

Marx's Theory of Value and the Transformation Problem: Some Lessons from a Debate*

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In our description of how production relations are converted into entities and rendered independent in relation to the agents of production, we leave aside the manner in which the interrelations, due to the world-market, its conjunctures, movements of market-prices, periods of credit, industrial and commercial cycles, alternations of prosperity and crisis, appear to them as overwhelming natural laws that irresistibly enforce their will over them, and confront them as blind necessity. We leave this aside because the actual movement of competition belongs beyond our scope, and we need present only the inner organisation of the capitalist mode of production, in its ideal average, as it were.

Karl Marx, *Capital*¹

Capitalist societies are more than ever characterized by this "conversion into entities." To the fetishism of commodities, money and capital is now added that of technology, science and information. Labour-power has become "human capital." Science is henceforth considered a new "factor of production." The latest discoveries of what is called "economic science" help to obscure even more the nature of social relations in capitalist society, and thus to further remove us from an explanation of the phenomena which manifest themselves in this society.

The fatal domination and blind necessity of "economic laws" have imposed themselves more and more, over the last ten years, through the

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mechanisms evoked by Marx. In their name, the ruling classes call on the people to tighten their belts and increasingly repress them.

This domination and this necessity are expressed, precisely, by those "phenomenal forms which are starting points for the vulgar economist."² Prices rise. Currencies fluctuate in relation to one another. The stock exchange, and interest rates, are erratic. It is a fantastic ballet, dazzling for the uninitiated. Concretely, this is seen in a deterioration of the living and working conditions of the people, and by the growing gulf between the wealth of the so-called developed and undeveloped worlds.

In the thirties, the economic crisis led to a qualitative leap in political economy as Keynes brought to light certain mechanisms which had been obscured by the neo-classical tradition, which was then solidly established.³ The Keynesian theory is giving way today to that of the "new economists," for whom a return to free markets is the way out of the economic crisis. The destruction of the logical coherence of the marginalist theory brought about by Sraffa in 1960 did not really shatter the neo-classical certitudes.⁴ Sraffa is ignored by the economists who today advise governments and formalize, without explaining it, the ballet of figures. Or perhaps the "Sraffa revolution" accounts for the present decadence of the dominant theory. Instead of providing answers, they mask the foundations of their analysis. They refuse to ask themselves questions about it.

Corresponding to this decadence there has been, over the last twenty years, a resurgence of the thought of Marx, in whom many discover a problematic more relevant to an analysis of present-day reality. The economic crisis, from this point of view, challenged Marxism. It is in this context that we must understand the latest stage in the debate on the theory of value and the transformation problem. Beyond the classical problem of the conversion from values to prices of production, what is in question is the transition from the analysis of "the inner organization of the capitalist mode of production, in its ideal average as it were" to the exposition of the "actual movement of competition." The question is whether, starting from the theory of value, correctly interpreted, we can explain what is happening today; whether, to synthesize, we can explain the crisis.

We do not intend, in what follows, to answer the above question. We should point out, however, recent publications which cast a new and revealing light on the present functioning of capitalist economies and the crisis they are going through.⁵ This research is partly linked to the debates on the theory of value and its relation to prices. The following article will be devoted to this latter debate. We shall first survey the question briefly, recalling the terms of the famous problem of the "transformation" of values into prices of production. After asking questions about the duration and the almost perpetual "reopening" of

(1) constant capital, C_i , representing the value transmitted from the means of production (raw and auxiliary materials, tools, machinery, etc.); (2) variable capital, V_i , equivalent to the value of the labour-power purchased by the capitalist and reproduced by the worker; and (3) surplus-value, S_i , corresponding to the labour effected beyond the time equivalent to V_i , that is the value of the reproduction of the labour-power. We have therefore:

$$W_i = C_i + V_i + S_i^{13}$$

Marx calls the ratio S_i/V_i the rate of surplus value. This rate, symbolized by e , is constant for any i , as a result of competition in the labour market. We have, therefore,

$$e = S_i/V_i = \Sigma S_i/\Sigma V_i$$

where " Σ " represents the sum for the totality of the branches of an economy.¹⁴

On the other hand, Marx calls "organic composition of capital," q_i , the ratio C_i/V_i . It is intuitively obvious that q_i varies from one branch to another.¹⁵ Finally Marx defines the rate of profit, r_i , as the ratio of $S_i/(C_i + V_i)$,¹⁶ which can also be written $r_i = e/(1 + q_i)$.

Just as the competition in the labour market must ensure the identity of e , the competition of capitals ensures the equalization of the rate of profit, r .¹⁷ Now, this equalization cannot be made if commodities are sold at their value, in view of the variation of q_i between branches. This is the problem that Engels defied economists to solve, in his preface to the second volume of *Capital*, published in 1885.

Marx's solution, elaborated as early as 1862 and communicated in a letter to Engels,¹⁸ was made public in 1895, in the second section of the third volume of *Capital*. Marx supposes that the totality of surplus-value is distributed among the different branches in proportion to invested capitals.¹⁹ This can be achieved only if commodities are sold not at their value but according to prices of production defined as follows: to the value of invested capital ($C_i + V_i$) is added the profit $r(C_i + V_i)$, defined on the basis of the general rate of profit, given by the formula $r = \Sigma S_i/\Sigma C_i + \Sigma V_i$.

The price of production p_i of the product of branch " i " appears thus: $p_i = (C_i + V_i)(1 + r)$.²⁰

From this "transformation model," we can easily deduce the following identities, to which Marx attached much importance:

$$\Sigma p_i = \Sigma W_i$$

$$\Sigma S_i = r \Sigma [C_i + V_i]$$

In words, the sum of the prices of production is equal to the sum of the values, and the sum of the profits is equal to the sum of the surplus-values.²¹ This "solution" by Marx, anticipated by certain economists before 1895,²² was criticized as early as 1896 by Böhm-Bawerk, who saw in it a "great contradiction" between the first volume of *Capital*, based on value, and the third, based on the price of production — a contradic-

tion which spelt doom for Marxism.²³ Though more sympathetic to Marx's procedure, Tugan-Baranowski, and later Bortkiewicz, brought to light a "logico-mathematical" error in his model, an error which allowed him to argue for the maintenance of the identity of the sum of profits and of surplus-values on the one hand, and that of the prices of production and of values on the other hand.²⁴

The error stems from the fact that Marx "transforms" his outputs without transforming his inputs. In other words, the expression $(C_i + V_i)$, on which the capitalist calculates his rate of profit, should be itself first transformed into prices of production. Relying on the work of the Russian economist V.K. Dmitriev,²⁵ Bortkiewicz proposes a model of prices of production in which all the unknowns are determined simultaneously: the prices of the inputs, those of the outputs *and* the rate of profit which, being a relationship between prices, cannot be given by Marx's formula. Likewise the maintenance of the global identities, $\Sigma \text{ prices} = \Sigma \text{ values}$ and $\Sigma \text{ profits} = \Sigma \text{ surplus-value}$, is no longer guaranteed. It comes from the choice of a specie or "normalization" for prices.

In our review of the history of this debate, we have demonstrated that the "solution" of Bortkiewicz, far from "correcting" superficially Marx's construction, moves considerably away from his problematic.²⁶ In fact, the concepts of value and surplus-value, fundamental to Marx's analysis, prove to be redundant in Bortkiewicz's model, which is closer to Ricardo than to Marx. Our analysis relies nonetheless on a particular "reading" of Marx's theory of value which we propose in another work.²⁷ This reading insists on a break between the analysis of Ricardo and that of Marx, a break which is situated at the very origin of Marx's project. It leads us to see, in Marx's theory of value, not directly a hypothetical theory of prices in a precapitalist commodity-producing society, as Engels implies in the supplement to the third volume of *Capital*, but rather an attempt to explain the genesis of the commodity form. It is a matter of establishing why and how, in a given society, the product of labour is transformed into commodities, commodities into money, money into capital. We are therefore, at the outset, very far from an explanation of the ratios of exchange, as was believed by Böhm-Bawerk or Bortkiewicz.

We have also shown how the "correction" of Bortkiewicz is rooted in the very ambiguities of Marx's text. The theory of prices of production proposed in 1895 was elaborated and put to paper before Marx wrote the first volume of *Capital*, which contains the final version of his theory of value. This latter version is much further removed from the theory of Ricardo than the problematic developed by Marx in the third volume, which is still close to Ricardo. It is this fact, in our opinion, which allowed the transformation of Marx's project, the *critique* of political economy, into "Marxist political economy."

In the twenties and thirties the debate continued along the lines of Bortkiewicz's work in Germany, in Austria, in Central Europe and in Russia. Among the most notable contributions are those of Natalia Moskowska, Henryk Grossman and Isaac Rubin.²⁸ The latter was largely ignored, and did not propose, as such, a "mathematical solution" to the transformation problem. But he did put forward an interpretation of the theory of value which broke radically with the dominant current and which approaches a "critique of political economy," a tendency of which we are a part. If it had enjoyed wider circulation at the time, Rubin's work would probably have removed certain misunderstandings which marked the discussion after Bortkiewicz's contribution. Nevertheless in 1942, when Joan Robinson published her *Essay on Marxian Economics*²⁹ in which she maintained that the theory of value belonged to metaphysics, Paul M. Sweezy introduced the English-speaking world to the work of Bortkiewicz,³⁰ and unleashed a series of interventions which would culminate in the contribution of Francis Seton in 1957. Seton broke up into *n* sectors the trisectorial model of Bortkiewicz and his successors, and clearly brought out certain elements implicit in the latter's solution.³¹

The publication of *Production of Commodities by Means of Commodities* by Sraffa in 1960, revived the discussion, this time on new bases.³² Henceforth a complete and logically flawless Ricardian model was available. The Sraffian model was first invoked to demonstrate the logical incoherence of the neo-classical theory of value and distribution, and only in the last decade was it applied to the transformation problem. The Marxist analysis of the functioning of capitalism was gradually recovering from the long lethargy into which it had been plunged by, among other things, the "correction" of Bortkiewicz which no one knew how to handle apart from reasserting Marx's text to the letter — thereby transforming the critique of political economy into "Marxist political economy." No doubt the challenge issued in 1971 by the Nobel prize winner in economics, Paul Samuelson, excusing Marx's errors in the name of the materialist conception of history, also contributed to a renewal of Marxist analysis.³³

This renewal was carried out in several directions. In the path traced by Bortkiewicz, several tried to bring about a synthesis between Marx and Sraffa, maintaining that the latter had conclusively solved the transformation problem.³⁴ Others continued to fall back on an orthodox literal interpretation of Marx's text, seeking through various acrobatics to demonstrate the totality of the results he arrives at in *Capital*.³⁵ A third current insists on a break between Marx and Ricardo, and thus between Marx and Sraffa, the latter completing the edifice of political economy, of which Marx wanted to make a radical critique.³⁶ For several writers in this current, Marx is closer to Ricardo and political economy in the third volume of *Capital* than in the first, in which the

critique of political economy really takes shape. Consequently, for them, the attempt to pass mathematically from values to prices of production is illusory.

At the present time, despite the urgency of the "concrete problems" to be solved, every few months a new contribution is made to this debate. Some do not hesitate to proclaim themselves, very imprudently, to be definitive. Thus, we read at the beginning of a recent article presented as the summary of work in preparation: "What we shall do is outline a new approach which will allow us at the same time to solve the latter [the transformation problem] and to demolish the principal neo-Ricardian propositions."³⁷ As in so many other writings, the claim is made that new light is cast on the implicit hypothesis, and that the Gordian knot, uncut by a century of discussions, is dissolved.

The debate contains many redundancies and repetitions. They arise no doubt from the fascination which that "elusive object," value, has always exerted. Value is in fact a hieroglyph, as Marx writes in his pages devoted to commodity fetishism. More superficially, the fascination comes from the challenge the problem poses to mathematical skill. But there is more. Analytically, value and the nature of commodities are fundamental to the study of capitalist society and to commodity production in general. We know that commodity production existed before the development of capitalism — indeed Aristotle was able to anticipate the fundamental metabolism of the articulation between the production and the circulation of commodities two thousand years before its generalization.

The analysis of the commodity, the "economic cellular form" (for from this analysis is derived all the rest, including transformation), occupies a fundamental place because it points to the question of methodological, epistemological and philosophical foundations, and to the most concrete problems confronting capitalist economies, above all inflation. That is why the commodity and value are always involved, whatever be the level of discourse. Any analysis necessarily flows from an epistemological problematic and it in turn determines the path subsequently taken in going towards the concrete.

Epistemology and Method

As part of a reflection on the method and process of knowledge, composed ten years before the publication of the first volume of *Capital*,³⁸ Marx constructed the concept of abstract labour and thus the beginnings of his theory of value. The first complete presentation of this theory is contained in the *Contribution to the Critique of Political Economy*. This text contains the plan of the critique of political economy and very clearly explains the cognitive process followed in *Capital* — the elaboration of determined abstractions; the passage, in thought, from the abstract to the concrete. The work takes the analysis

from abstract labour to the price of production and to the equalization of profit, reconstructs the concrete-in-thought, reproduces in theory capitalist reality in its many determinations. This position and the empiricist epistemology which characterizes political economy, whether classical or vulgar, are poles apart. The Marxist critique of Ricardo has exactly this point of departure. Briefly, here are its essentials.

The cognitive process is for Marx essentially a *conceptual process*. One does not start from reality as it is directly "given" to us, as is the case for all empiricists, including (according to Marx) Ricardo. Ricardo, generally accused of being too abstract, does not really understand the process of abstraction. One must start from concepts, constructed by thought. Thus, the commodity must not be confused with the concrete, visible, and palpable "object." These concepts are combined, enriched, multiplied in the progression of the analysis, at the end of which one must arrive at a *theoretical* reconstruction of reality. This is not concrete reality — that would be Hegelian idealism (which claims that Reason generates the "Real") — but rather, "concrete-in-thought." Moreover, the abstract categories that one gives oneself at the outset are not elaborated gratuitously — it is not a question of conceptual autarky. They are derived from our intuitions and our representation of the real. Thus the relationship between reality and the knowledge of it is a complex process about which it is important to grasp all the subtleties.

In the face of the epistemological implications of the debate on transformation, there are two pitfalls which several participants have difficulty avoiding. The first consists in short-circuiting the discussion by an incantatory reference to dialectics, conceived as the theoretical reflection of the real contradiction which constitutes the core of each thing. Faced with the difficulty posed by the transition from value to the price of production, one explains that the reality reflected by these concepts is contradictory, and the problem is solved. Even before the turn of the century, Antonio Labriola used this argument against those who saw a contradiction between the first and third volumes of *Capital*.³⁹ At the end of an interesting and meticulous philosophical study of the concepts of abstract labour and of value, Ruy Fausto has recently taken the same approach to dispose of the complex question of the historical space of the concept of value.⁴⁰ Setting out from a critique of Engel's interpretation of transformation as a historical process, a critique we agree with,⁴¹ Fausto indicates that value could be conceived by Aristotle without "being," and that it only comes into the world, in capitalist society, through being denied by the price of production. The law of value thus is realized through being denied. That is the "general logical meaning of transformation" which, the writer explains, "we usually go over too quickly."⁴² It seems to us that Fausto himself illustrates a little too quickly its logical meaning. What is in question is the relationship between Marx's discourse and the logic of identity, and the relationship

between the latter and dialectical thought. It seems to us excessive to affirm the irreducibility of the first to the second, and thus the absolute gulf between identitary logic and dialectical thought, transformed into a "password" in less subtle texts than Fausto's. We tend to follow, on this point, the positions developed by Galvano della Volpe and Lucio Colletti, to which Fausto refers.⁴³ We agree with Fausto on the meaning of the concepts (commodity, abstract labour, value), on their articulation and, on the whole, on the fundamental character of Marx's procedure — its conceptual nature.

The other pitfall comes from a misapprehension of a conceptual nature. It obviously characterizes the epistemology at the root of economic theories, however abstract their form may appear. It also leads a certain number of researchers claiming to be Marxist to attempt to re-establish, by often very elaborate mathematical acrobatics, *all* the results of the three volumes of *Capital*, placed at the same conceptual level. This pitfall is manifested to a certain extent in the procedure of the authors of "Valeur, prix et réalisation,"⁴⁴ as in the argumentation of Manuel Perez, who reproaches myself and Carlo Benetti for bringing about an epistemological break between the field of values and the field of prices, between the first and third volumes of *Capital*, leaving the way clear for those for whom the Marxist theory of value is metaphysical.⁴⁵ It is remarkable to see the writer contrast my thinking with that of David Yaffe, whose contribution to the debate, apart from a relevant critique of neo-Ricardian positions, consists essentially of a literal affirmation of Marx's text⁴⁶ without offering any demonstration.

What is involved, I believe, is a confusion between two orders of questions. The first concerns Marx's method, the second its implementation. This method implies the progression of thought from determined abstractions, according to a process of reconstruction of the concrete-in-thought. This reconstruction is not completed by Marx and, moreover, for reasons I have developed at length elsewhere, it contains flaws.⁴⁷ How could it be otherwise, given the enormity of the task? These flaws are numerous in the third volume (written first), are less numerous in the second, and are minimal — in the first volume (the only one that Marx completed for publication). It is not a matter of an epistemological break between two fields, but of the difficult transition from the abstract to the concrete. It happens that in this transition Marx at times skipped intermediate stages and then adopted categories which he had not "reworked" as much as those of value, commodity, and labour.

Value, Commodity and Labour

After Marx's method, it is the theory of value which is placed in question by the transformation problem. That fact appeared clearly to the most clear-sighted theorists following the publication of the third vol-

ume of *Capital*. It was not Marx's formulae which preoccupied Schmidt, Sombart, Croce, Labriola, Stammer, or Hilferding, but rather the meaning of Marx's theory of value, the significance of this concept. By "correcting" Marx's formulae Bortkiewicz evacuates this concept, whose redundancy is implicit in his model. Orthodox Marxism fell back on the solution marked out by Kautsky, Liebknecht, Kaulla, Riekes or Boudin: the reduction of value to the physiological expenditure of labour.⁴⁸ There is one notable exception: Isaac Rubin.⁴⁹

It was Aristotle who first posed the problem of value as one of the commensurability of products which confront one another on the market, and saw the exchange of labour behind the exchange of products which are given a price. As we know, he stopped there, but he had already said a great deal. He was first surpassed by Marx, and not, as the latter believed, by Benjamin Franklin or William Petty.⁵⁰

The next stage is reached by David Ricardo. He first of all excludes utility from the domain of value, whereas Aristotle had introduced it after labour. Then he defines his field of investigation by writing of "commodities whose quantity can be increased by the industry of man, whose production is encouraged by unhindered competition."⁵¹ Consequently he excludes, for example, the "wines of exquisite quality" of which Böhm-Bawerk would make, more than half a century later, one of the Achilles heels of the "Ricardo-Marxist" labour theory of value.⁵²

Finally Marx constructs the concept of abstract labour in the *General Introduction to the Critique of Political Economy*. (It is not by chance that he does so here.) On this basis, he "reconstructs" the concepts of commodity and of value and articulates them in a theory of value which is not, at the outset, an explanation of the ratios of exchange between objects. It is a matter of what constitutes the social link in a society in which production is carried on in juridically private and independent units. Private labour is sanctioned socially by exchange on the market. Such is abstract labour, a concrete abstraction which is fully realized only with the most complete development of capitalist production (in the U.S.A., in the middle of the nineteenth century, as Marx states, where individuals pass the most easily from one kind of work to another). If the present stage of the debate on transformation and the theory of value has achieved anything, it is the elucidation, already perceived by certain past researchers, among them Isaac Rubin, of the concept of abstract labour in Marx's theoretical construction.⁵³ We know that the latter saw in it one of his important discoveries.⁵⁴ Here I will succinctly summarize my thesis on the "conceptual articulation" of Marx's theory of value.⁵⁵

1. The theory of value is not a theory of the ratios of exchange between goods. (It is not therefore a theory of prices.)
2. The theory examines what constitutes the social link in a capitalist society; therefore it has as its object the mechanism of the regulation

and distribution of abstract social labour.

3. The theory presupposes and contains in its domain the solution to the problem of the homogenization of the products of labour, and calls therefore for a theory of money, which is to be an integral part of it.

4. The theory is constructed on the basis of the articulation of two fundamental concepts: (a) the commodity, which must not be confused with economic goods; and (b) abstract labour, which must not be confused with a physiological expenditure of energy (to which corresponds the interpretation of value as the "technological attribute of products") or with wage-labour (to which corresponds the confusion between value and exchange value).

5. These concepts acquire meaning only globally, at the level of social capital and of the collective worker. (We do not "calculate" the value of individual objects or the "surplus-value" produced by a given enterprise.)

This presentation is necessarily very condensed. For an understanding of its implications I refer the reader to the third chapter of my book: *Marx, la valeur et l'économie politique*. However, certain formulations of that chapter, and of the preceding one, give rise to confusion. There is a confusion between the problem of commensurability and the more prosaic one of measurement. Thus there has been attributed to me an interpretation of the theory of Marx as a theory of "value as measurement,"⁵⁶ which has been compared to Bernard Schmitt's interpretation of Keynes. At stake is much more than measurement; unlike the Ricardian theory where concrete labour appears as the most convenient aggregator, or the Keynesian, in which it is wages. And we know also that wages are implicit in the Ricardian theory.⁵⁷ What we have to know is how the product of labour becomes a commodity, in order to account for the genesis of the categories of value, money, wages, and capital. It is not a question of asking how to "measure" these, how to measure "concrete objects already given." To conclude this section, we could illustrate the respective Ricardian, Marxist and neo-classical approaches to the problem of value as follows:

1. RICARDO	Concrete Labour (Commanded)	→ Commodity (Goods)	→ Exchange Value (Price of Production)
2. MARX	Abstract Labour	↔ Commodity/ Value	→ Exchange Value
3. WALRAS	Goods	→ Utility	→ Market Price

The commodity of Ricardo is produced (it is defined by the fact that it can be reproduced), while that of Walras (or Jevons or Menger) is given. Consequently, we will speak of "goods" as far as the neo-classical theory is concerned.⁵⁸ But we can show that in Ricardo it is also correct

to refer to produced goods, as concrete objects. Simply put, goods are "caused by" a certain quantity of concrete labour which determines their exchange value (that is, the price of production). And, as was brought to light by Benetti and Cartelier in particular, this articulation supposes in fact that we implicitly equate wages to aggregate concrete labour. This results from the absence in Ricardo of the concept of abstract labour, and from his confusion of value and its "form," exchange value. Ricardo confuses the question of the "substance" of value and that of its measurement. Hence this astonishing paradox: Ricardo the theorist of value as labour commanded. The true Ricardian concepts are thus those written in parentheses and lie outside the conceptual framework of Marx. For Marx the commodity is not a concrete object already given whose attribute, value (confused with its form, exchange value), is determined by the physical expenditure of human energy. The activity of the global and collective labour-power of society takes the form of abstract labour. Its global product is a commodity, indefinitely divisible, which appears as value, which is value. Only then we derive, from value, the form in which it appears — exchange value — and hence, price. In the neo-classical theory, obviously, these concepts are absent. The market price of a good is directly derived from utility. Consequently, it is impossible to compare the role of utility in Walras with that of abstract labour in Marx as aggregators of commodities.

Surplus-Value and Exploitation

The theory of value, exposed in the first section of the first chapter of *Capital*, is developed in the following chapters. After elucidating how the social link between the isolated producers is constituted, Marx examines the consequences of the separation between workers and the means of production, and of the control of the means of production by a class whose agents, individually and/or collectively, own these means of production and thereby exercise *power* over the totality of society. This is explained by the theory of surplus-value. A partition of the space of value is effected. Of the product of abstract labour, a fraction is returned to the class dispossessed of the means of production, whose concrete labour is transformed through exchange into abstract labour; the rest constitutes the revenue of the capitalists who, like those of all dominant classes in history, are supported by the surplus-labour of the dominated class. This partition is expressed by the rate of surplus-labour, or rate of exploitation, a magnitude which has a meaning only at the level of the whole of the economy, at the macroeconomic level. This is another achievement of the debate on transformation. We do not see and we do not measure the surplus-value produced "concretely" by a group of so-called productive workers, for example the workers on an assembly line. Moreover, another achievement of this debate is to have

shown the Smithian (rather than Marxist) character of the criterion generally used to distinguish "productive" and "unproductive" workers; that is, the individualized production of values conceived as concrete commodities, as palpable objects.

The analysis of the commodity as the global product of abstract labour, and that of surplus value as a partition of the field of value, make problematical to say the least the distinction between "material production" and "services," as well as between production, transportation, and the circulation of commodities. And we should also ponder the theoretical relevance of the learned distinctions between productive, indirectly productive and unproductive workers. But that is another question.

According to Maurice Lagueux, the Marxist theory of surplus-value implies the technological, "substantive" conception of value that I reject. I have briefly answered this objection,⁵⁹ but several recent articles have also shown that in order to centre the analysis of exploitation on the rate of surplus-value, it is not necessary to conceive of the latter as the relationship between two chronometric measurements of expenditures of energy, as a relationship between quantities of concrete labour.⁶⁰ I shall dwell rather upon the criticism of another author and thereby illustrate a rather widespread current in the interpretation of the theory of Marx. Marc Los writes that my interpretation of the Marxist theory of value implies the elimination of some of Marx's ideas, among them the perception of surplus-value as originating in production. The profound cause of Marx's "Ricardian deviation" is, he affirms, the division made between the formation and the realization of surplus-value. The schemas of transformation, according to this view, constitute a false answer to the problem of the realization of surplus-value, which Los identifies with the conversion of surplus-value into profit. Relying on the work of Schmitt and Fradin, Los states that surplus-value, as with the value of labour-power and that of the global product, is formed and realized simultaneously in the same logical operation, generalized exchange: "Surplus-value appears *ex post facto* as the positive balance measuring the difference between the value of the global social product and the value of labour-power."⁶¹ Surplus-value is thus at once formed and realized by prices, and the latter must be explained at the same time as the former. These prices are, of course, purely nominal. In brief, after correctly posing a theory of value as measurement, Marx "became Ricardian again in the schemas of transformation because he was not sufficiently Keynesian."⁶²

This is taking the consequences of the abandonment of the technological conception of value very far. To start from the point of view that wages are the result of the splitting-up of the value-added rather than as the "value" of the fixed subsistence-level basket of goods should not lead to an elimination of the analysis of the determinants of this split, a

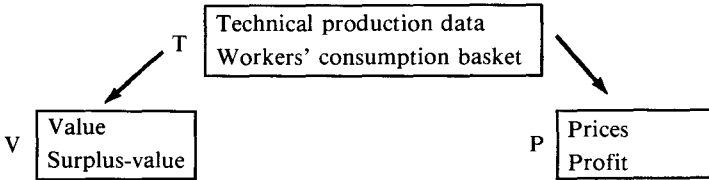
split which results from the class struggles which are played out at the level of production. Pushed to its logical end, this vision of things leads to the theory of “profit upon alienation”: profit (the concept of surplus-value is revealed as redundant) is born of exchange, because everything is played out on the market. Los asserts moreover that surplus-value depends on the consumption needs of the workers as much as on their role in production. It is true that the consumption of workers plays a crucial role in the establishment of the rate of surplus-value: it is consumption that I am referring to here, and not the consumption “needs,” whose definition is quite elusive, although it constitutes the foundation of the neo-classical theory of value to which certain interpretations of Keynesian theory sometimes adhere. At issue is the norm of consumption of workers, a norm which varies according to the category of workers, and includes collective consumption (education, health, transportation, etc.; these also are crucial stakes in the determination of the rate of surplus-value, as can be seen today). Secondly, there is the duration of labour; thirdly, its intensity; fourthly, its organization. All these have been, since the beginning of capitalism, the principal stakes of the class struggles — which are still alive — whose result contributes to fixing the rate of surplus-value. The latter is not fixed by exchange and the market, even if labour struggles to obtain the indexing of wages constitute a resistance to the deformation of consumption norms provoked by price increases. But that leads us to another stage in our discussion. Nevertheless, we can see that, even at this still very abstract level of the analysis of the functioning of capitalism, the most concrete social struggles intervene. Surplus-value is not the fruit of a “coagulation of labour time.” Nor is it fixed by the difference between anticipated and realized prices. It results from the class struggle which is played out, first of all, at the level of production, in the secret laboratory on whose door is written: “No admittance except on business.”

Prices and Profit: The “Transformation”

From what precedes, we must deduce prices, the rate of profit, interest, and rent — the phenomena which play a role at the “surface” of capitalist society. I continue to believe that Marx’s exposition contains flaws. It seems useless for us to seek to establish the whole of the results arrived at by Marx in the third volume of *Capital*, in particular the famous relationship:

$$\text{sum of prices} = \text{sum of profits}$$
$$\text{sum of values} = \text{sum of surplus-values}$$

The problem of the transition from values to prices was posed by Tugan-Baranowski, and then Bortkiewicz, in a conceptual framework which was totally foreign to the problematic of Marx's theory of value. Bortkiewicz does not achieve a correction of the fundamental theoretical construction of *Capital*, but rather a refinement of Ricardian theory, begun in the work of Dmitriev and anticipating Sraffa's price of production model. We now know what was implicit in the two models of Bortkiewicz (the model with n sectors of "Value and Price in the Marxian System," and the trisectorial model of the "Correction," the second being a particular case of the first). The following will illustrate:

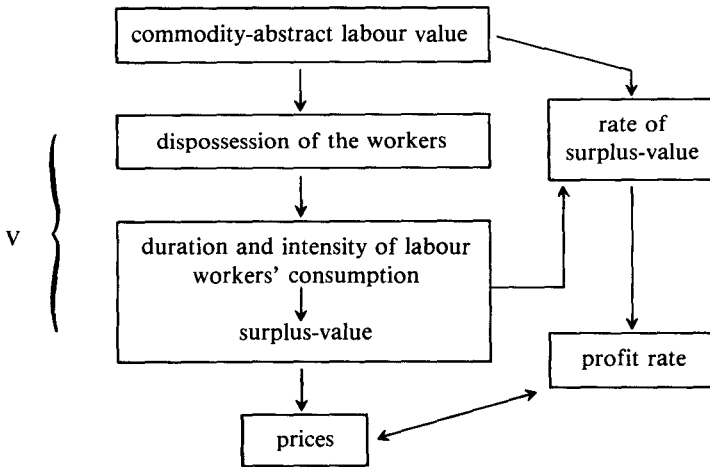


T includes the Leontievan matrix of input-output, the vector of quantities of work, and the vector of quantities of goods consumed by the workers. Hence, we can deduce either an accounting in terms of value and surplus-value, or an accounting in terms of prices and profit. According to Samuelson, Marx deduced the first in the first volume of *Capital* because he did not have matrix algebra and modern electronic calculators. But the second, accounting in prices and profit, illustrates just as much the fundamental hypothesis of the system: the fixity of the workers' consumption basket, that is, the "iron law of wages" to which, for Samuelson and several others, the Marxist theory of exploitation is reduced. There is therefore no "transformation" of values into prices of production, and especially no logical anteriority of the former in relation to the latter. To derive prices and profit, all one needs is knowledge of the technical production data and of the consumption level of the workers (or the distribution of the physical surplus-product generated by the technical matrix: this is in the logic of the Physiocrats, referred to by Sraffa at the end of his book).

Following this "discovery," certain scholars (including Maurice Dobb, Ronald Meek, Henri Denis, and Arghiri Emmanuel) reacted by recognizing the superiority of Sraffa's model over the traditional presentation of Marx, pointing out that the former preserves the essential character of the latter's theory of value, its objective character, "rooted" in production. Others sought to preserve Marx's model, emphasizing the flaws in the articulation of the construction of his

Ricardian correctors. Thus, Salama points out that in this formula "the real movement of capital, its distribution and its reallocation" has been forgotten⁶³ and he proposes a reconstruction of a non-Ricardian model of transformation by the integration of the conclusions of chapter ten of the third volume of *Capital*, neglected by the "fetishists of Chapter 9." More recently, Manuel Perez has insisted on an implicit central hypothesis of the neo-Ricardians: the invariance of the conditions of production, the stationary state. The removal of this unrealistic hypothesis would render the system incapable of determining the profit rate without going through values and surplus value. Hence he proposes the replacement of the articulation illustrated in the preceding diagram: from T can be deduced V and the prices of production, but not the profit rate. From V and from the prices, the profit rate is deduced.⁶⁴ Before Perez, the collective authors of "Valeur, prix et réalisation" had pointed out that the traditional presentation ignores the temporal deformation of the conditions of production, which could be expressed by the reverse effect of the prices of production on values. Consequently the connection between T, V and P would be preserved but not the logical anteriority of values. The writers go so far as to write: "The systems of prices of production and of values are constructed in a parallel fashion, each of them from alternative hypotheses: homogenization by labour and homogenization by the machine."⁶⁵

This last passage illustrates in our opinion the principal flaw of these attempts. Despite a certain number of assertions of principle concerning Marx's method, they remain within the conceptual framework in which the neo-Ricardian (and neo-classical) theorists place themselves. Let there be no mistake about the meaning of our remark. We are not saying that the "V field" is that of critique, and the fields defined by T and P are those of political economy, thus getting around the problem by leaving to the mists the derivation of the profit rate. We are placing V, P and T in the framework of Marx's conceptual field. What happens? T disappears, or rather it signifies something quite different. Carlo Benetti and Jean Cartelier have demonstrated at length how, in the elements of T, wage-labour is already pre-supposed. In a recent article, Alain Lipietz points out, in opposition to neo-Ricardian interpretations, that the datum T does not precede the theory of value and of exploitation. The technical data, he writes, "materialize social relations: fragmentation of labour, Taylorism, Fordism, etc."⁶⁶ That is the fundamental question which distinguishes the Marxist approach from that of political economy and brings us back to the question of method. T does not exist as a technical, natural, objective datum, as in Quesnay's model. The origin of the surplus-product is not found in technology or nature, but rather in abstract labour, the productive activity of the collective worker. T and V must therefore be fused together, or, more exactly, we must construct the following diagram:



What remains is to go to P and, in particular, to deduce the profit rate from the rate of surplus-value. Research on this subject is under way and it is progressing in the light, it must be said, of Sraffa's contribution (just as that of Walras is essential for the elucidation of fluctuations in market prices). In this area, in particular, Alain Lipietz has provided interesting insights, following Gérard Duménil.⁶⁷ We are, however, surprised to read in his findings that Morishima's solution to the transformation problem is economically compatible with the Marxist theory of value and of exploitation. It is a total negation of the problematic of Morishima and Samuelson which Lipietz puts forward in pointing out that T does not precede V. Consequently, when Lipietz writes that, for Morishima, wages correspond to the value of what is consumed by the workers, while in his opinion the wages are the share of the value which they have created and which they have gained the right to spend, on a market where prices are regulated by equalized values, he seems to have lost sight of the fact that the word "value" refers to two totally different conceptions.

We must not relegate prices and profit to another field in which the existence of natural laws of production are postulates (and of distribution in the neo-classical conceptual framework, in opposition to the Ricardians, for whom distribution is part of the institutional "rules of the game"), thus obscuring what must be understood — the functioning of capitalist society — even when it reveals antagonisms between workers and capitalists. As Lipietz states, it is a matter of erasing "the core of Marx's procedure: the proof that profit, far from being the 'wages of patience' of investors, is only an unpaid share of the value produced by the workers' labour."⁶⁸ Profit, thus, must be explained on the basis of the rate of surplus-value, and the latter on the basis of the

theory of value which includes, right from the beginning of the analysis, the struggle of classes — classes defined according to the places of agents in relation to the material conditions of production, and not the “technical conditions” of production. That was Marx’s project. The fact that he did not carry it out completely does not invalidate his procedure. By respecting this procedure we can establish certain results of the third volume. This means that Marx had a sound intuition which he was unable to develop. But it is a poor method to fix as one’s objective the demonstration, by all possible means, of the results attained by Marx.

Conclusion

We are aware of having surveyed rapidly some extremely complex questions. These questions concern the very foundations of the analysis of society, and these foundations are today very much in question. We mentioned at the beginning a crisis in economics. There is also, and this is more and more obvious, a crisis in Marxism, on both the political and the theoretical plane, as witnessed by the present state of the debate on the theory of value and the transformation problem. We will be able to make progress in the analysis of social processes only if we question a certain number of established truths. We have very briefly shown in what direction this revision can be made. No one should be content, today, with repeating as a characterization of capitalism that profit is a “coagulation of surplus-labour.”

We are also aware of the fact that this survey will not satisfy everyone. Orthodox Marxists will accuse us of attacking the theory developed in their Bible, *Capital*. Neo-Ricardians will accuse us of religiously defending Marx. Finally, the “critical Marxists” will reproach us for a certain half-heartedness in our questioning of Marx’s approach. Thus, after developing a critical approach (to which our research is partly indebted) Benetti and Cartelier in their most recent publication propose to make a clean sweep of all the answers which Marx, following political economy, gave to the completely new and relevant questions which he asked. At the same time they propose a “sketch of the general principles of the theory of the commodity, of the wage-labour relationship and of capital” on completely new foundations.⁶⁹ In another book with the title *L’“Economie” de Marx: histoire d’un échec*, Henri Denis, formerly a relatively “orthodox” Marxist, later a neo-Ricardian, explains how Marx in the *Grundrisse* had begun to elaborate in an extremely fruitful problematic, a dialectical theory of capital based on Hegelian logic. He then supposedly partly abandoned this approach and came back to that of Ricardo, which is totally contradictory to Hegel’s — hence the “incompleteness and the multiple contradictions of *Capital*.”⁷⁰

This “fracture of unanimities,” these challenges, revisions and questions, appear to be extremely fruitful. These periods of crisis in the his-

tory of thought, which are juxtaposed to the economic and social crisis and are one of its components, are in general the most fertile ground for the emergence of more fertile analyses, problematics, and theories. We intentionally use the term "fertile," not "true" or "correct." It is this vain search for and belief in a definitive truth, an end of science, which is the source of so much stagnation, if not obscurantism, dogmatism, and terrorism. We are far from following the so-called "new philosophers" in the connection made between the thought of Marx and the so-called "socialist" countries, or in the equation socialism-terrorism. But it is obvious that the transformation of Marxism into a dogma accompanied the birth and development of authoritarian class societies of a new type, which Marx did not anticipate in his sequence of modes of production. Marx believed in a certain way in an end of history, as he believed no doubt in an attainable truth, a possible transparency of thought to itself.

However, we do not conclude from the above that the work of Marx constitutes a failure, either political or theoretical. Marx was profoundly convinced of the injustice of the social system in which he lived and of the need for its transformation, and he was right. This system is revealing itself as more incapable than ever of satisfying the aspirations and needs of the majority of the population. To analyze this system, Marx elaborated the most fertile problematic which we have, even today. It is far from being the only one. It can be completed, enriched, amended, transformed, upset, and transcended by others. It is a problematic, and not a truth, contrary to what Marx himself may have sometimes believed.

We must doubt everything, all the time, so that our knowledge, which will always remain relative, may progress. The belief in an absolute truth is essentially religious in nature, even when it masquerades under the derisory name of "scientific." Through it can be justified all terrorisms, of whatever nature: the one exercised by those who claim, in the name of the "proletariat," to be leading the transition to communism, and the one exercised by those who, in the name of "freedom," are struggling against "this" communism. In all cases, what is called freedom, truth or socialism is an economic and social organization based on the exploitation and oppression of the majority by a dominant class, which holds the power. Truth masks power.

Notes

This is an expanded and revised version of a paper presented at the colloquium, *Actualité du marxisme*, in Lille on 24-26 April 1980. The proceedings of this colloquium were published by *Anthropos* (Paris) in 1982.

1. Karl Marx, *Capital*, vol. 3 (New York, 1967), p. 831.

2. Marx to Engels, 30 April 1868, Marx and Engels, *Selected Correspondence 1846-1895* (New York, 1942), pp. 240-5.
3. See J.M. Keynes, *The General Theory of Employment, Interest and Money* (1936; London, 1967). See also M. Kalecki, "Outline of a theory of the business cycle" in *Selected Essays on the Dynamics of the Capitalist Economy* by M. Kalecki (Cambridge, 1971).
4. P. Sraffa, *Production of Commodities by Means of Commodities* (Cambridge, 1960). While Keynes attacked certain "macroeconomic postulates" of the neo-classical theory (including the famous Say's Law, an implicit basis of the "new" supply side economics), Sraffa questions the internal coherence of the neo-classical theory of value and distribution, by bringing about a return to the Ricardian problematic. Sraffa published, moreover, between 1951 and 1955, the work and correspondence of David Ricardo (1772-1823). He launched as early as 1925 his first attack against neo-classical theory: "Sulle relazioni fra costo e quantità prodotta," *Anelli di Economia* 2, no. 1 (1925): 277-328; "The Laws of Return under Competitive Conditions" *The Economic Journal* 36 (1926): 535-50. See on this subject our article "Marx et Sraffa," *L'actualité économique* 58, nos. 1-2 (January-June 1982). An English version is to be published in 1983 in *Essays in Post-Keynesian Economics* (White Plains, N.Y.).
5. See on this subject certain texts and bibliographies assembled in Gilles Dostaler, ed. *La crise économique et sa gestion* (Montréal, 1982). Among the principal recent contributions: M. Aglietta, *A Theory of Capitalist Regulation* (London, 1979); Y. Baron, B. Billaudot, and A. Granou, *Croissance et crise* (Paris, 1979); R. Boyer and J. Mistral, *Accumulation, inflation, crises* (Paris, 1978); A. Lipietz, *Crise et inflation, pourquoi?* (Paris, 1979); M. Lorenzi, O. Pastre and I. Toledano, *La crise du XXe siècle* (Paris, 1980).
6. A presentation of the principal contributions to this debate can be found in Carlo Benetti, C. Berthomieu and J. Cartelier, *Economie classique, économie vulgaire* (Grenoble, 1975), pp. 93-136. See also the bibliography established by A. Roncaglia in *Sraffa and the Theory of Prices* (Chichester, 1978), pp. 161-166.
7. See Gilles Dostaler, *Valeur et prix, histoire d'un débat* (Montréal, 1978); and idem, *Marx, la valeur et l'économie politique* (Paris, 1978).
8. J.A. Kregel, "Reviews of Dostaler, *Marx, la valeur et l'économie politique* and *Valeur et prix*," *Economic Journal* 90, no. 358 (June 1980): 421-4; Maurice Lagueux, "A propos de deux ouvrages de Gilles Dostaler sur la théorie de la valeur," *Cahiers du socialisme* 2 (Fall 1978): 200-16; Marc Los, "Commentaires sur les deux livres de Gilles Dostaler," *Interventions critiques en économie politique* 3 (Spring 1979): 61-71; M. Perez, "Valeur et prix: un essai de critique des propositions neo-ricardiennes," *Critiques de l'économie politique*, n.s. no. 10 (January-March 1980): 122-49; F. Tournier, "La controverse Dostaler-Lagueux à propos du problème de la théorie de la valeur chez Marx: une intervention épistémologique," *Cahier* no. 8101, publication of the Groupe de recherche en épistémologie comparée, Université du Québec à Montréal, 1981). We replied to M. Lagueux in "Marxisme et science économique," *Cahiers du socialisme* 2 (Fall 1978): 216-32 and to M. Los in "Keynes, Marx et Ricardo," *Interventions critiques en économie politique* 6 (Fall 1980): 211-5. We shall take up again in what

follows some elements of these texts, and conversely, certain succinct statements of this study are developed in these articles, as in our two books mentioned in n. 7.

9. Engels, "Preface" in Marx, *Capital*, vol. 2 (New York, 1967), pp. 1-18.
10. Aristotle, *The Nicomachean Ethics*, bk. 5, chap. 5; and idem, *Politics*, bk. 1, chap. 9.
11. L. von Bortkiewicz, "On the Correction of Marx's Fundamental Theoretical Construction in the Third Volume of *Capital*," in *Karl Marx and the Close of his System*, ed. Paul M. Sweezy (Clifton, 1975). See also by the same author, "Value and price in the Marxian system," *International Economic Papers* 2 (1952): 5-60. (The first version of this text appeared in *Archiv für Sozialwissenschaft und Sozialpolitik*, in three parts, in 1906-1907.)
12. Dostaler, *Valeur et prix*. (See n. 7 above.) We shall summarize in the following paragraphs the model of Marx, of which we give a more detailed description on pages 35-9 of this book, where we give an algebraic version of Marx's arithmetical examples.
13. $V + S$ correspond therefore to the "value added," or to what Marx calls the living labour used up in a cycle of production; C corresponds to what Marx calls dead labour or past labour. The value of the raw and auxiliary materials is transmitted entirely to the final product, whereas that of the machinery, tools, buildings (which Marx calls, following classical economists, fixed capital) is transmitted in fractions, for the duration of the life of these objects. The fraction of the fixed capital transmitted to the final product in a cycle of production is termed by Marx the *rate of rotation* of fixed capital. It should be emphasized that our equation represents a *flow* of value, and that there is a clear difference in status between constant capital, C , whose value is *transmitted* and variable capital, V , whose value is *recreated*.
14. For Marx, this rate measures the exploitation of the workers by the capitalists. It represents, in fact, the relationship between the free labour provided by the former and the labour necessary for the reproduction of their labour-power. On the "macroeconomic" scale, e represents the "partition" of the value added between the portion accruing to the capitalists and the portion accruing to the workers. (We are, obviously, in a simplified model where only two classes exist.)
15. The organic composition of capital is an index of the "degree of mechanization" of an industry. The higher this mechanization, the greater the proportion of "dead labour" vis-à-vis "living labour." The definition of this index has given rise to much debate.
16. There is a fundamental difference, often obscured by Marx, between the rate of profit and the rate of surplus-value. While the latter is the relationship between two *flows*, measured during a cycle of production (a day, a week, a year, etc.), the former is the relationship between a *flow*, the mass of surplus-value generated over a given period (in general *the year*), and a *stock*, that is the total value of invested capital. Thus, for fixed capital, it is a matter not of its value transmitted annually, but of its total initial value. To simplify the argumentation, Marx often considers that the totality of capital accomplishes its rotation in one year. In such a case, the flows and the stocks coincide. This is the hypothesis we shall make later on.

17. The hypothesis of the equalization of rates of profit, first set forth by Turgot and Smith, is absolutely fundamental in a classical model. In a certain way it can be stated that, in this model, profit is defined by its rate. Moreover, this equalization, by which the mass of profits generated is linked to the whole of invested capital obscures, according to Marx, the source of profit, the living labour of the worker.
18. 2 August 1862, Marx and Engels, *Correspondence*, pp. 129-35. (See n. 2 above.)
19. In his arithmetical presentation, Marx supposes that the whole of social capital is divided into five branches.
20. These formulae obviously assume that the rate of rotation of C_i and V_i is equal to 1. (see n. 16.) But the results remain the same if, like Marx in his arithmetical example, we eliminate this hypothesis.
21. Thus for Marx the values determine the prices of production and the rate of surplus-value governs the profit rate. Values and surplus-value constitute the foundation, the inner "anatomy." On the surface appear prices and profit.
22. Among others, W. Lexis and C. Schmidt. See on this subject Dostaler, *Valeur et prix*, pp. 39-46.
23. E. von Böhm-Bawerk, in *Karl Marx and the Close of his System*, ed. Sweezy. (See n. 11 above.)
24. M. Tugan-Baranowski is the first to show this error by replacing Marx's five-sector model by a model with three sectors defined as follows: (1) means of production; (2) consumer goods; (3) luxury goods. He notes that Marx's method of transformation does not allow for the preservation of the conditions of reproduction brought to light in the second volume of *Capital*. Henceforth, and until Seton's contribution in 1957, the transformation problem would be dealt with in these terms.
25. V.K. Dmitriev, *Economic Essays on Value, Competition and Utility* (1904; Cambridge, 1974).
26. Dostaler, *Valeur et prix*, pp. 125-63.
27. Dostaler, *Marx, la valeur et l'économie politique*, esp. chap. 3.
28. Henryk Grossman, *Die Wert-Preis-Transformation bei Marx and das Krisenproblem* (Frankfurt, 1932); Natalia Moszkowska, *Das Marxsche System* (Berlin, 1929); Isaac Rubin, *Essays on Marx's Theory of Value* (1928; Detroit, 1972).
29. 2d ed. (New York, 1967).
30. P.M. Sweezy, *The Theory of Capitalist Development* (New York, 1968), pp. 109-30.
31. F. Seton, "The transformation problem," *Review of Economic Studies* 24, no. 3 (June 1957): 149-60.

32. P. Sraffa, *Production of Commodities by Means of Commodities* (Cambridge, 1960).
33. P.A. Samuelson, "Understanding the Marxian Notion of Exploitation: A Summary of the So-Called Transformation Problem Between Marxian Values and Competitive Prices," *Journal of Economic Literature* 9, no. 2 (June 1971): 399-431. In this article, which gave rise to an important debate, Samuelson explains in fact that it was the absence of modern calculators which led Marx to present his "model of exploitation" in terms of value and of surplus-value rather than in terms of prices and profit. In the body of writing, more and more voluminous, which attempts to reconcile Marx's theory and "modern mathematical economics," we should mention: A. Brody, *Proportions, Prices and Planning* (Amsterdam, 1970); G. Maarek, *Introduction au "Capital" de Karl Marx* (Paris, 1975); M. Morishima, *Marx's Economics* (Cambridge, 1973).
34. See in particular: G. Abraham-Frois and E. Berrebi, *Théorie de la valeur, des prix et de l'accumulation* (Paris, 1976); Maurice Dobb, *Theories of Value and Distribution Since Adam Smith* (Cambridge, 1973); Ronald Meek, introduction to *Studies in the Labour Theory of Value*, 2d ed. (London, 1973). Besides Dobb and Meek, also representative of this current are the following: J. Eatwell, "Mr. Sraffa's Standard Commodity and the Rate of Exploitation," *Quarterly Journal of Economics* 89 (1975): 543-55; C. Jaeger, "Sraffa et le problème de la transformation," *Cahiers d'économie politique* no. 3 (1976): 55-75; J. Robinson, "Value and Price" in *Collected Economic Papers*, vol. 4 (Oxford, 1973); Roncaglia, *Sraffa* (See n. 6 above); I. Steedman, *Marx after Sraffa* (London, 1978).
35. Such is the position developed in all "orthodox CP" manuals. It is found, although expressed much more subtly, in P. Salama, *Sur la valeur* (Paris, 1975); David Yaffe, "Valeur et prix dans *Le Capital* de Marx," *Critiques de l'économie politique*, no. 20 (April-June 1975): 45-103.
36. This current is represented, in particular, in the books in the collection "Intervention en économie politique," published by Maspéro. Let us note: Benetti, Berthomieu and Cartelier, *Economie classique* (See n. 6 above); G. Deleplace, *Théories du capitalisme* (Grenoble, 1979); S. Latouche, *Le projet marxiste* (Paris, 1975); C. Napoleoni, *Smith, Ricardo et Marx* (Turin, 1970); R. Rowthorn, "Neo-classicism, neo-Ricardianism and Marxism," *New Left Review* 86 (1974): 63-87; M. De Vroey, "Travail abstrait, marchandise et valeur," *Cahiers de recherche* no. 7912, Département de sciences économiques, Université de Montréal, 1979. We should emphasize that for the purposes of classification we are grouping writers between whom many differences in interpretation may exist. There are other contributions which are difficult to classify as they are less insistent on the break with Ricardo: for example, G. Dumenil, *De la valeur aux prix de production* (Paris, 1980).
37. Manuel Perez, "Valeur et prix: un essai de critique des propositions néo-ricardiennes," *Critiques de l'économie politique*, n.s. no. 10 (January-March 1980): 122.
38. Marx, *Contribution to the Critique of Political Economy* (Chicago, 1918): 292-305.
39. Antonio Labriola, *Socialisme et philosophie* (Paris, 1899). See Dostaler, *Valeur et prix*, pp. 104-11.

40. Ruy Fausto, "Abstraction réelle et contradiction: sur le travail abstrait et la valeur," *Critiques de l'économie politique*, n.s. no. 2 (January-March 1978): 88-121; and *ibid.*, no. 3 (April-June 1980): 88-114.
41. According to Engels, the "law of value," conceived as the rule by virtue of which commodities are exchanged in proportion to the labour-time necessary for their manufacture, was in force from the origins of commodity exchange, in Antiquity, until the time of the emergence of capitalism. This astonishing interpretation of transformation as a historical process is based on a particular vision of Marx's method, which is termed "Historicological." Engel's text, as well as the one in which, in 1885, he issues his "challenge" to economists, appear to us in part responsible for the wrong path taken by the debate on transformation.
42. Fausto, "Abstraction réelle et contradiction," *Critiques de l'économie politique*, no. 3, p. 103 (See n. 40 above.)
43. Lucio Colletti, *Marxism and Hegel* (London, 1973); *idem*, *From Rousseau to Lenin* (Paris, 1972); *idem*, *Politique et philosophie* (Paris, 1975); and Galvano della Volpe, *Rousseau and Marx* (London, 1978).
44. D. Bodes, P. Kermarrec, H. Lagrange, D. Levy, and F. Meunier, "Valeur, prix et réalisation," *Critiques de l'économie politique*, nos. 24-25 (April-September 1976): 206-25, and no. 26 (January-March 1977): 68-103.
45. Perez, "Valeur et prix," pp. 146-48. (See n. 37 above.)
46. Yaffe, "Valeur et prix." (See n. 35 above.)
47. G. Dostaler, *Marx, la valeur et l'économie politique*, esp. chap. 4 ("De la valeur au prix: étude génétique").
48. Dostaler, *Valeur et prix*, chap. 4.
49. Rubin, *Essays on Marx's Theory of Value*. (See n. 28 above.) Rubin understood well the specificity of Marx's theory of value, and the richness of the concept of "abstract labour," which cannot be reduced to a physiological expenditure of energy.
50. Marx, *Contribution*, pp. 56-64. (See n. 38 above.)
51. David Ricardo, *On the Principles of Political Economy and Taxation* (Cambridge, 1970), p. 12.
52. E. von Böhm-Bawerk, *Capital and Interest: a Critical History of Economical Theory* (London, 1890). See also n. 23.
53. See, apart from the works (already mentioned) of Benetti, Cartelier, Colletti, Fausto and Rubin (and this list is far from exhaustive), the very clear and convincing presentations of Michel de Vroey, in particular: "Travail abstrait, marchandise et valeur: une interprétation de la théorie de la valeur de Marx," *Cahiers de recherche* 7912, Département de sciences économiques, Université de Montréal. See also Alain Lipietz, *Crise et inflation*, 1st sec. (See n. 5 above.)

54. Marx to Engels, 24 August 1867 and 8 January 1868, Marx and Engels, *Correspondence*, pp. 231-3.
55. We take the following formulation from our article "Marxisme et science économique," *Cahiers du socialisme*: 225-6.
56. Los, "Commentaires sur les deux livres de Gilles Dostaler." (See n. 8 above.)
57. See the works of Carlo Benetti and Jean Cartelier, in particular Benetti, *Valeur et répartition* (Grenoble, 1974) and Cartelier, *Surproduit et reproduction* (Grenoble, 1976).
58. See on this topic the conclusive critique by Jacques Fradin, *Les fondements logiques de la théorie néo-classique de l'échange* (Grenoble, 1976).
59. See n. 8 for the reference to the article by Maurice Lagueux and my reply.
60. See in particular Michel Aglietta, *Régulation et crises du capitalisme* (Paris, 1976); Alain Lipietz, *Crise et inflation* (See n. 53 above).
61. Los, "Commentaires sur les deux livres de Gilles Dostaler," p. 67.
62. Ibid., p. 70.
63. Salama, *Sur la valeur*, p. 235. (See n. 35 above.)
64. See n. 37.
65. Bodes et al., "Valeur, prix et réalisation," p. 68. (See n. 44 above.)
66. A. Lipietz, "Retour au problème de la 'transformation des valeurs en prix de production'," CEPREMAP, no. 7902 (January 1979): 27.
67. Ibid.; G. Duménil, *De la valeur aux prix de production* (Paris, 1980).
68. A. Lipietz, "Retour au problème", p. 7. (See n. 67 above.)
69. Carlo Benetti and Jean Cartelier, *Marchands, salariat et capitalistes* (Paris, 1980).
70. Henri Denis, *L'"Economie" de Marx: histoire d'un échec* (Paris, 1980).