

## Chapter One

### THE FUNCTIONS OF A THEORY OF VALUE

Any theory of capitalist evolution is a theory of endogenous change. It must explain the developmental tendencies of the capitalist economy not by the political events or psychological propensities characteristic of capitalist society, but by the economic laws governing this economy. It is our thesis that these economic laws can be explained only by a sound theory of value.

Marx's theory of evolution, the theory of capitalist breakdown, is, in fact, derived step by step from his theory of value. Since this is the case, the question of the nature and function of value theory itself must be taken down off the shelf designated for it and other "metaphysical antiquities" by the dominant opinion in contemporary economics. The modern view is that a theory of value in the old-fashioned sense is unnecessary, since the general equilibrium of the system can be determined by an empirical theory of price. According to the most recent development in price theory, which is essentially a theory of choice, this general equilibrium, in which all prices and quantities are uniquely determined, can be deduced from no more information than (1) that each firm attempts to maximize its net revenue; (2) that each consumer, when faced with given prices and a given income, prefers a certain group of commodities A to another group B, and does not at the same time

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prefer group B to group A.

If it is true that equilibrium conditions can be uniquely determined with only the scanty information that goods are scarce and useful, and that consumers and producers are consistent, what indeed is the use of a theory of value. Why not abandon the metaphysics of value for the logic of price?

The answer to this question requires first that we examine the claims of modern price theory. This theory has grown out of, and, despite its assertions to the contrary, is still rooted in the marginal utility theory of value. It claims to be able to determine the relations of all variables in the system without recourse to the concept of value. Market behavior is simply observed; there is no attempt to examine real costs or underlying desires and motivations. Yet while price theory has abandoned the concept of utility as a measurable entity, as a theory of choice it still rests implicitly on the concept of utility. There is only a formal difference between the general equilibrium system of Walras, which assumes that there is a "cause" of value, and a purely empirical theory which deals

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1. Paul A. Samuelson, "A Note on the Pure Theory of Consumers' Behavior," *Economica*, Vol. 5, No. 17 (February, 1938), 61-71. This article sets three postulates to the theory. These are: (1) that the quantity of each commodity is a single-valued function of all prices and income; (2) that this function is homogeneous of zero degree in the variables prices and income; (3) that the individual behaves consistently in that when he prefers the A group of goods to the B group, he does not at the same time prefer the B group to the A group.

In "A Note on the Pure Theory of Consumers' Behavior: An Addendum," *ibid.*, Vol. 5, No. 19 (August, 1938), 353-4, Samuelson demonstrates that all three postulates are contained in the third, that relating to the consistency of consumers' choice.

explicitly only with the phenomenon of price. Implicitly, if not explicitly, a theory of price must rest on the concept of value. Price theory may refuse to examine what lies behind the phenomena it observes. Yet economic theory based on the observation that some goods command price without asking why this is so would be like science if it observed natural phenomena without trying to explain them. The very function of economic theory is, in fact, to explain as well as to describe the phenomenon of price. This means that it must explain the phenomenon of value itself.

According to one <sup>Marxist</sup> theorist, the purpose of a theory of value is to provide "a unifying principle, or system of general statements cast in quantitative form. . . . competent to determine the equilibrium or movement of the system as a whole." This statement of purpose indicates, in fact, how the theory of value operates. But to explain the phenomenon it describes, a theory of value must explain why as well as how. This means that value theory is essentially an attempt to explain why the phenomenon of value exists at all, and how this phenomenon determines all economic relations. How much a theory of value can explain depends, of course, on the theory itself. An adequate theory of value must (1) determine the source of value and the distribution of the product both to social classes and to factors of production; (2) determine the conditions of equilibrium in the relations of all the variables of the system; (3) determine the conditions and direction of economic evolution.

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2. Maurice Dobb, Political Economy and Capitalism (revised ed., New York, 1946), 5.

The order in which these purposes are given indicates that the movement of the system can be deduced only from the conditions of equilibrium, and that the determination of the equilibrium relations of the system, the establishment of a unique set of exchange values, which is what in logic the theory of value does, has meaning only when we know what value is.

Before we examine the extent to which the leading theories of value fulfill these purposes, we must state the <sup>purely</sup> formal requirements of an adequate theory of value.<sup>3</sup> These are: (1) that the theory yield a closed system (i. e., equal equations and unknowns) which determines the equilibrium relations of the variables; (2) that the measure of value be something which is not itself a value. Thus, "a principle of value is not adequate which merely expresses value in terms of some one or other particular value: the determining constants must express a relationship with some quantity which is not itself a value."<sup>4</sup> (3) that the determining relation in the equational system admit of quantitative expression.

From these three requirements it follows that the only adequate theories of value are the labor theory and the marginal utility theory.<sup>5</sup> Other theories of value,<sup>such</sup> as the labor-command theory of Smith and Malthus, the simple supply and demand theories, and the cost of production theory of Mill and Marshall, fail to

3. These are pointed out by Dobb, ibid., 5-12.

4. Ibid., 9-10.

5. In order to deal with the marginal utility theory at all it is necessary to make what is well known to be the treacherous assumption that the theory meets the third requirement.

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 fulfill these requirements. The labor theory and the marginal utility theory do fulfill these requirements because in each case not only are all the variables explained in a closed system, but the determining quantity -- in the former case labor, measured in time,

6. The labor-command theory is only <sup>part of</sup> Adam Smith's one of four value theories, the others being the labor embodied theory, the "toil and trouble" (or marginal labor cost) theory, and the cost of production theory. It was taken over by Malthus, and finally reduced to a theory of demand and supply. (T. R. Malthus, Principles of Political Economy, 2nd ed., London, 1836, 61-69.)

As for "cost of production" as an alternative explanation, this can have no meaning unless the elements of cost -- wages, rent, and profits -- are independently determined. This is impossible since, according to this theory, these elements are similarly reduced to cost. Cost of production theory then reduces to supply and demand theory, each element of cost being determined by competition between buyers and sellers. Of this Marx writes, "If supply and demand balance, the oscillation of price ceases, all other conditions being the same. But then demand and supply also cease to explain anything." (Karl Marx, Capital, (Chicago, 1906), I, 2589.) Ricardo, like Marx, rejects a supply and demand explanation as a "source of much error." (David Ricardo, Principles of Political Economy and Taxation, Everyman's Library ed., London-N. Y., 1943, 260.)

Marshall explains the determination of value by the (incorrect) scissors analogy -- demand and supply are the two blades of the scissors. When one blade is held constant, it appears that the other does the cutting. In the short run, demand or utility, in the long run, supply or cost of production is the chief determinant of price. (Alfred Marshall, Principles of Economics, 8th ed., London, 1938, 348-9.) The scissors analogy, like any demand and supply theory, is inadequate. Moreover, it shows that Marshall fails to see that one theory can explain both supply and demand. Thus he criticizes Jevons' one-sidedness, his "overemphasis" of demand, similarly, but more kindly than Jevons had criticized Ricardo's overemphasis of supply. (Ibid., Appendix I, 817-21.) Marshall does not realize that just as cost of production in the Ricardian sense determines demand, so utility, via the process of imputation, determines supply.

in the latter case consumers' desires, measured in monetary expenditure -- is itself not a value. Each theory is concerned with the source, as well as the measure, of value, one objective, the other subjective.

We do not stop here to discuss the different philosophical and sociological foundations of these two theories, but will compare them directly with reference to the extent to which they fulfill the functions of value theory, those of explaining the value phenomena, equilibrium, and evolution.

#### I. The Determination of the Origin and Distribution of Value

The determination of the source of value is the real purpose of value theory. The essential problem is not why goods exchange in given proportions, but why some goods become objects of exchange, while others are free and do not enter into the market.

Historically, the theory of value originated as a theory of surplus value. This expresses the fact that in every economy the goal is not only to maintain a given level of production, but to create a surplus product, whether designed for consumption or for accumulation, which, in an exchange economy, is realized as a surplus value. Different explanations of surplus value reflect different stages of economic development; thus the Mercantilists found the surplus in exchange, the Physiocrats in agricultural

7. Of the Physiocrats and their opponents, who concerned themselves not with the question of what kind of labor creates value, but what kind creates surplus value, Marx writes, "They approached the problem in its complicated form before they had solved it in its elementary form; such is the historical course of all sciences leading them by a labyrinth of intersecting paths to the real starting point. Unlike

production, the Classicists in industrial production.

The marginal utility theory explains that value is a result of scarcity and utility. It does not investigate the problem of scarcity as such, except to state it as a condition of values, and to observe that some goods are naturally scarce.

This theory finds the essential source of value in the capacity of commodities to satisfy human wants. Value is subjectively determined by consumers' desires, and objectively measured by price. Subjective value theory recognizes the fact that price and value are not identical, insofar as price expresses value. But it furnishes no analytic tool for differentiating value from price. The measure of value of any commodity is its utility; but this can be deduced only from prices to which values must thereby be equated.

According to this theory, a given value is not first produced and then realized in price. Price realizes what is assumed to be an equivalent value. But the purpose of value theory is to explain the phenomenon of value which determines a given set of market relations. Marginal utility theory, on the other hand, avers that this given set of relations determines value.

The starting point in the explanation of exchange value is the investigation of the desires for consumption goods as expressed in individual demand schedules. In accordance with

other builders, science not only erects castles in the air, but constructs separate stories of the building before it has laid the foundation." (A Contribution to the Critique of Political Economy, Chicago, 1904, 84-5.)

Gossen's laws of the satiability of wants, and the maximisation of satisfactions, individuals evaluate commodities in terms of their relative marginal utilities, and express their valuations in purchases such that the satisfactions derived from the last unit of income spent on different commodities is everywhere equal. The actual value of any commodity can be directly observed from the market. The value of producers' goods is similarly determined by the imputation of value from consumers' to producers' goods.

Both demand and supply are subjectively determined. From consumption and demand, subjective value theory proceeds to production and supply. Either the supply of productive factors is fixed (as in the Austrian variant of the theory) and productive factors evaluated in terms of their marginal service in producing consumers' goods, or the supply of factors is variable (as in the theory of Jevons and Marshall), the quantity produced depending on the marginal disutility of producing it.

Distribution to the factors of production is determined by the productivity of factors; each factor receives a value equal to its marginal physical productivity times the price of the product. Distribution to social classes does not enter the theory. Classes do not exist, in fact, except perhaps only implicitly in the fact that the owners of the factors of production compete for the use of their services. But this is no more a basis for class division than is competition among sellers of different commodities.

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8. Dobb, op. cit., 160.



The marginal utility theory of value has many shortcomings, chief among them (1) its approach to the economic process; (2) its assumptions regarding the independence and rationality of consumers; and (3) its emptiness of specific social and historical content.

The approach from demand to supply, from consumption to production, rests on an incorrect conception of the logic of the economic process. No one denies that human need creates the necessity for production. In Marx's words,

Consumption furnishes the impulse for production as well as its object, which plays in production the part of its guiding aim. It is clear that while production furnishes the material object of consumption, consumption provides the ideal object of production, as its image, its want, its impulse, and its purpose. It furnishes the object of production in its subjective form. No wants, no production. But consumption reproduces the want.<sup>9</sup>

But logically and in time, consumption depends on, and is determined by, production. It is production that produces consumption, "first, by furnishing the latter with material; second, by determining the manner of consumption; third, by creating in consumers a want for its products as objects of consumption."<sup>10</sup> But according to subjective value theory it is not production but consumption which forms the starting point of the economic process, and thus of economic analysis.

The theory is further weakened by its assumption that society is composed of a homogeneous group of independent consumers

9. Critique of Political Economy, 279.

10. Ibid., 280.

whose psychic consciousness and rationality of choice dictate an equality of desires and satisfactions. It makes the incorrect assumption that individual choices are independent of custom, of social relations, of the distribution of income, and of the structure of supply. Even if there were no other limitations, Marshall's condition that the marginal utility of money remain constant, and Weiser's assertion that true "natural value," based on marginal utility, applies only to a communist society of equal incomes, impose such rigid limitations as to make it impossible for the marginal utility theory to explain value in a capitalist society.

Subjective value theory denies the obvious fact that exchange is not determined by individual desires, but is a social process corresponding to a determined form of production. The social relations of men underlie the exchange of things. Consumption is similarly determined by a social process which shapes the structure of wants and sets limits to their satisfaction.

By ignoring the property relations, the class antagonisms, the patterns of income distribution of a specific historical form of production, by attempting to deduce laws applicable to all forms of society, subjective value theory cannot reveal the essential economic relations of any society.

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The labor theory of value finds the source of value

11. For Marxist critiques of subjective value theory, cf. Dobb, op. cit.; Rudolf Hilferding, Engel-Bawerke Marx-Kritik (Wien, 1904), and Nikolai Bukharin, The Economic Theory of the Leisure Class (New York, 1927).

in objective cost, in human labor, measured in time. The exchange ratios of commodities, equal the ratios of the labor-time expended in their production. Utility and scarcity enter insofar as utility is a condition of value, and scarcity (apart from natural scarcity) a result of value. Commodities are not scarce as such; what is scarce is the labor necessary to obtain them.

The labor theory starts with the distinction between wealth, or use value, and exchange value. Use values, concrete, specific, material goods are a product of the technical relation between man and nature. In William Petty's happy formulation, labor is the father, and earth the mother of wealth. Exchange value, on the other hand, is the result of a specifically social relation. Commodities must be useful to possess exchange value, but the actual source and measure of this value is the labor expended in production. Since value expresses a social relation, natural agents can not produce value. Thus land has a price, but

12. Ricardo is not altogether clear on the relation of scarcity to value. He attributes the value of commodities in general, those that can be freely reproduced, to both scarcity and the necessary quantity of labor. The value of naturally limited commodities, such as wines of a particular quality, rare books and statues, he attributes to scarcity alone. (Principles, 5-6.) Marx attributes the value of commodities in general -- absolutely scarce goods fall outside capitalist production and thus are excluded from his theoretical system -- to the quantity of labor alone. The labor theory thus explains scarcity in terms of its own principle. The marginal utility theory, on the other hand, calls upon scarcity to explain value, but it cannot explain the phenomenon of scarcity itself.

13. The full development of this distinction, and its reduction by Marx to the distinction between abstract and concrete labor, will appear in the next chapter.

no value, apart from that given it by the application of labor.

The labor theory starts its analysis with production. Value is objectively determined in production, subjectively realized in consumption. Value is expressed in price, yet price may deviate from value. Thus the distinctions between the real and nominal price in Smith, between the natural and the market price in Ricardo,<sup>14</sup> and between the price of production and the market price in Marx.

The first step in the analysis is the determination of the value of the value-producing commodity, labor power.<sup>15</sup> This is determined by the quantity of labor embodied in subsistence goods. The theory of value then becomes immediately the theory of surplus value. For according to the law of value, labor power exchanges with wages of equal value. But the expenditure of labor power yields a value superior to the value of this labor power.

Distribution to social classes is therefore determined by production. Labor power exchanges for its equivalent; the surplus is appropriated by the capitalist class as the agent of capital.

Distribution to factors of production has no real meaning in the labor theory of value, insofar as labor is the only "factor" producing value. The distribution of revenue in the form

14. Marx's price of production is itself a deviation from value as will be explained in a later chapter. It corresponds, however, to the real or natural price of the classical economists.

15. In classical theory the first step is the determination of the value of labor, a non-existent entity. Marx alone makes the distinction between labor and labor power, and thus makes possible a clear formulation of the theory of surplus value.

of wages, rent, and interest, does not express the actual relations of production. Of the theory of distribution which later reappears in the marginal utility theory of value Marx says,

In Capital-Profit, or better Capital-Interest, Land-Rent, Labor, Wages, in this economic trinity expressing professedly the connection of value and of wealth in general with their sources, we have the complete mystification of the capitalist mode of production, the transformation of social conditions into things, the indiscriminate amalgamation of the material conditions of production with their historical and social forms. It is an enchanted, perverted, topsy-turvy world, in which Mister Capital and Mistress Land carry on their goblin tricks as social characters and at the same time as mere things. It is the great merit of classical economy to have dissolved this false appearance and illusion. . . . by reducing interest to a portion of profit, and rent to the surplus above the average profit, and to have reduced value and surplus value of commodities to labor in the actual process of production.<sup>16</sup>

## II. Determination of the Conditions of Equilibrium

Any value theory determines the equilibrium relations of all prices and quantities. But while the establishment of equilibrium conditions appears to be the most obvious purpose of value theory, logically it is secondary, insofar as the equilibrium conditions can be determined only after the phenomenon of value, the basis of exchange relations, is explained.

The concept of equilibrium in economic theory usually refers to static equilibrium. This is not a picture of reality, but a tool designed to reveal the logical relations of the economic variables. The concept of equilibrium plays a central role in the theory of marginal utility. Equilibrium is uniquely determined

<sup>16</sup>. Ibid., III, 986-7.

as all commodities are exchanged at their respective marginal utilities or marginal value productivities. As the utility theory is developed in the Walrasian system<sup>17</sup> of general equilibrium, all firms and households are in balance, all demands are satisfied, all commodities find a market, and there is full employment of all factors of production.

The concept of equilibrium plays a somewhat different role in the labor theory of value, especially as the theory is developed by Marx. The concept of equilibrium is generally associated with that of competition; equilibrium values are determined by the action of supply and demand. The labor theory, on the other hand, attempts to determine first the "normal" values that would prevail in the absence of inequalities of supply and demand. Thus the classical economists and Marx determine labor values, before considering market prices which deviate from values. But competition expresses the fact that the law of value determines the equilibrium of the system. Marx says of the law of value,

Only as internal law, and from the point of view of the individual agents as a blind law, does the law of value

17. The Walrasian equilibrium differs formally from that of subjective value theory in that the former is one of mutual interdependence, of all prices and quantities, whereas the latter derives the prices and quantities of producers' goods from those of consumers' goods. But they come to the same thing in that (1) the prices and quantities of producers' goods in marginal utility theory, once determined, may be taken as data, and (2) the mutual interdependence of utility and costs in general equilibrium theory is finally reduced to utility, as a condition of production.

exert its influence here and maintain the social equilibrium of production in the turmoil of its accidental fluctuations.<sup>18</sup>

The equilibrium condition established by the law of value is that all commodities exchange in the ratios of their labor-cost. However, the concept of equilibrium developed by the labor theory of value is not the static equilibrium of the marginal utility theory of value. Marx uses the concept of dynamic, aggregative equilibrium borrowed from the Physiocrats, in his models of simple reproduction (the stationary state) and of accumulation. As we shall see when we examine Marx's theory of the accumulation process, this process itself alters the conditions of equilibrium and modifies the law of value.

The labor theory has been attacked on the ground that the actual market relations it depicts contradict its own conditions of equilibrium. We reserve this question for a subsequent chapter. The essential point, however, is that the labor theory, which unlike the marginal utility theory, approaches reality in successive steps, establishes not one, but successive levels of equilibrium conditions, each one of which applies to a different stage in the development of the analysis from abstract labor values to concrete market prices. Since this is so, no one set of equilibrium conditions can be specified, any more than a particular set can be taken as a description of reality. But that the labor theory does not specify a uniquely determined static equilibrium does not invalidate the theory; it simply confirms its analysis of the capitalist economy as inherently dynamic and unstable.

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<sup>18</sup>. Capital, III, 1028.

### III. The Determination of the Conditions and Direction of Evolution

This third function of value theory is most unequally fulfilled by the two theories of value. The marginal utility theory and its modern form, the theory of general equilibrium, do not attempt to deal with the evolutionary process, and in fact, cannot, without considerable modification of assumptions, especially that of invariant production functions. By approaching the economy from the point of view of consumers' choice in an historically and socially unspecified economy, subjective value theory can say little about the capitalist economy, but that it is an exchange economy, and can say nothing about its evolution.

The marginal utility theory as a theory of static equilibrium was very early recognized by one of its leading proponents to be fully incapable of dealing with the fundamental features of the capitalist economy. Thus Schumpeter writes in 1908 that the static system of marginal utility

breaks down before every problem which can be understood only from the standpoint of development. To this group belongs the problem of capital formation, and others, especially those of economic progress and crises. Especially this last point must be stated, since we have not mentioned it thus far: The static system and its methods give us no tools for explaining this phenomenon. Under static assumptions just as there would be no interest, so also there could be no crises (even if some of the effects of crises can be well demonstrated under these assumptions). In a static economy there is no room for those forces which can bring about a crisis; and all theories of crises, whatever their nature and value, are essentially dynamic.<sup>19</sup>

<sup>19</sup> J. A. Schumpeter, Das Wesen und der Hauptinhalt der theoretischen Nationalökonomie (Leipzig, 1908), 587-88. Schumpeter alone develops



The superiority of the labor theory of value to the theory of marginal utility in explaining evolution is generally recognized. Oscar Lange summarizes the obvious difference in the explanatory value of the two theories as follows:

The difference between the explanatory value of Marxian and "bourgeois" economics respectively is easily accounted for if the essential features of modern economic theory are recalled. Economic theory as developed by the Austrian, Marshallian,<sup>20</sup> and Lausanne schools is essentially a static theory of economic equilibrium analyzing the economic process under a system of constant data and the mechanism by which prices and quantities produced adjust themselves to changes in these data. The data themselves, which are psychological (the preference scales of the consumers), technical (the production functions), and institutional (the forms and distribution of property of the factors of production, the monetary and banking systems, etc.) are regarded as outside the scope of economic theory. The study of the data is a matter of descriptive and statistical investigation, the study of changes in the data is the province of economic history. If there are any "laws" discoverable in the change of data, their study is outside the range of economic theory. Further, the institutional data of the theory are not specified. In so far as the theory of economic equilibrium is merely a theory of distribution of scarce resources between different uses it does not need any institutional data at all, for the relevant considerations can be deduced from the example of Robinson Crusoe. In so far as economics is not even a social science. When economic theory is concerned with the pricing process, the specification of institutional data is

a theory of evolution within the framework of the theory of marginal utility. His theory that change, borne by innovations, is the essence of an inherently unstable capitalist economy is in this respect very close to that of Marx. Cf. The Theory of Economic Development (1st German edition, 1911. English translation, Cambridge, 1934) and Business Cycles (New York, 1939).

20. Marshallian theory, based on subjective real costs does deal with evolution, but in a very limited way. For Marshall, "Natura non facit saltum." Long-run equilibrium is achieved not by change, but by gradual, linear, additive growth. The essential relations of the economic system remain unchanged.

very general. All that is assumed is the existence of institutions necessary for the functioning of an exchange economy. But the consequences of the additional institutional datum which distinguishes capitalism from other forms of exchange economy, i. e., the existence of a class of people who do not possess any means of production, is scarcely examined.<sup>21</sup>

The labor theory of value, as developed by Marx, provides a theory of evolution. The classical economists fail to see the capitalist economy as an historical form of production,<sup>22</sup> With Marx, on the other hand, the capitalist form of production is a particular, historical and transitory form. Marx's express purpose is, in fact, "to lay bare the economic laws of motion" of this form of production.<sup>23</sup> Insofar as the labor theory deduces the necessity and direction of evolution from the law of value itself, it provides, as subjective value theory cannot, the means of understanding the fundamental nature of capitalist process.

The Marxian theory of breakdown stands or falls with the labor theory of value. We have not tried to make the impossible proof that the labor theory is "true". But we have tried to show

21. Oscar Lange, "Marxian Economics and Modern Economic Theory," *Review of Economic Studies*, Vol. II, No. 8 (June 1935), 192-3. Lange points out, further, that dynamic equilibrium theory serves no better to show the forces making for evolution in the system. Even where changes of data are included, as in H. L. Moore's "moving equilibrium," and in various dynamic models, which deduce fluctuations from time lags, there is merely a demonstration of the mechanisms of adjustment, not a theoretical deduction from the changes in the data. (*Ibid.*, note, 192-3.)

22. Classical political economy is essentially unhistorical, but there are exceptions, notably James Stewart and Richard Jones, whose evolutionary approach, especially that of the latter, elicits strong praise from Marx in *Theorien über den Mehrwert* (Stuttgart, 1905-10), III, 450-520, *passim*.

23. Preface to the first edition, *Capital*, I, 14.

that of the two theories of value, the labor theory offers a more  
convincing explanation of the laws governing the capitalist economy.

We shall next indicate in more detail the way in which Marx develops  
the labor theory of value, and uses this theory to explain capitalist  
evolution.

Notes on the Elements in the Labor Theory of Value

Before proceeding further with the analysis of the labor theory of value, we must clarify a point which has confused economists from classical until our own times. This is the question of the component parts and different meanings of the labor theory of value: (1) labor as source of value; (2) labor as measure of value; and (3) labor as numeraire. The distinctions emerge in the answers to these questions: (1) Must a theory of value which asserts labor to be the measure of value require also that labor be the source and substance of value, or, in other words, does the determination of relative values depend on the determination of absolute values? (2) Does the establishment of labor as a numeraire constitute a labor theory of value?

I. Labor as Source and Measure of Value

The most obvious meaning of the labor theory is that the quantity of labor embodied in each commodity furnishes the measure of value. Thus, within perfect competition, labor-time as the measure of value determines the exchange ratios of commodities. This is true as a first approximation in all labor theories of value.<sup>1</sup>

But does the fact that the value of commodities is measured by the time of labor expended in their production require that labor itself be the source of value? Marx asserts that the very fact that

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1. In Smith it is true only in the deer-beaver society; in Ricardo only when the turnover of capital, the "durability" of fixed capital, and the proportion of fixed to circulating capital are equal; and in Marx, similarly, when the turnover and the organic composition of capital are equal.

labor is the source, and thus the substance, of value, is what makes it possible for labor to be the measure of value. This means that there must be absolute before there is relative value. "The ratio in which two commodities are exchanged does not determine their value, but their value determines this ratio."<sup>2</sup> Thus the values of commodities cannot be compared until they have been independently determined.

Ricardo's treatment of the relation between measure and substance of value is ambiguous. In one passage he says: "To measure any one thing is to compare it with a determinate quantity of that same thing which we take for a standard of comparison, for unity, . . ."<sup>3</sup> Ricardo finds that of commodities, "labor is the common measure by which their real as well as their relative value may be estimated."<sup>4</sup> Moreover, he says that "natural agents, though they add greatly to value in use, never add exchangeable value."<sup>5</sup> These passages imply that for Ricardo labor alone is the source and substance of absolute ("real") value.

However, while he asserts that the quantity of labor "regulates" and "determines" exchange value, Ricardo never says explicitly that labor is the substance of value. Moreover, he asserts that his investigation is directed to the establishment of relative, not of absolute, values.<sup>6</sup> In addition, from the fact that there are

2. Theorien über den Mehrwert, (Stuttgart, 1905-10), III, 156.

3. Principles of Political-Economy and Taxation, 189.

4. Ibid., 189.

5. Ibid., 190.

6. Ibid., Ch. 1, 11-13.

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 in Ricardo elements of an abstinence theory of profits, it is clear that he does not see clearly that his own theory logically requires that labor be the only source of value. But if labor is not the only source of value, it cannot be an adequate measure of value.

Measurement implies a common quality or abstinence. Just as two objects cannot be measured as to relative temperature unless they share the common quality, heat, so the two use-values cannot be compared as to relative value unless they share the common abstinence.  
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 "congealed labor."

## II. Labor as Numeraire

Since the numeraire is the commodity (money) in terms of whose value commodities are exchanged, must the numeraire be the same

7. In a letter to McCulloch in 1820, Ricardo wrote: "I sometimes think that if I were to write the chapter on value again. . . I should acknowledge that the relative value of commodities was regulated by two causes instead of one, namely, by the relative quantity of labor necessary to produce the commodities in question, and by the rate of profit for the time that the capital remained dormant, and until the commodities were brought to market." Letters of David Ricardo to John R. McCulloch, 1816-1823 (ed. J. H. Hollander, N. Y., 1895), 72.

8. Marx's analysis of the twofold nature of commodities, their use value and their exchange value, is to be developed later. But since this point is so often misunderstood, it is worth while stressing the fact that exchange is always made of qualitatively different use values, which are quantitatively equal exchange values. But -- this is the burden of Marx's criticism of Ricardo -- behind the quantitative equivalence of exchange values is a qualitative equivalence arising from the common, measurable substance of value -- labor. (Theorien über den Mehrwert, III, 146-176.) Marx deals with this question in his criticism of Samuel Bailey's criticism of Ricardo. Bailey, who admits the validity only of relative values, wrongly accuses Ricardo of transforming relative into absolute values. As Marx points out, it is impossible to turn relative value into absolute value. The opposite is really what happens in the comparison of two values, whose absolute magnitudes are given independently of their exchange ratio, by the labor they embody. (Ibid., 161-2.)

as the measure, and thus the substance, of value? The answer is "no". The labor theory establishes labor as the source of value, labor time as the measure of value, and the money commodity as numeraire.

The numeraire is the commodity whose absolute value quantifies the exchange ratios of all other commodities, or, which is the same thing, is the unit in which all values are expressed. But the numeraire is the standard of price only because all commodities are commensurable.

The confusion between the numeraire and the measure of value in the labor theory of value is especially great in Adam Smith. The contradiction between his labor-embodied theory and his labor-command theory arises out of his confusion between the value of commodities and the value of labor power.<sup>10</sup> Smith holds that the value of commodities equals the value of the labor embodied in them only "in that early and rude state of society which precedes both the accumulation of stock and the appropriation of land."<sup>11</sup> In capitalist society, "the value of a commodity, . . . is equal to the quantity of labor which . . . [it can] purchase or command."<sup>12</sup> Smith's measure of value, i. e., the quantity of labor a commodity can command, involves setting labor as the numeraire. This Smith

9. Critique of Political Economy, 78.

10. Smith, like all economists before Marx, speaks only of the "value of labor" -- a non-existent entity.

11. Adam Smith, The Wealth of Nations (5th Edition, Modern Library, N. Y., 1937), Book I, Ch. 6, 47.

12. Ibid., Book I, Ch. 5, 30.

justifies in asserting that "Labor alone, therefore, never varying in its own value, is alone the ultimate and real standard by which the value of all commodities can at all times and places be estimated and compared."<sup>13</sup> However, Smith suggests that for a long-run measure -- for centuries -- corn is an even more invariable, and hence better,<sup>14</sup> measure of value.

The labor-command theory, which sets labor as numeraire, reappears in Malthus. Malthus earlier rejected Smith's measure, suggests a mean of corn and labor, but finally agrees that "the value of any commodity at any time, and at any place, may be measured by the quantity of standard labor of that time and place, which it will exchange for a command."<sup>15</sup>

The logical impossibility of the labor-command theory, as pointed out both by Ricardo and Marx, is obvious. The theory would hold only if the product of labor were equal to the value of labor-power. But the question still remains: Can labor serve as a

13. Ibid., Book I, Ch. 5, 33.

14. Ibid., Book I, Ch. 5, 37. Smith is looking for a commodity whose value remains constant. This commodity is to be the numeraire, or real price, while the money price is only the nominal price. (Ibid., Book I, Ch. 5, 38-9.) But, as Ricardo later pointed out, neither corn nor labor are invariable in value. However, from Ricardo's observation that gold is less variable in value than either labor or corn, it seems that he too believes the value of the numeraire should be as invariable as possible (Principles, Ch. 1, 7-11). But, as Marx points out, the numeraire, gold, must have a variable value, since it represents labor-time, which varies with the productivity of labor. (Critique of Political Economy, 77.)

15. Principles of Political Economy (2nd edition, 1836), 111. London. Malthus is aware of the differential between the source and measure of value, but he does not see that the measure must be the same as the source, or "cause" of value. Thus he writes: "The labor worked up



numeraire, as the unit in which other values are expressed, if the measure of value is the labor embodied in commodities?

Marx puts the question as follows:

Labor-time being the intrinsic measure of value, why should there be another external measure side by side with it? Why does exchange value develop into price? Why do all commodities estimate their value in one exclusive commodity, which is thus converted into a special embodiment of exchange value into money?<sup>16</sup>

To answer this question we must examine the role of the numeraire. While as a first approximation, labor-time as measure of value can function ideally as numeraire, practically it cannot. As a measure of value implies exchange, so exchange requires a universal equivalent which becomes the numeraire and therefore the medium of exchange. The "immanent measure", labor-time, must be expressed by the "exterior measure", money.<sup>17</sup>

The exchange of commodities requires that the individual labor contained in them must be transformed into social labor, as represented by the universal equivalent, money. In Marx's words,

Commodities are the direct products of isolated, independent, private labors, which have to be realized as universal social labor through their alienation in the process of private exchange, that is to say, labor based on the production of commodities becomes social labor only through the universal alienation of individual labors.<sup>18</sup>

in a commodity is the principle cause of the value but it will appear. . . that it is not the measure of it. The labor which a commodity will command is not the cause of its value, but it will appear... to be the measure of it." (Ibid., 83 note.)

16. Critique of Political Economy, 104. Marx deals with this question in connection with his criticism of the plan of John Gray (followed by similar plans of Robertus and Proudhon) of a national bank issuing labor notes against commodities.

17. Theorien über den Mehrwert, II (1), 123.

18. Critique of Political Economy, 104-5.

Another reason why labor-time cannot be taken as numeraire is that the law of value can operate only if price as expressed by the numeraire can deviate from value. In his criticism of Rodbertus' money plan, Engels points out that, in an economy where each producer produces for an unknown market,

the continual deviation of the prices of commodities from their values is the necessary condition in and through which alone the value of the commodities can come into existence. . . . In the second place, competition, by bringing into operation the law of value of commodity production in a society of producers who exchange their commodities, precisely thereby brings about the only organization and arrangement of social production which is possible in the circumstances.<sup>19</sup>

In the exchange of commodities, therefore, where individual labor is converted into social labor, and value into price, the numeraire is not the measure of value, labor-time, but the standard of price, money.

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19. Frederick Engels, Preface to the First German Edition (1884) of Marx's Poverty of Philosophy (1847), (International Publishers, N. Y., no date), 18.