Religious Life* (trans. Joseph Ward Swain [New York, 1965]), also proposes a theory of knowledge which attempts to ground the categories of thought socially. On the basis of his approach, Durkheim is able to indicate the power of a social theory of knowledge in addressing and changing the terms of epistemological problems, as they had been formulated classically. However (leaving aside its functionalist aspects), Durkheim's theory focuses on the social organization of society rather than on the forms of social mediation—hence, he lacks a conception of categories of social life which could simultaneously be categories of subjectivity and objectivity. Durkheim's approach is ambivalent as regards the issue of the relation of social context and thought. It both is critical of natural scientific understandings of social life, which disregard the issue of social meaning, and is itself transhistorical and objectivistic. Although Durkheim does suggest that science itself is embedded socially, he does not treat as a determinate system of meaning the tendency of science to view all of reality in object-terms. Rather, he takes it to be an expression of the evolutionary development of society.

It is possible to grasp Durkheim's own dualistic interpretations of social life in terms of the Marxian approach presented here. His oppositions of society and the individual, soul and body, the abstract, general and the concrete particular—whereby only the first, abstract term of each opposition is understood as social—can be grasped as hypostatizations and projections of the commodity form. See *The Elementary Forms of the Religious Life,* pp. 21–33, 169–73, 258–60, 306–308, 467–94.

8. The dialectic of labor and time

Marx in unfolding the category of capital, then, relates the historical dynamic of capitalist society as well as the industrial form of production to the structure of abstract domination constituted by labor when it is both a productive activity and a socially mediating activity. I shall now specify this relation by examining more closely how, according to Marx's critique, the fundamental social forms of capitalism shape the character of both this historical dynamic and this form of production. Rather than proceeding by directly investigating Marx's analysis of the sphere of production, however, I shall discuss the most salient structural features of that sphere by first taking a "step backward," as it were, and considering further the implications of the initial categories of Marx's analysis. This will clarify certain important characteristics of the capital form which might not be apparent were I to examine the sphere of production more directly. In particular, this will allow me to elaborate the central importance of the temporal dimension of value to Marx's analysis. Such an approach will elucidate the specificity of the dynamic of capital and lay the groundwork for articulating Marx's understanding of the social constitution of the process of production. Once I have analyzed the determinate character of the dynamic of capitalism on this fundamental level, I shall return, in Chapter Nine, to examining central aspects of Marx's treatment of the sphere of production in light of this analysis.

By first considering the implications of Marx's initial categories for an analysis of the dynamic of capital and of the process of production, the interpretation presented in this chapter will be able to clearly locate the basic contradiction of capitalist society—and, hence, the possibility of social critique and practical opposition—in the double-sided social forms grasped by the Marxian categories, rather than between these social forms and "labor."

This approach will make clear how my reinterpretation of Marx's basic categories grounds a reconceptualization of the nature of capitalism, in particular, of its contradictory dynamic, in a way that does not privilege considerations of the market and private ownership of the means of production. It provides the basis for analyzing the intrinsic relationship between capital and industrial production, and for investigating the possible relation between the development of capital and the nature and development of other large-scale bureaucratic institutions and organizations of postliberal capitalist society. (An investigation based

on this interpretation would ground socially and specify historically these institutions and organizations, and, in doing so, provide the basis for distinguishing between economic and administrative mechanisms that are bound or related to the capital form, and those that would remain necessary even if capital were abolished.)

The immanent dynamic

I have focused thus far on the centrality to Marx's critical theory of his conception of the dual character of the fundamental social forms of capitalist society, and have tried to clarify the nature of, and distinction between, the value dimension of the forms (abstract labor, value, abstract time) and their use value dimension (concrete labor, material wealth, concrete time). At this point, I can examine their interrelations. The nonidentity of these two dimensions is not simply a static opposition; rather, the two moments of labor in capitalism, as productive activity and as a socially mediating activity, are mutually determining in a way that gives rise to an immanent dialectical dynamic. It should be noted that the following investigation of the dynamic relation of productivity and value presupposes fully developed capitalism; this relation is the core of a pattern that only fully comes into its own with the emergence of relative surplus value as a dominant form.

In examining the significance of the distinction between concrete labor and abstract labor in terms of the difference between material wealth and value, I showed that although increased productivity (which Marx considers an attribute of labor's use value dimension) does increase the number of products and, hence, the amount of material wealth, it does not change the magnitude of total value yielded within a given unit of time. The magnitude of value, then, appears to be a function of abstract labor time expenditure alone, completely independent of labor's use value dimension. Behind this opposition, however, there is a dynamic interaction between the two dimensions of commodity-determined labor, as becomes evident when the following example is examined closely:

> The introduction of power looms into England, for example, probably reduced by one half the labour required to transform a given quantity of yarn into woven fabric. The English hand-loom weaver in fact needed the same amount of labour-time as before to effect this transformation; but the product of his individual hour of labour now only represented half a social labour-hour, and consequently fell to one half its former value.[1]

Marx introduces this example in the first chapter of Volume 1 of *Capital* to illustrate his notion of socially necessary labor time as the measure of value. His example indicates that when the commodity is the general form of the product, the actions of individuals constitute an alienated totality that constrains

1. Marx, *Capital*, vol. 1, trans. Ben Fowkes (London, 1976), p. 129.

and subsumes them. Like his exposition of value in Volume 1 more generally, this example operates on the level of the social totality.

It is significant for our purposes that this initial determination of the magnitude of value also implies a dynamic. Let us assume that, before the power loom was introduced, the average hand-loom weaver produced 20 yards of cloth in one hour, yielding a value of x. When the power loom, which doubled productivity, was first introduced, most weaving still was done by hand. Consequently, the standard of value—socially necessary labor time—continued to be determined by hand-loom weaving; the norm remained 20 yards of cloth per hour. Hence, the 40 yards of cloth produced in one hour with the power loom had a value of $2x$. However, once the new mode of weaving became generalized, it gave rise to a new norm of socially necessary labor time: the normative labor time for the production of 40 yards of cloth was reduced to an hour. Because the magnitude of value yielded is a function of (socially average) time expended, rather than the mass of goods produced, the value of the 40 yards of cloth produced in one hour with the power loom fell from $2x$ to x. Those weavers who continued to use the older method, now anachronistic, still produced 20 yards of cloth per hour but received only $\frac{1}{2}x$—the value of a socially normative half hour—for their individual hour of labor.

Although an increase in productivity results in more *material wealth,* the new level of productivity, once generalized, yields the same amount of *value* per unit time as was the case prior to its increase. In discussing the differences between value and material wealth, I noted that the total value yielded in a social labor hour remains constant, according to Marx: "The same labour, therefore, performed for the same length of time, always yields the same amount of value, independently of any changes in productivity."[2] This example clearly indicates, however, that something does change with changes in productivity: not only does increased productivity yield a greater amount of material wealth, but it effects a reduction of socially necessary labor time. Given the abstract temporal measure of value, this redetermination of socially necessary labor time changes the magnitude of value of the individual commodities produced rather than the total value produced per unit time. That total value remains constant and simply is distributed among a greater mass of products when productivity increases. This, however, implies that, in the context of a system characterized by an abstract temporal form of wealth, the reduction of socially necessary labor time redetermines the normative social labor hour. The social labor hour in this example had been determined by hand-loom weaving in terms of the production of 20 yards of cloth; it then was redetermined by power-loom weaving in terms of the production of 40 yards of cloth. Although, then, a change in socially general productivity does not change the total amount of value produced per abstract time unit, it does change the determination of this time unit. Only the hour of labor time in which the general standard of socially necessary labor time is met counts as a social labor hour. In other words, *the social labor hour is constituted by the level of productivity.* (Note that this determination cannot be expressed in terms of abstract time. What has changed is not the *amount* of time which yields a value of x but, rather, the *standard* of what constitutes that amount of time.)

2. Ibid., p. 137.

Productivity—the use value dimension of labor—does not, then, change the total value yielded per abstract time unit; it does, however, determine the time unit itself. We are thus faced with the following apparent paradox: the magnitude of value is a function only of labor expenditure as measured by an independent variable (abstract time), yet the constant time unit itself apparently is a dependent variable, one that is redetermined with changes in productivity. Abstract time, then, is not only socially constituted as a qualitatively determinate form of time, but it is quantitatively constituted as well: what constitutes a social labor hour is determined by the general level of productivity, the use value dimension. Yet although the social labor hour is redetermined, it remains constant as a unit of abstract time.

I shall investigate the temporal dimension of this paradox below, but at this point it should be noted that Marx's example implies that the two dimensions of the commodity form interact. On the one hand, increased productivity redetermines socially necessary labor time and thereby changes the determinations of the social labor hour. That is, the abstract temporal constant which determines value is itself determined by the use value dimension, the level of productivity. On the other hand, although the social labor hour is determined by the general productivity of concrete labor, the total value yielded in that hour remains constant, regardless of the level of the productivity. This implies that each new level of productivity, once it has become socially general, not only redetermines the social labor hour but, in turn, is redetermined by that hour as the "base level" of productivity. The amount of value yielded per unit of abstract time by the new level of productivity is equal to that yielded by the older general level of productivity. In this sense, the level of productivity, the use value dimension, is also determined by the value dimension (as the new base level).

This process of the reciprocal determination of the two dimensions of social labor in capitalism occurs on the level of society as a whole. It is at the heart of a dialectical dynamic intrinsic to the social totality constituted by commodity-determined labor. The peculiarity of the dynamic—and this is crucial—is its *treadmill effect.* Increased productivity increases the amount of value produced per unit of time—until this productivity becomes generalized; at that point the magnitude of value yielded in that time period, because of its abstract and general temporal determination, falls back to its previous level. This results in a new determination of the social labor hour and a new base level of productivity. What emerges, than, is a dialectic of transformation and reconstitution: the socially general levels of productivity and the quantitative determinations of so-

cially necessary labor time change, yet these changes reconstitute the point of departure, that is, the social labor hour and the base level of productivity.

This treadmill effect implies, even on the abstract logical level of the problem of the magnitude of value—in other words, before the category of surplus value and the wage labor–capital relation have been introduced—a society that is directionally dynamic, as expressed by the drive for ever-increasing levels of productivity. As we have seen, increased productivity results in short-term increases in the amount of value yielded per unit time, which induces the general adoption of the newer methods of producing;[3] however, once these methods become generalized, the value yielded per unit time returns to its older level. In effect, those producers who had not yet adopted these new methods are now *compelled* to do so. The introduction of still newer methods of increasing productivity bring about further short-term increases in value. One consequence of the labor time measure of wealth, then, is that as the temporal constant is redetermined by increased productivity, it induces, in turn, still greater productivity. The result is a directional dynamic in which the two dimensions, concrete labor and abstract labor, productivity and the abstract temporal measure of wealth, constantly redetermine one another. Because, at this stage of the analysis, we cannot explain the necessity that capital accumulate constantly, the dynamic outlined here, does not represent the fully developed immanent historical logic of capitalism. It does, however, represent the initial specification of this logic and delineates the form growth *must* take in the context of labor-mediated social relations.

The reciprocal redetermination of increased productivity and the social labor hour has an objective, lawlike quality that is by no means a mere illusion or mystification. Although social, it is independent of human will. To the extent that one can speak of a Marxian "law of value," this treadmill dynamic is its initial determination; as we shall see, it describes a pattern of ongoing social transformation and reconstitution as characteristic of capitalist society. The law of value, then, is dynamic and cannot be understood adequately in terms of an equilibrium theory of the market. Once one considers the temporal dimension of value—understood as a specific form of wealth that differs from material wealth—it becomes evident that the form of value implies the above dynamic from the outset.

Note that the market-mediated mode of circulation is *not* an essential moment of this dynamic. What is essential to the dynamic of capitalism once it has been

3. As I have discussed, people in capitalism do not act directly in this regard on the basis of considerations of value, according to Marx; rather, their actions are shaped by considerations of price. A complete analysis of the underlying structural dynamic of capitalism, as grasped by the critique of political economy, would therefore have to show how individuals constitute this dynamic on the basis of its forms of appearance. Because my intention here, however, is only to clarify—on a very abstract logical level—the nature of this structural dynamic, I shall not address such considerations of the relation of structure and action.

constituted fully is the treadmill effect, which is rooted in the temporal dimension of the value form of wealth alone. If the market mode of circulation does play a role in this dynamic, it is as a subordinate moment of a complex development—for example, as the mode by which the level of productivity is generalized.[4] That such generalization results in a return of the amount of value to its original level, however, is *not* a function of the market; it is a function of the nature of value as a form of wealth and is essentially independent of the mode by which each new redetermination of the abstract temporal frame is generalized. As we shall see, this pattern is a central moment of the form of growth Marx associates with the category of surplus value. To focus exclusively on the mode of circulation is to deflect attention away from important implications of the commodity form for the trajectory of capitalist development in Marx's critical theory.

This investigation of the abstract determinations of capitalism's dynamic suggests that although the market mode of circulation may have been necessary for the historical genesis of the commodity as the totalizing social form, it need not remain essential to that form. It is conceivable that another mode of coordination and generalization—an administrative one, for example—could serve a similar function for this contradictory social form. In other words, once established, the law of value could also be mediated politically. One implication of this abstract logical analysis, then, is that abolishing the market mode of coordination and overcoming value are not identical.

Earlier, we described the category of capital as a dynamic social form. We now have begun to examine more closely the nature of its dynamic character and indicate how it ultimately is rooted in the interaction of value and material wealth, abstract and concrete labor—that is, the interaction of the two dimensions of the commodity form. This dynamic represents the first outlines of the immanent historical logic of capitalism, which results from the alienated character and temporal determination of labor-mediated social relations. It abstractly foreshadows a central characteristic of capital, namely, that it must accumulate constantly in order to exist. Becoming is the condition of its being.

Abstract time and historical time

I have begun to examine how the dialectical interaction between the use value dimension of social labor in capitalism and its value dimension generates a historical dynamic. The interaction between the two dimensions of the commodity form can also be analyzed in temporal terms, with reference to an opposition between abstract time and a form of concrete time peculiar to

4. On another level, market competition also serves to generalize and equalize the rate of profit, according to Marx: see *Capital,* vol. 3, trans. David Fernbach (Harmondsworth, England, 1981), pp. 273–302.

capitalism. In order to clarify the significance of this opposition I shall also extrapolate its implications on a more socially concrete level.

As we have seen, the interaction of the two dimensions of the commodity form involves a substantive redetermination of an abstract temporal constant. This abstract temporal measure of value remains constant, yet it has a changing, if hidden, social content: not every hour is an hour—in other words, not every hour of labor time counts as the social labor hour that determines the magnitude of total value. The abstract temporal constant, then, is both constant and nonconstant. In abstract temporal terms, the social labor hour remains constant as a measure of the total value produced; in concrete terms, it changes as productivity does. Yet because the measure of value remains the abstract temporal unit, its concrete redetermination is not expressed in this unit as such. Increased productivity is, to be sure, expressed in the proportional decrease in the value of each individual commodity produced—but not in the total value produced per hour. Nevertheless, the historical level of productivity does bear on the total value produced, if only indirectly: it determines the socially necessary labor time required to produce a commodity; this temporal norm, in turn, determines what constitutes a social labor hour. It has become clear that, with increased productivity, the time unit becomes "denser" in terms of the production of goods. Yet this "density" is not manifest in the sphere of abstract temporality, the value sphere: the abstract temporal unit—the hour—and the total value produced remain constant.

That the abstract time frame remains constant despite being redetermined substantively is an apparent paradox that I have noted. This paradox cannot be resolved within the framework of abstract Newtonian time. Rather, it implies another sort of time as a superordinate frame of reference. As we have seen, the process whereby the constant hour becomes "denser"—that is, the substantive change effected by the use value dimension—remains nonmanifest in terms of the abstract temporal frame of value. It can, however, be expressed in other temporal terms, with reference to a form of concrete temporality.

In order to elaborate the character of this other sort of time, I must examine further the interaction of the use value and value dimensions of labor in capitalism. In a sense, changes in productivity move the determination of socially necessary labor time along an axis of abstract time: socially necessary labor time decreases with increased productivity. But, although the social labor hour is thereby redetermined, it is not moved along that axis—because it is the coordinate axis itself, the frame against which change is measured. The hour is a constant unit of abstract time; it must remain fixed in abstract temporal terms. Hence, each new level of productivity is redetermined "back" as the base level, yielding the same rate of value. Nevertheless, a new level of productivity has indeed been achieved, even if it is redetermined as the same base level. And while this substantive development cannot change the abstract temporal unit in terms of abstract time itself, it does change the "position" of that unit. The entire abstract temporal axis, or frame of reference, is moved with each socially general increase in productivity; both the social labor hour and the base level of productivity are moved "forward in time."

This movement resulting from the substantive redetermination of abstract time cannot be expressed in abstract temporal terms; it requires another frame of reference. That frame can be conceived as a mode of concrete time. Earlier, I defined concrete time as any sort of time that is a dependent variable—a function of events or actions. We have seen that the interaction of the two dimensions of commodity-determined labor is such that socially general increases in productivity move the abstract temporal unit "forward in time." Productivity, according to Marx, is grounded in the social character of the use value dimension of labor.[5] Hence, this movement of time is a function of the use value dimension of labor as it interacts with the value frame, and can be understood as a sort of concrete time. In investigating the interaction of concrete and abstract labor, which lies at the heart of Marx's analysis of capital, we have uncovered that *a feature of capitalism is a mode of (concrete) time that expresses the motion of (abstract) time.*

The dialectic of the two dimensions of labor in capitalism, then, can also be understood temporally, as a dialectic of two forms of time. As we have seen, the dialectic of concrete and abstract labor results in an intrinsic dynamic characterized by a peculiar treadmill pattern. Because each new level of productivity is redetermined as a new base level, this dynamic tends to become ongoing and is marked by ever-increasing levels of productivity. Considered temporally, this intrinsic dynamic of capital, with its treadmill pattern, entails an ongoing directional movement of time, a "flow of history." In other words, the mode of concrete time we are examining can be considered *historical time,* as constituted in capitalist society.

The historical time to which I refer clearly differs from abstract time, although both are constituted socially with the development of the commodity as a totalizing form. I have argued that abstract time, defined as an abstract independent framework within which events and actions occur, emerges from the transformation of the results of individual activity, by means of a total social mediation, into an abstract temporal norm for that activity. Although the measure of value is time, the totalizing mediation expressed by "socially necessary labor time" is not a movement *of time* but a metamorphosis of substantial time into abstract time *in space,* as it were, from the particular to the general and back.[6] This mediation in space constitutes an abstract, homogenous temporal frame that is unchanging and serves as the measure of motion. Individual activity then takes place in, and is measured with reference to, abstract time but cannot change that

5. *Capital,* vol. 1, p. 137.

6. See Lukács, "Reification and the Consciousness of the Proletariat," in *History and Class Consciousness,* trans. Rodney Livingstone (London, 1971), p. 90.

time. Although changes in productivity move the abstract time unit historically, that historical movement is not reflected in abstract time. Abstract time does not express the motion of time, but constitutes an apparently absolute frame for motion; its equable constant "flow" is actually static. Consequently, the amount of value yielded per unit time, being a function of that time, remains constant regardless of changes in productivity. The entire frame is reconstituted but does not itself express this reconstitution: the movement of the frame is not reflected directly in value terms.

Historical time, in this interpretation, is not an abstract continuum within which events take place and whose flow is apparently independent of human activity; rather, it is the movement *of time,* as opposed to the movement *in time.* The social totality's dynamic expressed by historical time is a constituted and constituting process of social development and transformation that is directional and whose flow, ultimately rooted in the duality of the social relations mediated by labor, is a function of social practice.

This historical process has many aspects. I shall consider only a few fundamental determinations of this process, but all imply, and provide the ground for, the more concrete aspects of the dynamic analyzed by Marx. In the first place, as noted, the dynamic of the totality entails the ongoing development of productivity, a development that distinguishes capitalism from other societies, according to Marx.[7] It involves ongoing changes in the nature of work, production, technology, and the accumulation of related forms of knowledge. More generally, the historical movement of the social totality entails ongoing, massive transformations in the mode of social life of the majority of the population—in social patterns of work and living, in the structure and distribution of classes, the nature of the state and politics, the form of the family, the nature of learning and education, the modes of transportation and communication, and so on.[8] Moreover, the dialectical process at the heart of capitalism's immanent dynamic entails the constitution, spread, and ongoing transformation of historically determinate forms of subjectivity, interactions, and social values. (This is implied by Marx's understanding of his categories as determinations of forms of social existence, grasping both social objectivity and subjectivity in their intrinsic relatedness.) Historical time in capitalism, then, can be considered as a form of concrete time that is socially constituted and expresses an ongoing qualitative transformation of work and production, of social life more generally, and of forms of consciousness, values, and needs. Unlike the "flow" of abstract time, this movement of time is not equable, but changes and can even accelerate.[9]

A characteristic of capitalism, then, is the social constitution of two forms of time—abstract time and historical time—that are related intrinsically. The society based upon value, upon abstract time, is, when fully developed, characterized by an ongoing historical dynamic (and relatedly, the spread of historical consciousness). In other words, the Marxian analysis elucidates and grounds socially the historically dynamic character of capitalist society in terms of a dialectic of the two dimensions of the commodity form that can be grasped as a dialectic of abstract and historical time. He analyzes this society in terms of determinate social forms that constitute a historical process of ongoing social transformation. The basic social forms of capitalism, according to Marx, are such that people in this social formation create their own history—in the sense of an ongoing, directional process of social transformation. Because of the alienated character of these forms, however, the history they constitute is beyond their control.

Historical time, then, is not just the flow of time within which events take place but is constituted as a form of concrete time. It is not expressed by the value-determined form of time as an abstract constant, as "mathematical" time. We have seen that the social labor hour is moved within a dimension of historical time that is concrete and does not flow equably; yet the abstract temporal unit does not manifest its historical redetermination—it retains its constant form as *present time.* Hence, the historical flow exists behind, but does not appear within, the frame of abstract time. The historical "content" of the abstract temporal unit remains as hidden as does the social "content" of the commodity.

Like this social "content," however, the historical dimension of the abstract temporal unit does not represent a noncapitalist moment; it does not, in and of itself, constitute the standpoint of a critique that points beyond that social formation. As opposed to Lukács—who equates capitalism with static bourgeois relations and posits the dynamic totality, the historical dialectic, as the standpoint of the critique of capitalism[10]—the position developed here shows that the very existence of an ongoing, "automatic" historical flow is related intrinsically to the social domination of abstract time. *Both* forms of time are expressions of alienated relations. I have argued that the structure of social relations characteristic of capitalism takes the form of a quasi-natural opposition between an abstract universal dimension and one of "thingly" nature. The temporal moment of that structure also has the form of an apparently nonsocial and nonhistorical opposition between an abstract formal dimension and one of concrete process. These oppositions, however, are not between capitalist and noncapitalist moments, but, like the related opposition between positive-rational and romantic forms of thought, they remain entirely within the framework of capitalist relations.

Before examining further the interaction of the two forms of time in capitalism, I shall first continue to investigate their differences—in particular, those

7. *Capital,* vol. 1, pp. 486–89.
8. Ibid., pp. 411–16, 517–44, 575–638.
9. The development of the capital form could, then, serve as the starting point for a sociohistorical examination of changing conceptions of time in the West since the seventeenth century.
10. Lukács, "Reification and the Consciousness of the Proletariat," pp. 143–49.

differences between historical time and the frame of abstract time which are implied by the differences between material wealth and value. As we have seen, the frame of abstract time, intrinsically related to the value dimension, remains constant with increased productivity. The social labor hour in which the production of 20 yards of cloth yields a total value of x is the abstract temporal equivalent of the social labor hour in which the production of 40 yards of cloth yields a total value of x: they are equal units of abstract time and, as normative, determine a constant magnitude of value. Assuredly, there is a concrete difference between the two, which results from the historical development of productivity; such a historical development, however, redetermines the criteria of what constitutes a social labor hour, and is not reflected in the hour itself. In this sense, then, *value is an expression of time as the present.* It is a measure of, and compelling norm for, the expenditure of immediate labor time regardless of the historical level of productivity.

Historical time in capitalism, on the other hand, entails a unique process of ongoing social transformation and is related to ongoing changes in the historical level of productivity: it is a function of the development of the use value dimension of labor in the context of the commodity-determined social totality. It is significant that Marx analyzes productivity in terms of the use value dimension of labor (that is, the social character of concrete labor) as follows:

> The productivity of labour . . . is determined amongst other things by the workers' average degree of skill, the level of development of science and its technological application, the social organization of the process of production, the extent and effectiveness of the means of production, and the conditions found in the natural environment.[11]

This means that the productivity of labor is not bound necessarily to the direct labor of the workers; it also is a function of scientific, technical, and organizational knowledge and experience, which Marx regards as products of human development that are socially general.[12] We shall see that in his account, capital unfolds historically in such a way that the level of productivity becomes less and less dependent on the direct labor of the workers. This process entails the development in alienated form of socially general forms of knowledge and experience which are not a function of, and cannot be reduced to, the skills and knowledge of the immediate producers.[13] The dialectical movement of time we have been considering represents the initial determinations of Marx's analysis of capital's historical unfolding.

When the use value dimension of labor is measured, it is—unlike the value dimension—measured in terms of its products, the amount of material wealth it

11. *Capital,* vol. 1, p. 130.
12. Marx, *Results of the Immediate Process of Production,* trans. Rodney Livingstone, in *Capital,* vol. 1, pp. 1024, 1054.
13. See, for example, *Capital,* vol. 1, pp. 443–58, 482, 509, 549.

produces. Not being bound to immediate labor, it is not measured in terms of the expenditure of abstract labor time. The measure of material wealth also can have a temporal aspect, but in the absence of the form of temporal necessity associated with the value dimension, this temporality is a substantive function of production—the amount of time actually required to produce a particular product. This time is a function *of* objectification and not a norm *for* expenditure. The changes in this concrete time of production which occur with the developments of productivity are changes reflecting the historical movement of time. This movement is generated by a process of social constitution related to an ongoing accumulation, in alienated form, of technical, organizational, and scientific knowledge and experience.[14] It follows from the discussion thus far that, within the framework of Marx's analysis, certain *consequences* of this accumulation—that is, consequences of the social, intellectual, and cultural developments that ground the movement of time—can indeed be measured, either in terms of changes in the quantity of goods produced per unit time, for example, or in terms of changes in the amount of time required to produce a particular product. The historical developments *themselves,* however, cannot be measured: they cannot be quantified as dependent variables of abstract temporality (that is, in value terms), even though the requirements of the social form of value mold the concrete form of production in which the accumulation of knowledge, experience, and labor is objectified. The movement of history, then, can be expressed indirectly by time as a dependent variable; as a movement of time, though, it cannot be grasped by static, abstract time.

One important aspect of Marx's conception of the trajectory of capitalist society's historical dynamic has become apparent at this initial stage of the investigation. His fundamental categories imply that, with the unfolding of the dynamic driven ultimately by the commodity form of relations, a growing disparity arises between developments in the productive power of labor (which are not necessarily bound to the direct labor of the workers), on the one hand, and the value frame within which such developments are expressed (which *is* bound to such labor), on the other. The disparity between the accumulation of historical time and the objectification of immediate labor time becomes more pronounced as scientific knowledge is increasingly materialized in production. Consistent with Marx's distinction between value and material wealth, the great increases in productivity effected by science and advanced technology are not, and cannot be, accounted for adequately in terms of abstract labor time expenditure, whether manual or mental—including the time required for research and development, and the training of engineers and skilled workers.

This development can be understood with reference to the category of historical time. As we shall see in considering the trajectory of production, with the development of scientifically and technologically advanced production, in-

14. Ibid., pp. 482, 510.

creases in productivity also express the accumulation of socially general past experience and labor, as well as the frequently discontinuous increases in general knowledge that occur on the basis of this preserved past.[15] The dynamic of capitalism, as grasped by Marx's categories, is such that with this accumulation of historical time, a growing disparity separates the conditions for the production of material wealth from those for the generation of value. Considered in terms of the use value dimension of labor (that is, in terms of the creation of material wealth), production becomes ever less a process of materially objectifying the skills and knowledge of the individual producers or even the class immediately involved; instead, it becomes ever more an objectification of the accumulated collective knowledge of the species, of humanity—which, as a general category, is itself constituted with the accumulation of historical time. In terms of the use value dimension, then, as capitalism develops fully, production increasingly becomes a process of the objectification of historical time rather than of immediate labor time. According to Marx, though, value, necessarily remains an expression of the latter objectification.

The dialectic of transformation and reconstitution

The historical dynamic characteristic of capitalist society, as analyzed by Marx, is not linear but contradictory. It points beyond itself but is not self-overcoming. I have examined, on an abstract and preliminary level, certain differences between production based on the objectification of immediate labor and that based upon historical time. Were it not for the dual character of capitalism's social forms, the development of production could be understood simply as a technical development entailing the linear supersession of one mode of production by another according to the following historical pattern: In the course of capitalist development a form of production based upon the knowledge, skills, and labor of the immediate producers gives rise to another form, based upon the accumulated knowledge and experience of humanity. With the accumulation of historical time, the social necessity for the expenditure of direct human labor in production gradually is diminished. Production based upon the present, upon the expenditure of abstract labor time, thus generates its own negation—the objectification of historical time.

A number of theories of modernity—for example, those of "postindustrial society"—are based on such an understanding of the development of production. This evolutionary understanding is not fully adequate to the nonlinear character of capitalist production's historical development. It presupposes that the form of wealth produced remains constant, and that only the method of its production, understood solely in technical terms, changes. Within the framework of Marx's analysis, such an evolutionary development would be possible only

15. Ibid., p. 508ff.

if value and material wealth were not very different forms of wealth. Because of the double character of capitalism's structuring forms, however, this development represents only one tendency within a much more complex, dialectical historical dynamic. Marx's analysis of value as a structuring social category neither treats the development of production simply as a technical development—whereby a mode of production based primarily on human labor is superseded by one based on science and technology—nor, however, does it ignore the great changes effected by science and technology. Rather, on the basis of the distinctions between value and material wealth, abstract and concrete labor (and, implicitly, abstract and concrete time), Marx analyzes production in capitalism as a contradictory social process that is constituted by a dialectic of the two dimensions of the commodity form.

The interaction of these two dimensions is such that value is not simply superseded by the accumulation of historical time, but continually is reconstituted as an essential determinant of the social formation. This process, which entails the retention of value and the forms of abstract domination associated with it, despite the development of the use value dimension, is intrinsic structurally to the basic social forms of capitalism grasped by Marx's fundamental categories. In examining the most abstract determinations of capitalist society's dynamic in terms of the interaction of these two dimensions, we saw how each new level of productivity both redetermines the social labor hour and, in turn, is redetermined by the abstract time frame as a base level of productivity. Changes in concrete time effected by increased productivity are mediated by the social totality in a way that transforms them into new norms of abstract time (socially necessary labor time) that, in turn, redetermine the constant social labor hour. Note that inasmuch as the development of productivity redetermines the social labor hour, this development reconstitutes, rather than supersedes, the form of necessity associated with that abstract temporal unit. Each new level of productivity is structurally transformed into the concrete presupposition of the social labor hour—and the amount of value produced per unit time remains constant. In this sense, the movement of time is continually converted into present time. In Marx's analysis, the basic structure of capitalism's social forms is such, then, that the accumulation of historical time does not, in and of itself, undermine the necessity represented by value, that is, the necessity of the present; rather, it changes the concrete presupposition of that present, thereby constituting its necessity anew. Present necessity is not "automatically" negated but paradoxically reinforced; it is impelled forward in time as a perpetual present, an apparently eternal necessity.

For Marx, then, the historical dynamic of capitalism is anything but linear and evolutionary. The development—which I have grounded, on a very abstract logical level, in the double character of labor in capitalism—is at once dynamic and static. It entails ever rising levels of productivity, yet the value frame is perpetually reconstituted anew. One consequence of this peculiar dialectic is

that sociohistorical reality is increasingly constituted on two very different levels. On the one hand, as I have pointed out, capitalism involves an ongoing transformation of social life—of the nature, structure and interrelations of social classes and other groupings, as well as the nature of production, transportation, circulation, patterns of living, the form of the family, and so on. On the other hand, the unfolding of capital involves the ongoing reconstitution of its own fundamental condition as an unchanging feature of social life—namely, that social mediation ultimately is effected by labor. In Marx's analysis, these two moments—the ongoing transformation of the world and the reconstitution of the value-determined framework—are mutually conditioning and intrinsically related: both are rooted in the alienated social relations constitutive of capitalism, and together they define that society.

The Marxian concept of capital, examined on this very fundamental level, is an attempt to grasp the nature and development of modern capitalist society in terms of *both* temporal moments, to analyze capitalism as a dynamic society that is in constant flux and, yet, retains its underlying identity. An apparent paradox of capitalism, within this framework, is that, unlike other social formations, it possesses an immanent historical dynamic; this dynamic, however, is characterized by the constant translation of historical time into the framework of the present, thereby reinforcing that present.

To analyze modern capitalist society in terms of the domination of value (and, hence, the domination of capital) is thus to analyze it in terms of two apparently opposed forms of abstract social domination: the domination of abstract time as the present, and a necessary process of ongoing transformation. Both forms of abstract domination as well as their intrinsic interrelation are grasped by the Marxian "law of value." I have noted that this "law" is dynamic and cannot be grasped adequately as a law of the market; at this point I can add that it categorially grasps the drive toward ever-increasing levels of productivity, the ongoing transformation of social life in capitalist society, as well as the ongoing reconstitution of its basic social forms. It reveals capitalism to be a society marked by a temporal duality—an ongoing, accelerating flow of history, on the one hand, and an ongoing conversion of this movement of time into a constant present, on the other. Although socially constituted, both temporal dimensions lie beyond the control of, and exert domination over, the constituting actors. Far from being a law of static equilibrium, then, Marx's law of value grasps as a determinate "law" of history, the dialectical dynamic of transformation and reconstitution characteristic of capitalist society.

The analysis of capitalism in terms of these two moments of social reality suggests, however, that it can be very difficult to grasp both simultaneously. Because so many aspects of social life are transformed more and more rapidly as capitalism develops, the unchanging underlying structures of that society—for example, the fact that labor is an indirect means of life for individuals—can be taken to be eternal, socially "natural" aspects of the human condition. As a result, the possibility of a future qualitatively different from modern society can be veiled.

This brief investigation of the dialectic of the two dimensions of the basic forms of capitalist society has shown how, according to Marx's analysis, production based on the expenditure of abstract present time and that based on the appropriation of historical time are not clearly distinguished modes of producing in capitalism (whereby the latter gradually supersedes the former). Rather, they are moments of the developed capitalist process of production which interact in a way that constitutes this process. Consequently, production in capitalism does not develop in a linear fashion. The dialectical dynamic does, however, give rise to the historical possibility that production based on historical time can be constituted separately from production based on abstract present time—and that the alienated interaction of past and present, characteristic of capitalism, can be overcome. It is this possible future separation that allows one to distinguish between the two moments of the sphere of production in the present, that is, in capitalist society.

At this point, I can return to the category of socially necessary labor time. We have seen that this category represents the transformation of concrete time into abstract time in capitalism, and, as such, expresses a temporally normative compulsion. My preliminary examination of capitalism's immanent dynamic has shown how this objective, impersonal compulsion exerted on individuals is not static but is itself continually reconstituted historically. The producers not only are compelled to produce in accordance with an abstract temporal norm, but must do so in a historically adequate fashion: they are compelled to "keep up with the times." People in capitalist society are confronted with a historically determinate form of abstract social necessity whose determinations change historically—that is, they are confronted with a socially constituted form of historical necessity. The notion of historical necessity has another meaning, of course—that history necessarily moves in a determinate fashion. This discussion of Marx's initial categories has shown that, according to his analysis, these two aspects of historical necessity—the changing compulsion confronting individuals, and the intrinsic logic impelling the totality—are related expressions of the same form of social life.[16]

This investigation implies further that the category of socially necessary labor time also has another dimension. Given that value is the form of social wealth

16. It should be clear that the sort of historical necessity grounded socially by the Marxian categories pertains to the development of the social formation as a whole. It does not refer directly to political developments within countries and among countries, for example. These could, conceivably, be investigated in terms of the historical "metalogic" analyzed by Marx; to do so without considering necessary mediations and contingent factors, however, would be reductionist. By the same token, to criticize Marx's analysis from the standpoint of a more contingent plane of historical development is to confuse levels of analysis and social reality which should be distinguished.

in capitalism, socially necessary labor time should be understood as socially necessary in an additional sense: it implicitly refers to labor time that is necessary for capital and, hence, for society so long as it is capitalist, that is, so long as it is structured by value as the form of wealth and surplus value as the goal of production. This labor time, accordingly, is the expression of a superordinate form of necessity for capitalist society as a whole, as well as for individuals, and should not be confused with the form of necessity Marx refers to in his distinction between "necessary" and "surplus" labor time. As we have seen, this is a distinction between the portion of the workday in which the workers labor for their own reproduction ("necessary" labor time) and the portion that is appropriated by the representatives of capital ("surplus" labor time).[17] In this sense, both "necessary" and "surplus" labor time are subsumed under "socially necessary labor time" in all of its ramifications.

The category of value, in its opposition to that of material wealth, then, signifies that labor time is the stuff of which wealth and social relations are made in capitalism. It refers to a form of social life in which humans are dominated by their own labor and are compelled to maintain this domination. The imperatives grounded in this social form, as I shall discuss further, impel rapid increases in technological development and a necessary pattern of ongoing "growth"; yet, they also perpetuate the necessity of direct human labor in the process of production, regardless of the degree of technological development and of the accumulation of material wealth. It is as the ultimate ground of these historically specific imperatives that labor, in its dual character as productive activity and as a historically specific social "substance," constitutes the identity of capitalism, according to Marx.

It should be clear by now that the complex dynamic I have been investigating is the essential core of the Marxian dialectic of the forces and relations of production in capitalism. My reading indicates, first, that this dialectic is rooted in the double character of the social forms that constitute capitalist society—in the value and use value dimensions of labor and of socially constituted time; and, second, that it perpetuates the abstract compulsion of temporal necessity in both its static and its dynamic dimensions. By grounding this dialectic's fundamental features on such an abstract logical level, I have shown that, in Marx's analysis, it is rooted neither in a purportedly fundamental contradiction between production and distribution, nor in private ownership of the means of production—that is, in class conflict; rather, it stems from the peculiar social forms constituted by labor in capitalism which structure such conflict. This understanding of the developmental pattern and possible negation of capitalist society differs greatly from that associated with approaches proceeding from the notion of "labor" that define the contradictory dialectic of capitalism in traditional terms.

We have seen, if only on a preliminary logical level, how the two dimensions

17. *Capital*, vol. 1, pp. 324–25.

of social labor dynamically redetermine and reinforce one another. Nevertheless, in my discussion of the differences between production based on the appropriation of historical time and that based on the expenditure of abstract present time, I have also shown that these two dimensions are fundamentally different. In Marx's analysis, the ground for capitalism's contradictory character is precisely the circumstance that, while these two dimensions are very different, they, nevertheless, are bound together as two moments of a single (historically specific) social form. The result is a dynamic interaction in which these two moments redetermine one another and in such a way that their difference becomes a growing opposition. This mounting opposition within a common framework does not, as I have shown on a very abstract level, result in any sort of linear evolutionary development wherein the underlying basis of the present is quasi-automatically overcome and superseded. Even at this level one can see that it would result in a growing intrinsic structural tension.

In the traditional interpretation, capitalist relations of production remain extrinsic to the process of production, which is constituted by "labor." The contradiction between the forces and relations of production is, therefore, seen as one between production and distribution, that is, *between* existing social "institutions" and spheres. Within the framework developed in this work, however, that contradiction is *within* these "institutions," spheres, and processes. This suggests that the capitalist process of production, for example, must be understood in social as well as in technical terms. As I shall elaborate, even the material form of this process can be analyzed socially, in terms of the growing internal structural tension, the "shearing pressure," that results from the two structural imperatives of the dialectic of transformation and reconstitution—achieving ever-higher levels of productivity and producing a surplus of value.

It is the nonidentity of the two dimensions of the basic structuring forms of capitalism, then, which imparts an intrinsic dialectical dynamic to the social formation and unfolds as its basic contradiction. This contradiction both shapes social processes and institutions in capitalist society and grounds the immanent possibility of its historical negation.

My analysis of the dialectic of labor and time has shown clearly that Marx, far from adopting labor and production as the standpoint of a historical critique of capitalism, focuses his critical analysis precisely on the socially constitutive role played by labor in that society. Hence, Marx's idea that capitalism's contradictory character gives rise to a growing tension between what is and what could be does not posit industrial production and the proletariat as the elements of a postcapitalist future. In Marx's understanding the basic contradiction of capitalism is not one between one existent social structure or grouping and another; rather, it is grounded in the capitalist sphere of production itself, in the dual character of the sphere of production in a society whose essential relations are constituted by labor.

The fundamental contradiction of capitalism, then, lies between the two di-

mensions of labor and time. On the basis of the investigation thus far, I can describe this contradiction as one between the socially general knowledge and skills whose accumulation is induced by the labor-mediated form of social relations, on the one hand, and this form of mediation itself, on the other. Although the value basis of the present and, hence, the abstract necessity expressed by socially necessary labor time, is never automatically overcome, it comes into growing tension with the possibilities intrinsic to the development it has induced.

I shall elaborate this contradiction below, but at this point I wish to return to the question of the historical dialectic. The interpretation I have presented here extends the scope of this dialectic beyond the laissez-faire epoch of capitalism but also limits it to the capitalist social formation. My analysis of Marx's initial categories has shown, if only abstractly, that his conception of the dual character of capitalism's structuring social forms implies a historical dialectic. By socially grounding the directional dialectical dynamic in a way that specifies it historically as a feature of capitalist society, this investigation reinforces my contention regarding the historical determinateness of Marx's categories and his conception of an immanent logic in history.

It also helps to distinguish three modes of dialectical interactions that are intertwined in Marx's analysis. The first, which is best known and most commonly referred to, can be characterized as a dialectic of reflexive constitution through objectification. It is expressed, for example, by Marx's statement at the beginning of his discussion of the labor process in *Capital* that people, by acting on external nature and changing it, change their own nature.[18] In other words, for Marx, the process of self-constitution involves a process of externalization, both for humanity and for individuals. Skills and abilities are constituted practically, through their expression. Marx's conception of history frequently has been understood in terms of such a process.[19] However, my discussion of the twofold character of capitalism's social forms has demonstrated that this process of self-constitution through labor, even when labor is understood broadly as any externalizing activity, does not necessarily entail a historical development. For example, the material interactions of humanity with nature are not necessarily directionally dynamic; there is neither a theoretical ground nor historical evidence for maintaining that the reflexive effects of concrete labor's objectifications must be directional. The sorts of immanent necessity and directional logic that are central to the dialectical development I have been examining are not intrinsic to the interactions of a knowing subject with its objectifications—whether these interactions are understood individually or in terms of the interactions of humanity with nature. In other words, a directional logic is not intrinsic to those activities which can be termed forms of concrete labor.

18. Ibid., p. 283.
19. Lukács can be interpreted in this way: see "Reification and the Consciousness of the Proletariat," pp. 145–49, 170–71, 175–81, 185–90.

A second dialectical interaction in Marx's mature theory is one of the reciprocal constitution of determinate forms of social practice and social structure. In *Capital,* as I have noted, Marx begins to develop a complex dialectic of deep structure and practice, mediated by the forms of appearance of the former as well as by the subjective dimensions of the various social forms. Such an analysis allows one theoretically to overcome objectivistic and subjectivistic interpretations of social life so as to reveal the valid moments and distorted aspects of each.[20] Nevertheless, this sort of dialectic is also not necessarily directional; it can entail the reproduction of a form of social life that has no intrinsic historical dynamic.[21]

Both of these dialectical interactions can exist in some form in various societies. What distinguishes capitalism, according to Marx, is that both become directionally dynamic because they are embedded in, and intertwined with, an intrinsically dynamic framework of objectified social relations, which is constituted by a third sort of dialectical interaction—one rooted in the double character of the underlying social forms. As a result, the social structures of capitalism that constitute and are constituted by social practice are dynamic. Because, moreover, the intrinsically dynamic relations that mark capitalism are mediated by labor, humanity's interaction with nature does indeed acquire a directional dynamic in capitalism. What ultimately gives rise to this historical dynamic, however, is the twofold character of labor in capitalism, not "labor." This directionally dynamic structure also totalizes and renders dynamic the antagonism between producing and expropriating social groupings; in other words, it constitutes such antagonism as class conflict.

My investigation of the implications of the temporal dimension of value, then, has shown that Marx's analysis uncovers the basis of a dialectical developmental logic in historically specific social forms. His analysis thereby shows that there is indeed a form of logic in history, of historical necessity, but that it is immanent only to the capitalist social formation, and not to human history as a whole. This implies that Marx's mature critical social theory does not hypostatize history as a sort of force moving all human societies; it does not presuppose that a directional dynamic of history in general exists. Rather, it seeks to explain the existence of the sort of ongoing directional dynamic that defines modern society, and to do so in terms of historically determinate social forms

20. For example, Marx's analysis of value and price indicates the "rational core" of approaches based on the premise of methodological individualism or of the notion that social phenomena are the aggregate results of individual behavior. At the same time, the Marxian analysis embeds such approaches historically by showing the historically specific social constitution of that which they take to be socially ontological (for example, the maximizing rational actor).
21. Pierre Bourdieu's examination of Kabyle society is a good example of an analysis of the reproduction of such a form of social life in terms of a mutually constituting dialectic of structure and practice (as one of structure, habitus, and practice): see *Outline of a Theory of Practice,* trans. Richard Nice (Cambridge, 1977).

constituted by labor in a process of alienation.[22] This analysis implies that any theory that posits an immanent logic to history as such—whether dialectical or evolutionary—without grounding this logic in a determinate process of social constitution (which is an unlikely proposition), projects as the history of humanity the qualities specific to capitalism. This projection necessarily obscures the actual social basis of a directional dynamic of history. The historical process is thereby transformed from the object of social analysis into its quasi-metaphysical presupposition.

22. The notion that the commodity form is the ultimate ground for capitalism's complex historical dynamic calls into question any transhistorical opposition between a conception of history either as a single, homogeneous process or as the result of the intersections of a variety of social processes with their own temporalities. My effort to ground socially—on a very abstract logical level—the historically dynamic character of capitalism suggests that although capitalism is not necessarily marked by a unitary, synchronous, homogeneous historical process, it is, as a whole historically dynamic in a way that distinguishes it from other forms of social life. The relations among various social levels and processes are organized differently than they would be in a noncapitalist society; they become embedded in a general, socially constituted, temporally directional, dialectical framework.

9. The trajectory of production

I have approached Marx's conception of the nature of capitalist society by examining the implications of his analysis of the commodity as capitalism's fundamental social form. My examination has uncovered the initial determinations of the intrinsic historical dynamic implied by his analysis of commodity-determined labor's double character and value's temporal dimension. In this way it has begun to illuminate Marx's category of capital as referring to a contradictory and dynamic structure of alienated social relations constituted by labor. This approach has supported and further clarified my argument that Marx's theory of the centrality of labor to capitalist society is a critical theory of a determinate mode of social mediation; labor in capitalism has a social significance, within the framework of that theory, that cannot be grasped adequately when labor is understood only as a productive activity mediating humanity and nature.

I shall now reconsider Marx's analysis of the sphere of production in light of this investigation of his critical theory's initial categories, focusing in particular on the issues of economic growth, class conflict, and the social constitution of industrial production. In this way I shall elaborate further the understanding of capital—and, hence, the reconceptualization of capitalism and the nature of its possible overcoming—developed thus far.

Surplus value and "economic growth"

My preliminary discussion of Marx's conception of the dialectic of the forces and relations of production sheds light on an aspect of the dynamic implied by his category of surplus value of particular interest in view of the current intensification of ecological problems on a global scale. The category itself, as we have seen, refers to the value yielded by surplus labor time, that is, the labor time expended by workers above and beyond the time required to create the amount of value necessary for their own reproduction (necessary labor time). The category of surplus value usually has been understood as indicating that the social surplus in capitalism results not from a number of "factors of production" but from labor alone. Such an interpretation maintains that labor's unique productive role is veiled by the contractual character of the relations between nonpropertied producers and nonproductive proprietors in capitalism. These

participate in their transformation—for example, by calling into question the given structure of labor, not identifying people any longer only in terms of that structure, and participating in rethinking those interests. However, I can do no more than mention these themes and problems here.

Inasmuch as the idea of a growing tension between the necessity and nonnecessity of value-constituting labor refers to the form of social mediation, its implications are not limited to an investigation of the structure of work itself. A final example I have already touched upon of what one could investigate in terms of this understanding of capitalism's contradiction is that of changing conceptions of, and attitudes toward, universality. The notion of the different forms of socially constituted universality implied by Marx's analysis of the development of the structuring forms of the social formation could serve as the basis for a sociohistorical investigation of some strains of new social movements—for example, of the feminist movement—that are attempting to formulate a new form of universalism, beyond the opposition of homogeneous universality and particularity. This approach, then, could also serve as the point of departure for rethinking the relation of the new social movements and identity-based politics of recent decades to capitalism and its possible overcoming. These various examples, however, are intended only as suggestions. At the preliminary logical level of the present study, I cannot adequately undertake an investigation of such possible implications of my interpretation.

To sum up my discussion of the determinate negation of capitalism as it is implied by Marx's critique: This negation cannot, in any way, be grasped in terms of a transformation of the bourgeois mode of distribution alone. Socialism, according to Marx, also involves another mode of production, one not organized as a metamachine based essentially upon direct human labor. It, therefore, would allow for new modes of individual labor and activity that are richer and more satisfying, and for a different relation of work to other realms of life. The possibility of this transformation ultimately is rooted in the possibility of a determinate historical negation—in the abolition of an objective mode of social mediation and the abstract compulsions associated with it, a mode of social mediation that ultimately is constituted by labor, and that constitutes the quasi-automatic directional dynamic of the capitalist social formation and its form of production. Hence, the determinate historical negation of value envisioned by Marx as a historical possibility could free humans from the alienated sway of their own labor, while allowing labor, freed from its historically specific social role, to be transformed so as to enrich rather than impoverish individuals. Freeing the forces of production from the compulsions imposed by the form of wealth based upon direct labor time entails freeing human life from production. In light of the traditional interpretation, it is ironic that Marx's analysis implies that most individuals' labor could become more satisfying and self-constituting only when labor is no longer socially constitutive.

Marx's understanding of the abolition of the capitalist form of labor and of production, then, refers not to production in any narrow sense but to the very structuring principle of our form of social life. Relatedly, his critique of capitalism is not one of social mediation per se but of the specific form of mediation constituted by labor. Value is a self-mediating form of wealth, but material wealth is not; the abolition of the former necessarily entails the constitution of new forms of social mediation, many of which presumably would be political in nature (which by no means necessarily implies a hierarchical, state-centered mode of administration).

Central to Marx's conception of the overcoming of capitalism is his notion of people's reappropriation of the socially general knowledge and capacities that had been constituted historically as capital. We have seen that, according to Marx, such knowledge and capacities, as capital, dominate people; such reappropriation, then, entails overcoming the mode of domination characteristic of capitalist society, which ultimately is grounded in labor's historically specific role as a socially mediating activity. Thus, at the core of his vision of a postcapitalist society is the historically generated possibility that people might begin to control what they create rather than being controlled by it.

The development of the social division of time

At the beginning of this work, I asserted that the notion of the historical specificity of value, which Marx develops in the *Grundrisse,* provides a key to interpreting his mature critique of political economy. I have shown that this idea is indeed the essential core of Marx's analysis in *Capital* of the nature of modern capitalist society and its possible determinate negation. At this point I shall briefly recapitulate what I have developed in this chapter and reconfirm the essential continuity of Marx's analysis in the two texts, by summarizing his conception of the trajectory of capitalist production in *Capital* in terms of temporal categories introduced in the *Grundrisse*—that is, in terms of the development of what I shall call the "social division of time." In the process, I shall emphasize the central significance of the notion of historical nonnecessity. As we have seen, the growing historical nonnecessity of value-constituting labor—that is, the necessary presupposition of capitalism and the constituent of its characteristic form of abstract social necessity—is essential to Marx's understanding of capitalism's fundamental contradiction as one between what is and its own potential (rather than between what is and what also is).

In a passage from the *Grundrisse* quoted at the beginning of this work, Marx states:

> Capital itself is the moving contradiction, [in] that it presses to reduce labour time to a minimum, while it posits labour time, on the other side, as sole measure and source of wealth. Hence it diminishes labour time in the necessary form so as to increase it in the

superfluous form; hence posits the superfluous in growing measure as a condition—question of life or death—for the necessary.[125]

My investigation of *Capital* permits us now to grasp these temporal categories. Marx's opposition of "necessary" and "superfluous" labor time is not identical to that of "necessary" and "surplus" labor time. The former opposition refers to society as a whole, whereas the latter refers to the class of immediate producers. In Marx's theory, the existence of surplus production—more than is necessary to satisfy producers' immediate needs—is a condition of all "historical" forms of social life. One can distinguish in every historical form between the amount of production required to reproduce the laboring population and an additional amount, expropriated by nonlaboring classes, "necessary" for society as a whole. According to Marx, in capitalism the surplus is value, rather than material wealth and is not expropriated by means of direct domination. Instead, expropriation is mediated by the form of wealth itself, and exists in the form of a nonmanifest division between that portion of the workday in which the workers labor for their own reproduction ("necessary" labor time) and that portion which is appropriated by capital ("surplus" labor time). Given the distinction between value and material wealth, so long as the production of material wealth depends largely on the expenditure of direct labor time, both "necessary" and "surplus" labor time can be considered socially necessary.

This, however, ceases to be the case as the production of material wealth comes to be based on socially general knowledge and productive capacities rather than on direct human labor. In such a situation, the production of material wealth may bear so little relation to the expenditure of direct labor time that the total amount of socially necessary labor, in *both* its determinations (for individual reproduction and for society generally), could be greatly reduced. The result, as Marx put it, would be a situation characterized not by the "reduction of necessary labour time so as to posit surplus labour" but rather by "the reduction of the necessary labour of society in general to a minimum."[126]

My examination of the dialectic of the two dimensions of capitalism's underlying social forms has shown, however, that a general reduction of socially necessary labor that would be fully commensurate with the productive capacities developed under capitalism cannot occur, according to Marx's analysis, so long as value is the source of wealth. The difference between the total labor time determined as socially necessary by capital, on the one hand, and the amount of labor that would be necessary, given the development of socially general productive capacities, were material wealth the social form of wealth, on the other, is what Marx calls in the *Grundrisse* "superfluous" labor time. The category can be understood both quantitatively and qualitatively, as referring both to the duration of labor as well as to the structure of production and the very

125. *Grundrisse,* p. 706.
126. Ibid., (translation amended).

existence of much labor in capitalist society. As applied to social production in general, it is a new historical category, one generated by the trajectory of capitalist production.

Until this historical stage of capitalism, according to Marx's analysis, socially necessary labor time in its two determinations defined and filled the time of the laboring masses, allowing nonlabor time for the few. With advanced industrial capitalist production, the productive potential developed becomes so enormous that a new historical category of "extra" time for the many emerges, allowing for a drastic reduction in both aspects of socially necessary labor time, and a transformation of the structure of labor and the relation of work to other aspects of social life. But this extra time emerges only as potential: as structured by the dialectic of transformation and reconstitution, it exists in the form of "superfluous" labor time. The term reflects the contradiction: as determined by the old relations of production it remains labor time; as judged in terms of the potential of the new forces of production it is, in its old determination, superfluous.

It should be clear that "superfluous" is not an unhistorical category of judgment developed from a position purportedly outside of society. It is, rather, an immanent critical category that is rooted in the growing contradiction between the potential of the developed forces of production and their existent social form. From this point of view, one can distinguish labor time necessary for capitalism from that which would be necessary for society were it not for capitalism. As my discussion of Marx's analysis has indicated, this distinction refers not only to the quantity of socially necessary labor but also to the nature of social necessity itself. That is, it points not only toward a possible large reduction in total labor time but also toward the possible overcoming of the abstract forms of social compulsion constituted by the value form of social mediation. Understood in these terms, "superfluous" is the historically generated, immediate opposite of "necessary," a category of contradiction that expresses the growing historical possibility of distinguishing society from its capitalist form, and, hence, of separating out their previous necessary connection. The basic contradiction of capitalism, in its unfolding, allows for the judgment of the older form and the imagination of a newer one.

My analysis of the dialectic of transformation and reconstitution has shown that, according to Marx, historical necessity cannot, in and of itself, give rise to freedom. The nature of capitalist development, however, is such that it can and does give rise to its immediate opposite—historical nonnecessity—which, in turn, allows for the determinate historical negation of capitalism. This possibility can only be realized, according to Marx, if people appropriate what had been constituted historically as capital.

The understanding of the determinate negation of capitalism implied by the unfolding of Marx's categories in *Capital* parallels what he presents in the *Grundrisse.* In the latter, he characterizes a possible postcapitalist society in terms of the category of "disposable" time: "on the one side, necessary labour

time will be measured by the needs of the social individual, and, on the other, the development of the power of social production will grow so rapidly that, even though production is now calculated for the wealth of all, *disposable time* will grow for all.''[127] Marx defines ''disposable'' time as ''room for the development of the individual's full productive forces, hence those of society also.''[128] This is the positive form taken on by that extra time, freed by the forces of production, which under advanced capitalism remains bound as ''superfluous.'' The category of superfluous time expresses only negativity—the historical nonnecessity of a previous historical necessity—and therefore still refers to the Subject: society in general in its alienated form. The category of disposable time reverses this negativity and gives it a new referent: the social individual.[129] It presupposes the abolition of the value form of social mediation: only then, according to Marx, can (nonalienated) labor time and disposable time complement one another positively as constitutive of the social individual. Overcoming capitalism, then, would entail the transformation not only of the structure and character of social labor but also of nonworking time, and of their relation. In the absence of the abolition of value, however, any extra time generated as a result of the reduction of the workday is determined negatively by Marx, as the antithesis of (alienated) labor time, as what we would call ''leisure time'': ''*Labour time as the measure of wealth* posits wealth itself as founded on poverty, and disposable time as existing *in and because of the antithesis to surplus labour time.*''[130]

The trajectory of capitalist production as presented by Marx can be viewed, then, in terms of the development of the social division of time—from socially necessary (individually necessary and surplus), through socially necessary and superfluous, to the possibility of socially necessary and disposable (which would entail overcoming the older form of necessity). This trajectory expresses the dialectical development of capitalism, of an alienated form of society constituted as a richly developed totality at the expense of the individuals, which gives rise to the possibility of its own negation, a new form of society in which people, singly and collectively, can appropriate the species-general capacities that had been constituted in alienated form as attributes of the Subject.

The development of the social division of time is in Marx's analysis a function of the complex dialectic of the two dimensions of capitalism's underlying structuring forms. As I have argued, by grounding capitalism's directional dynamic in the twofold character of the fundamental structures of this society, Marx breaks with any notion of a single transhistorical human history with an immanent principle of development; further, he demonstrates

127. Ibid., p. 708.
128. Ibid.
129. For a discussion of disposable time which focuses on a possible system of rotational employment, see Becker, *Marxian Political Economy*, p. 263ff.
130. *Grundrisse*, p. 708.

that this directional dynamic cannot be taken for granted but must itself be grounded by a theory of social constitution. Within the framework of this interpretation, the emergence of capitalism can be seen as an ever-less random development with the rise and full unfolding of the commodity form—but not as the unfolding of an immanent principle of necessity. The history of the capitalist social formation, however, does have an immanent, as opposed to a retrospective, logic, according to Marx; as a result of its form of social mediation, capitalism is marked by a form of historical necessity. Yet the dialectic of its underlying social forms is such that capitalism points beyond itself to the possibility of a future society based on a different form of social mediation, one that would be neither quasi-objectively constituted nor traditionally given. Marx's analysis implies that a society so constituted would allow people a greater degree of freedom over their lives, individually as well as collectively, and could be considered a situation of historical freedom. To the degree that one can speak of a notion of human history in Marx's mature works, then, it is not in terms of a single transhistorical principle; rather, it refers to a movement, initially contingent, from various histories to History—to a necessary, increasingly global, directional dynamic constituted by alienated social forms which is structured in a way that it points toward the possibility of historical freedom, toward the possibility of a future society free from any quasi-objective directional logic of development.

The specificity of capitalism's dialectical dynamic, as analyzed by Marx, entails a relationship of past, present, and future very different from that implied by any linear notion of historical development. The dialectic of objectified present time and objectified historical time can be summarized as follows: In capitalism, objectified historical time is accumulated in alienated form, reinforcing the present, and, as such, it dominates the living. Yet, it also allows for people's liberation from the present by undermining its necessary moment, thereby making possible the future—the appropriation of history such that the older relations are reversed and transcended. Instead of a social form structured by the present, by abstract labor time, there can be a social form based upon the full utilization of a history alienated no longer, both for society in general and for the individual.[131]

For Marx, then, the historical movement of capitalism, driven forward by social conflicts structured by the dialectic of labor and of time, can be expressed in terms of the development of the social division of time, and results in the possibility that the social meaning of time be transformed: ''The measure of

131. One could draw a parallel between this understanding of the capitalist social formation's history and Freud's notion of individual history, where the past does not appear as such, but, rather, in a veiled, internalized form that dominates the present. The task of psychoanalysis is to unveil the past in such a way that its appropriation becomes possible. The necessary moment of a compulsively repetitive present can thereby be overcome, which allows the individual to move into the future.

wealth is then not any longer, in any way, labour time, but rather disposable time.''[132]

Realms of necessity

I have shown that Marx's mature critical theory is based on an analysis of the historically specific role of labor in capitalism as constituting the peculiar, quasi-objective mode of social mediation that structures this society. Yet several commonly cited passages in Volume 3 of *Capital* seem to call into question some central propositions of the interpretation presented here—in particular, that overcoming capitalism would involve overcoming value, a self-mediating form of wealth, and, relatedly, alienated labor. I shall therefore close this chapter and, with it, this stage of the investigation, by considering these passages in light of what I have developed thus far, in order to show that they actually are consistent with my interpretation.

Central to my reading has been the argument that value is a determinate form of wealth, historically specific to capitalism, and that it is temporally determined. One aspect of the abstract form of social domination constituted by labor as a socially mediating activity was shown to be the sort of objective necessity exerted by the form of abstract time. In Volume 3 of *Capital,* however, it seems as if Marx maintains that, even after the overcoming of capitalism, such a temporal determination of wealth would be retained:

> After the abolition of the capitalist mode of production, but still retaining social production, the determination of value continues to prevail in the sense that the regulation of labour time and the distribution of social labour among the various production groups, ultimately the bookkeeping encompassing all this, become more essential than ever.[133]

Despite Marx's use of the term ''value'' at this point in his posthumously published manuscript, his statement that the regulation of labor time would remain important in a (technologically developed, globally interdependent) postcapitalist society should be distinguished from the notion that value would remain the form of wealth. I can begin to clarify this distinction by turning to a passage in the *Grundrisse* where he addresses the same question of the role of the regulation of labor time expenditure in a postcapitalist society:

> Thus, economy of time, along with the planned distribution of labour time among the various branches of production, remains the first economic law on the basis of communal production. It becomes law, there, to an even higher degree. However, this is essentially different from a measurement of exchange-values (labour or products) by labour time. The labour of individuals in the same *branch of work,* and the various kinds of work, are different from one another not only quantitatively but also qualitatively. What does a solely *quantitative* difference between things presuppose? The identity of their qualities. Hence, the quantitative measure of labours presupposes the equivalence, the identity of their quality.[134]

132. *Grundrisse,* p. 708.
133. *Capital,* vol. 3, p. 851.

It is significant that Marx explicitly distinguishes the ''planned distribution of labour time'' from the ''measurement of exchange-value by labour time,'' which he then discusses in terms of the qualitative equation of various kinds of labors. The difference between the two is that the form of wealth based on labor time expenditure is related intrinsically to a quasi-objective form of social mediation, according to Marx. In such a situation, time is not a descriptive measure, but has become a quasi-independent objective norm. *This* grounds the dialectic of labor and time and, hence, the logic of development and form of material production that characterize capitalism in Marx's analysis. This dialectic, and the forms of abstract social necessity related to it, are functions not of an economy of time as such but of the temporal form of wealth. By the same token, not every economy of time implies a self-mediating form of wealth. Marx clearly distinguishes the two.

Marx's statement that considerations of labor time would remain important in a postcapitalist society does not, therefore, mean that the form of wealth itself would be temporal rather than material. On the contrary, it is another example of his thesis that what was constituted historically in an alienated form that dominates people—in this case, the economy of time—could be transformed and controlled by people for their benefit, were the labor-constituted mode of mediation abolished. These passages, then, do not contravene my assertion that the distinction between value and material wealth, and the notion that overcoming capitalism entails the abolition of the former form of wealth and its supersession by the latter, are central to Marx's critical analysis. As he notes in Volume 3 of *Capital,* several pages prior to the passage cited above,

> it depends upon the productivity of labour how much use-value is produced in a definite time, hence also in a definite surplus labour-time. The real wealth of society, and the possibility of constantly expanding its reproduction process, therefore, do not depend upon the duration of surplus-labour, but upon its productivity and the more or less copious conditions of production under which it is performed.[135]

This passage shows clearly that Marx thought the form of wealth in a postcapitalist society would be material wealth. Although an economy of time would remain important, this time presumably would be descriptive. Within the framework of Marx's analysis, as I have presented it, the differences between such a socioeconomic order and one dominated by the temporal form of wealth would be considerable. In the postcapitalist society constituted as a determinate possibility by the trajectory of capital, increases in social wealth could be di-

134. *Grundrisse,* p. 173.
135. *Capital,* vol. 3, p. 820 (translation amended).

rectly proportional to increases in productivity—hence, the relation between considerations of time expenditure and wealth production could be essentially different than in a situation where value is the social form of wealth. Moreover, because the process of production no longer would possess a double character as a labor process and a valorization process, it would not necessarily be based on the extraction of labor time from the workers; nor would its form be molded structurally by the necessary role of direct human labor in production as the essential source of wealth (in the form of value). Hence, the process of production could be fundamentally transformed. As I have shown, the dialectic of capital, in Marx's analysis, points to the possibility that the previously necessary presupposition of social wealth could be overcome—that humanity, as it were, could free itself from Adam's curse.[136]

Marx's notion of a possible postcapitalist economy of time, therefore, and his analysis of capitalism in terms of a temporal form of wealth are not identical and should be distinguished. The trajectory of capitalist development, as he analyzes it, implies both that a possible postcapitalist society would be based on material wealth, and that it would also be characterized by an economy of time. In short, as Paul Mattick noted, when Marx refers to value in the passage from Volume 3 cited at the beginning of this section, "the term value in this connection is a mere manner of speech."[137]

Just as one must distinguish between an economy of time and the domination of time, in Marx's mature theory, one must also, in considering the relation between labor and social necessity, distinguish between transhistorical social necessity and historically determinate social necessity. An example of the former sort of necessity, for Marx, is that some form of concrete labor, however determined, is necessary to mediate the material interactions of humans and nature and, hence, to maintain human social life. Some such activity, according to Marx, is a necessary condition of human existence in all forms of society.[138] Marx's implicit notion of the latter sort of necessity, according to my interpretation, refers to the sorts of abstract, impersonal compulsions exerted by capitalism's objectified, alienated forms of social relations that ultimately are constituted by labor as a socially mediating activity. His analyses of the trajectory of capitalist production and the historical constitution of tremendous productive capacities as capital can also be described in terms of the development

136. The emphasis on the overcoming of alienated labor as a condition of human emancipation is central to the thought of Herbert Marcuse, who was one of the first to recognize the significance of both the *Economic and Philosophic Manuscripts of 1844* and the *Grundrisse*. Because the historical dimension of Marcuse's analyses has sometimes been overlooked, his positions have been attributed a higher degree of romanticism than is the case. See Herbert Marcuse, "The Foundation of Historical Materialism," in *From Luther to Popper*, trans. Joris De Bres (London, 1972), pp. 3–48; and *One-Dimensional Man* (Boston, 1964).

137. Mattick, *Marx and Keynes: The Limits of the Mixed Economy* (Boston, 1969), p. 31.

138. *Capital*, vol. 1, p. 133.

of this second form of social necessity. The historical development of capitalism, then, of a society based upon an abstract, quasi-natural form of social domination, entailed not only the supersession of direct, personal forms of social domination but also the partial overcoming of the domination of humans by nature. In other words, to the degree that, with the development of capitalism, humanity freed itself from its overwhelming dependence on the vagaries of its natural environment, it did so by the non-conscious and unintentional creation of a quasi-natural structure of domination constituted by labor, a sort of "second nature"; it overcame the domination of the first, of the natural environment, at the price of constituting the domination of this second nature.

As a result of its dual character, then, commodity-determined labor, in Marx's analysis, is bound to two different forms of necessity, one transhistorical, and one specific to capitalism. This should be borne in mind when one considers the following frequently cited passage from Volume 3 of *Capital:*

> The realm of freedom actually begins only where labour, which is determined by necessity and external goals, ceases; thus in the very nature of things it lies beyond the sphere of actual material production. . . . Freedom in this field can only consist in socialized humans, the associated producers, rationally regulating their material interchange with Nature, bringing it under their common control, instead of being ruled by it as by a blind force; and achieving this with the least expenditure of energy and under conditions most favorable to, and worthy of, their human nature. But it nonetheless remains a realm of necessity. Beyond it begins that development of human power, which is an end in itself, the true realm of freedom, which, however, can blossom forth only with this realm of necessity as its basis.[139]

This passage refers to two different sorts of freedom—that from transhistorical social necessity and that from historically determinate social necessity. The "true realm of freedom" refers to the first form of freedom. Freedom from *any* form of necessity must necessarily begin outside of the sphere of production. There can, however, be a form of freedom within this sphere as well, according to Marx: the associated producers can control their labor rather than being controlled by it. In terms of what I have developed thus far, it is clear that he is not referring here to control over production in any narrow sense but to the transformation of the structure of social production and the abolition of the abstract form of domination rooted in commodity-determined labor—that is, to the abolition of historically determinate social necessity. We have seen that, for Marx, overcoming the value form of social relations would mean overcoming alienated social necessity. Humanity could thereby free itself from the sorts of quasi-natural social compulsions discussed above, for example, the form of runaway productivity associated with capital accumulation and the increasing fragmentation of labor—in short, the various aspects of social and historical automatism. In Marx's view, then, the abolition of alienated labor would entail

139. *Capital*, vol. 3, p. 820 (translation amended).

overcoming historical necessity, the historically specific social necessity constituted in the capitalist sphere of production; it would allow for historical freedom. "Historical freedom" can be used to characterize Marx's conception of a society in which people are free of alien social domination, whether its form is personal or abstract, and in which it would be possible for the associated individuals to make their own history.

In Marx's conception, historical freedom involves the liberation from historically determinate social necessity and allows for an expansion of the "true realm of freedom." However, it does not and cannot entail freedom on a total social level from any sort of necessity: society, for Marx, cannot be based on absolute freedom. One remaining constraint is nature. Although the labor of individuals need not be a necessary means for acquiring means of consumption, *some* form of social production is a necessary precondition of human social existence. The form and extent of this transhistorical, "natural," social necessity can be historically modified; this necessity itself, however, cannot be abolished. Even when direct human labor in production no longer would be the primary source of social wealth, and society no longer would be structured by a quasi-objective form of social mediation constituted by labor, social labor would have to be performed, according to Marx. For this reason, as I noted early in this work, he maintains that, however playful individual labor may become, labor on a socially general level can never acquire the character of pure play.

The abolition of alienated labor, implied by Marx's analysis of capitalism, does not, then, signify the abolition of the necessity of all forms of social labor, although the character of such labor, the amount of labor time (and life time) required, and the various possible modes by which the social distribution of labor could be effected could be considerably different than in a society dominated by historical necessity. Within the framework of Marx's analysis, then, the continued existence of the necessity of labor as a condition of human social life should not be identified with alienation, with the abstract forms of labor-constituted social domination I have analyzed. The former necessity is rooted in human life itself—in the circumstance that humans are part of nature, but are so mediately, inasmuch as they also regulate their "metabolism" with their natural environment by means of labor.

There is an additional aspect of the last passage quoted that deserves mention. That the labor-mediated interaction between humanity and nature is a necessary precondition of human social life highlights one dimension of Marx's critique of capitalism which usually is overlooked. We have seen that, according to Marx, material wealth is constituted by (concrete) labor and nature, but value is a function of (abstract) labor alone. As self-valorizing value, capital consumes material nature to produce material wealth—not as an end, however, but as a means of expanding surplus-value, of extracting and absorbing as much surplus labor time from the working population as possible. This transformation of matter into units of objectified time is a one-way, rather than a cyclical, process of

productive consumption. In this respect, capital-determined production is like slash-and-burn agriculture on a "higher" level; it consumes the sources of material wealth and then moves on. Capitalist production, in Marx's words, "only develops the techniques and the degree of combination of the social process of production by simultaneously undermining the basic sources of all wealth—the earth and the worker."[140] The enormous increases in productivity induced and required by capital are due precisely to the fact that the creation of more material wealth is not an end but a means of lowering necessary labor time. One consequence of the value form, then, is that capital is characterized by a movement toward boundless expansion; as we have seen capitalist production is for the sake of production. This accelerating drive of capital is a function of a form of wealth based on the expenditure of direct labor time. We have seen that this basis becomes less significant and ever-narrower as a source of material wealth, while remaining necessary as a source of value, according to Marx. The boundless strivings of capital and its narrow basis are tied to each other, yet this is not manifest. The dream implied by the capital form is one of utter boundlessness, a fantasy of freedom as the complete liberation from matter, from nature. This "dream of capital" is becoming the nightmare of that from which it strives to free itself—the planet and its inhabitants.

Humanity can fully awaken from this somnambulistic state only by abolishing value. This abolition would entail abolishing the necessity for productivity to be constantly increased in the form discussed above, and would allow for a different structure of labor, a higher degree of control by people over their lives, and a more consciously controlled relationship with the natural environment. Marx's assertion that some form of labor is a transhistorical social necessity is a critique of conceptions of absolute freedom, a critique based on a recognition of the boundedness of humanity as a mediate part of nature. It suggests that a situation of historical freedom would also allow for a consciously regulated process of interaction with nature, a relationship with nature that should not be understood in terms of the romanticized "harmony" that expresses the subjection of humanity to the blind forces of nature, or the "freedom" that entails the blind subjugation of nature.

Marx's critical theory frequently has been criticized as "Promethean," as a theory based on the dangerously utopian proposition that people can shape their world as they choose. The analysis of modern society in terms of labor-mediated social relations presented in this work calls into question one assumption such criticisms make—namely, that whether people shape their world around them is a matter of choice. Marx's analysis can be understood as a very powerful and sophisticated attempt to show that, with the development of the commodity as a total social form, people already "make" the world around them. This indicates retrospectively that people earlier also constituted their world; the form in

140. *Capital,* vol. 1, p. 638 (translation amended).

which people make the world under capitalism, however, is very different from earlier forms of social constitution. The modern, capitalist world, according to Marx, is constituted by labor, and this process of social constitution is such that people are controlled by what they make. Marx analyzes capital as the alienated form of historically constituted, species-general knowledge and skills and, hence, grasps its increasingly destructive movement toward boundlessness as a movement of objectified human capacities that have become independent of human control. In terms of what I have developed in this work, Marx's conception of the overcoming of capitalism can be understood in terms of people gaining control over such quasi-objective developments, over processes of ongoing and accelerating social transformation, which they themselves have constituted. Within such a framework, then, the issue is not so much whether people should try to shape their world—they already are doing so. Rather, the issue is the way in which they shape their world and, hence, the nature of this world and its trajectory.

10. Concluding considerations

The purpose of this work has been to reinterpret Marx's mature critical theory by closely examining its most basic categories and, on this basis, to begin reconceptualizing the nature of capitalist society. An important concern of this reinterpretation has been to show the extent to which significant differences exist between Marx's theory and traditional Marxist interpretations. Indeed, I have shown that Marx's theory can provide a powerful critique of such interpretations, one that embeds them socially by analyzing them with the same categories with which it critically analyzes capitalism. This reinterpretation of Marx's analysis, in other words, allows for a critique of traditional Marxism that, at the same time, expresses another critical theory of capitalism. It also transforms the terms of discourse between Marxian theory and other sorts of social theory.

The key to the reinterpretation of Marx's theory developed here has been the distinction between a critique of capitalism from the standpoint of "labor," traditionally understood, and one based on a critical analysis of the historically determinate character of labor in capitalism. My investigation has shown that the former conception lies at the heart of traditional Marxism, and that the Marxian analysis should not be understood in these terms. We have seen that Marx's analysis of the historically unique character of labor as a socially mediating activity in capitalism is central to his investigation of the social relations and forms of subjectivity that characterize this society. According to Marx, the dual function of labor in capitalism as abstract labor and as concrete labor, as an activity that mediates people's relations with one another and with nature, constitutes the fundamental structuring form of social life in capitalism—the commodity. He treats the commodity as a socially constituted and constituting form—"subjective" as well as "objective"—of social practice. Marx's theory of the centrality of labor to social life in capitalism, then, is a theory of the specific nature of the form of social mediation in this society—one that is constituted by labor and has a quasi-objective character—rather than a theory of the necessary social primacy of the labor-mediated interactions of humans with nature. This focus on social mediation, rather than on "labor" (or class), means that Marx's social theory of knowledge, relating labor and consciousness, should be understood as one that grasps forms of social mediation (constituted by structured forms of practice) and forms of subjectivity as intrinsically related. Such