

The Value Controversy and Social Research

Erik Olin Wright

Debates on the labour theory of value are usually waged at the most abstract levels of theoretical discourse.* Frequently these debates are preoccupied with questions of the appropriate methodological stance toward social analysis, epistemological disputes about what it means to 'explain' a social process, and mathematical arguments about the merits of competing ways of formally deriving certain categories from others. Rarely are the issues posed in terms of their implications for the concrete investigations of social life in which social scientists would engage. This will be the central theme of this essay: the implications of the labour theory of value and its critiques for empirical investigation. In order to keep the discussion as focused as possible, I will organize the analysis primarily around one central aspect of the labour theory of value—its account of the determination of profits in capitalist societies.¹ In some ways this is not the

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¹ The analysis will focus on the determination of the *magnitude* of profits rather than the *rate* of profits. This choice was made mainly for convenience in the exposition of certain arguments, since the use of a ratio (the rate of profit) makes the analysis somewhat more complex. None of the logic of what follows hinges on this choice, however, and with appropriate modifications the argument could be restated in terms of profit rates. (It is assumed throughout the discussion that money profits have been appropriately scaled in terms of constant money units, so that none of the arguments are affected by arbitrary changes in the numeraire.)

most basic issue within the debates over the labour theory of value, since analysis of the determinants of profits presupposes the debates over the relationship of embodied labour times (values) to prices of commodities. Nevertheless, since the analysis of profits plays such a central role in Marxist theory as a whole, and since it has particularly important immediate empirical implications, we will centre our discussion on this particular issue.

One of the difficulties in embarking on an assessment of the empirical implications of theoretical alternatives is that, typically, each of the alternative positions characterizes the debate itself in different ways. The preliminary task of this paper, therefore, will be to translate each of the positions in the debates on the labour theory of value onto a common conceptual terrain, so that it will be possible to assess their empirical implications in terms of a common framework. Such an act of translation cannot be 'innocent', to use a favourite expression of Louis Althusser, but to a greater or lesser extent must presuppose one of the theoretical stances in the debate. In this essay, the evaluation and elaboration of each of the positions will be from the vantage point of the Marxist labour theory of value itself.

In the following section, I shall present a brief exposition of three perspectives on the determination of profits: a 'causal-agnostic' account as developed in the work of Anthony Cutler, Barry Hindess, Paul Hirst, and Athar Hussain;² the 'Sraffian' account as elaborated in the work of Ian Steedman;³ and a reconstructed version of the traditional Marxist account based on the labour theory of value. In each case I shall present a substantive model of determination of profits rather than try to elaborate all the technical details of the theoretical position. Following this exposition, we will consider the implications of each model for the kinds of questions one would ask in an empirical study. This analysis will then be illustrated by a discussion of the relationship of recent research on the nature of the labour process to the labour theory of value.

The analysis that follows should be seen more as attempting to redefine in certain critical ways the terms of the debate rather than

² Anthony Cutler, Barry Hindess, Paul Hirst, and Athar Hussain, *Marx's 'Capital' and Capitalism Today*, vols. I and II, London 1977, 1978.

³ Ian Steedman, *Marx After Sraffa*, London, NLB, 1977.

definitively resolving all of the points in dispute.⁴ In a sense, therefore, I am trying to pose an alternative agenda of theoretical (and empirical) research, and in so doing to establish more systematically the conditions for the adequacy (or inadequacy) of the labour theory of value. In various places I will point out where unresolved questions remain which need to be addressed.

With these limitations in mind, let us now turn to the exposition of alternative accounts.

1. Alternative Accounts of Profit Determination

Although, in terms of historical development, the Marxist model of determination of profits is the earliest of the three we will consider, presentation of the different positions is made easier by discussing first the conceptually simplest model, the causal-agnostic account of profits, and then turning to the Sraffian and Marxist perspectives.

The Causal-Agnostic Account

In order for profits to be produced in a capitalist society, many necessary conditions must occur. Capitalists must organize their investments and financial transactions, means of production must be

⁴ In particular, I will not attempt to deal with the knotty problem of joint production (i.e. the problem of how to calculate labour values in situations in which two commodities are simultaneously produced by a single labouring activity). Since joint production has been an important part of the recent Sraffian critique of the labour theory of value, the objection could thus be raised that avoiding this problem undermines my entire argument. While I acknowledge this limitation in my analysis, it is important to note that in spite of the mathematical elegance of the Sraffian strategy for calculating prices and profits under conditions of joint production, it is not so clear that this can be considered a real *theory* of joint production. If a theory is meant to identify the real mechanisms by which certain outcomes are produced, then it must do more than provide a satisfactory method of calculating those outcomes (although calculation is important as well). The structure of calculation must itself reflect or appropriate the structure of the process which it is trying to explain. The Sraffian strategy used to calculate a consistent set of prices under conditions of joint production does not even claim to be an account of the real mechanisms that generate those prices in capitalist production. Thus, while the Sraffians may have a valid critique of simple Marxist approaches to calculating prices and profits under conditions of joint production, I do not feel that there is yet a developed substantive theory of joint production inconsistent with the labour theory of value.

combined with labour within the production process, the weather and geological conditions must fall within certain definable limits, and so on. All of these are *necessary* conditions in the specific sense that if they vary outside certain limits, no profits will be possible. If the weather produces horrendous flooding, or if geological conditions produce massive earthquakes, for example, profits will not be produced. A similar argument can be made about capitalists' actions, technological processes, labour, and many other factors. Of course, not all necessary conditions can be thought of as real determinants of profits. Without oxygen on the planet, for example, profits would be impossible, and thus the existence of oxygen is a necessary condition for profits to occur. Only those necessary conditions which have 'pertinent effects', that is, whose range of variation in the world generates real effects on profits, can be considered theoretically relevant necessary conditions. Given that all such pertinent necessary conditions have real effects, so the causal-agnostic argument runs, it is arbitrary to raise any of them to the privileged status of the 'essential' cause of profits, or as Marxists typically put it, the 'origin' of profits.

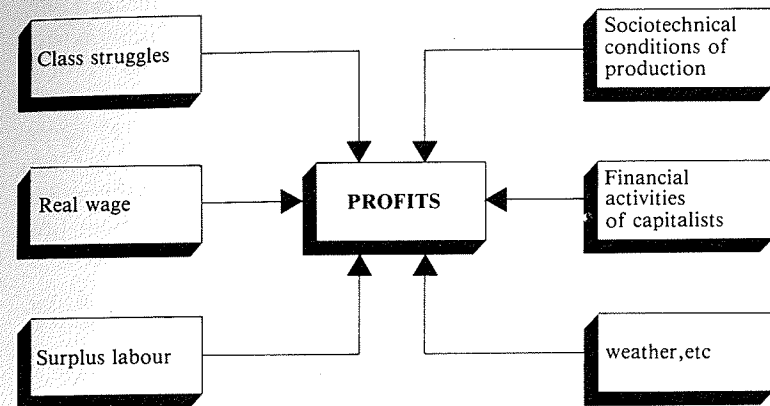


FIGURE 1
The Causal-Agnostic Account of the
Determination of Profits

This basic argument can be schematically represented as in figure 1. Profits are pictured as the outcome of a plurality of causes. Some may be more important than others in the sense that their typical range of variation produces greater variation in profits, but since they are all pertinent necessary conditions for profits, none of them can be given privileged status.

This position has been argued at length by Cutler *et al.*⁵ They insist that it is theoretically arbitrary to see any determinant of profits as the 'origin' of profits: 'If one does not seek a single, general determinant of profits—rejecting both Marxist and Orthodox general accounts of their origin and accepting that the profits capitalist enterprises actually make have no single "origin" (that they cannot be ascribed to any one category of agents or factors in the production process, and are the product of many determinations)—then there is no *a priori* reason to conceive exchange in this way' (i.e., conceiving exchange as an equation of equal quantities of labour).⁶ This is not to suggest that the amount of surplus labour performed within production has no effects on profits, but simply that surplus labour has no privileged status in the analysis of profits. Since surplus labour is always performed in conjunction with specific technologies, activities of capitalists, divisions of labour, and other factors, profits can only be theoretically understood as an outcome of the total process as such rather than of any of the elements within that process: 'If it is recognized that the agency of transformation of the *raw* material is the complex *process* (including each of its necessary elements, machines, the collective labourer, techniques and knowledges) then the resulting product can be ascribed only to the process itself (and to all its effectiveness in combination) and not to labour or labour-time alone.'⁷

⁵ Cutler *et al.* do not refer to their position as a 'causal-agnostic' position. Rather, they simply define it negatively as the rejection of all general causal doctrines: 'What we are challenging is not merely the economic monist causality of Marxism, but the very pertinence of all such general categories of causality and the privilege they accord to certain orders of causes as against others' (p. 128). It would seem appropriate to designate their position a 'causal-pluralist' account of profits, but since causal-pluralism would itself count as a 'general doctrine' of causation (i.e., the doctrine that there are never privileged determinants), it is more appropriate to designate their position as simply an agnostic one.

⁶ Cutler *et al.*, *Marx's 'Capital' and Capitalism Today*, I, p. 19.

⁷ *Ibid.*, p. 44.

It is not clear from this analysis whether *all* pertinent necessary conditions for profits are treated as conceptually equal determinants, or whether the authors restrict the analysis to the necessary conditions within production. There is no discussion of whether or not, for example, meteorological conditions or political institutions should be included in the analysis of the process through which profits are determined. It is also not entirely clear from their discussion whether they believe that it is impossible, in principle, to provide any theoretical ordering of the multiple, pertinent, necessary conditions of profits. In any event, in the analysis of the book, the authors refrain from imposing any such order on the various causes of profits. It is for this reason that their account of profits can be called a 'causal-agnostic' account.

The Sraffian Account

Unlike the causal-agnostic stance toward the determination of profits, theorists using the Sraffian perspective argue that the various causes which influence profits can be theoretically ordered in a systematic manner. In particular, proponents of this view argue that profits can be considered a direct consequence of two factors: the socio-technical conditions of production and the real wage paid to workers.⁸ Other causes of profits have their effects only by virtue of their influence on these two factors. This account is schematically represented in figure 2.

The Sraffian argument is based on a mathematical analysis of the necessary conditions for formally calculating profits from a set of

⁸ Throughout this discussion I will use the expression 'socio-technical conditions' of production rather than simply 'technical' or 'physical' conditions. This is simply to emphasize that technical conditions can never be understood simply as physical input-output relations, but always have a social content. Above all, the length of the working day and the intensity of labouring activity within production are all 'physical' properties of the production process from the point of view of a technical input-output analysis, even though these are in good part stamped directly by social relations. Even in the case of machines, the social content of the technical input may be just as 'real' and significant as the narrowly technical content. Some theorists in the Sraffian tradition do in fact treat socio-technical conditions as mere physical coefficients of production. Ian Steedman, the main theorist we will consider, is careful to avoid this technological reduction, and explicitly acknowledges that physical conditions of production have a social content.

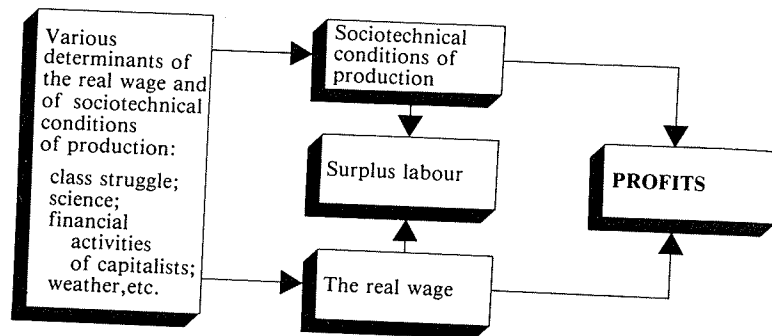


FIGURE 2
The Sraffian Account of the Determination of Profits

initial conditions. Steedman and others have argued, using the work of Piero Sraffa as the point of departure, that it is possible to calculate a unique profit rate simply by knowing the real wage rate and the socio-technical conditions of production. The categories of the labour theory of value, they argue, do not enter into this calculation at all. Indeed, in order to define value magnitudes themselves, it is first necessary to specify the socio-technical conditions of production. Thus, at best, analysing value categories is a redundant step, an unnecessary detour from the systematic analysis of the two determinants of profit.⁹

⁹ Steedman also argues that under certain circumstances (i.e., joint production and fixed capital) the attempt to calculate profits from values is not only unnecessary, but can give an incorrect answer. After demonstrating that values can give incorrect calculations of the profit rate, however, he then goes on to show that if values themselves are calculated in a somewhat more complex manner, as suggested by M. Morishima, a correct calculation of the rate of profit again becomes possible. The heart of his critique, therefore, is that values are irrelevant for the calculation of profits.

The objection has been raised by both Marxists and non-Marxists that Morishima's strategy for calculating labour times is such a departure from Marx's own method that the proofs based on this method have absolutely nothing to do with the labour theory of value. The heart of this objection is that whereas in Marx's analysis labour values are always additive—that is, the labour value in two commodities is always the sum of the labour values in each—in Morishima's approach labour values may be non-additive. The question then becomes whether within Marxist theory, non-additive values make any sense at all. This seems to me to be an issue which requires much deeper investigation before it can be definitely answered. In any event, as stated earlier, I will not attempt to deal with the problem of joint production here.

The logic of this analysis rests on two premisses. First, a mathematical calculation has the status of a proof about a process of causation. A mathematical derivation is viewed as a kind of thought-experiment, which replicates, in thought, a set of real conditions that cannot be observed in a pure state in a social world. If the assumptions used to frame this derivation are reasonable, then a redundant step in the calculation is viewed as a redundant step in the real world's causal process. Second, this formal argument is bolstered by a behavioural argument about the nature of the choices and decisions of the actors within the process being studied. Since the actors themselves make choices based on the real wage and on the technical conditions of production, and since these conditions are sufficient to provide a derivation of the magnitude of profits, the mathematical argument can be interpreted as linking the behaviours of real people to the structural outcome (profits).

It is important to note that this perspective on profit determination does not argue that the socio-technical conditions of production and the real wage rate alone provide a full theory of profits, but only that they are the proximate causes of profits. Class struggle, for example, can still play a pivotal role in the dynamics of profit determination, in the form of struggles over both the technical conditions of production and the real wage. An example of the former would be struggle within production over the introduction of new machines; struggles within the labour market, of course, shape the real wage.

The critical point of the model is not to collapse the theory of profits into a simple two-factor account, but rather to argue that other causes have their effects on profits by virtue of their effects on real wages and technical conditions. Thus, class struggles which have no effects on either of these factors could not have effects on aggregate profits.

Marxist Accounts

Traditional Marxist accounts share with Sraffian accounts a commitment to organizing the multiple determinants of profits into an ordered structure of determination. But they differ in assigning a privileged status to surplus labour (in the form of surplus-value)¹⁰

¹⁰ For convenience in this discussion I will not constantly refer to 'surplus labour in the form of surplus-value', but simply to 'surplus-value'. Surplus labour is ap-

within the structural model of determination: in Marxist theory, real wages and technical conditions of production have their effects on profits by virtue of their effects on the creation of surplus-value. Other causes of variation in profits may be two steps removed from the final outcome. The weather, for example, may influence profits by virtue of its influence on socio-technical conditions and real wages; these, in turn, influence profits by virtue of their effects on surplus-value. This basic model is illustrated in figure 3.

In this account, changes in the mix of commodities in the real wage or changes in the socio-technical conditions of production that have no consequences for the amount of surplus-value could have no effects on the total amount of profit. Only insofar as they influence surplus-value can they affect aggregate profits. It is by virtue of this strategic location within the process of profit-determination that Marxists have referred to surplus-value as the 'origin' of profits.

The various critical discussions of the labour theory of value based on the work of Sraffa and others have demonstrated that, stated in this simple way, the model in figure 3 is simply incorrect. It can be shown, for example, that where there are choices of techniques of production, it is possible to increase (or decrease) the total magnitude of profits even if there are no changes in the amount of total surplus-value produced. At least at first glance, this would seem to invalidate the model of determination in figure 3 in favour of that presented in figure 2.

In fact, it is possible to recast slightly the model of determination in the traditional Marxist theory so as to preserve the central point of the theory and yet accommodate these objections. In order to do this, however, it is necessary to move beyond the simple notion of homogeneous determination expressed in the models so far, and replace it with a more complex notion of causation, one in which

appropriated by dominant classes in all class societies, but it only takes the form of surplus-value in capitalist ones. It should be noted that even in capitalist society some surplus labour is performed which is not represented as surplus-value (e.g. by wage-earners in state bureaucracies, in which no commodities are produced but surplus labour may still be performed). It is only that surplus labour which is performed in productive sectors of the economy and thus embodied in commodities as surplus-value that constitutes the basis of profits within Marxist theory. For simplicity, therefore, I will generally refer directly to surplus-value in this exposition.

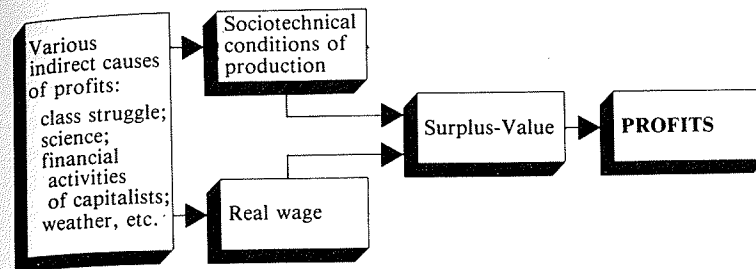


FIGURE 3
The Marxist Account of the Determination of Profits,
Simple Version

there are different kinds of causal relations between elements in a theory. These different kinds of causation I have referred to elsewhere as 'modes of determination'.¹¹

For our immediate purposes, two modes of determination are particularly important:

1. *Structural limitation*, in which one structure or element systematically sets limits of possible variation on another structure or element. Within those limits, there is a variety of possible outcomes, but the limits themselves are determinate.
2. *Selection of specific outcomes from a range of structurally limited possibilities*. In a sense, this is a mode of determination which establishes limits within limits. Depending upon the specific process being investigated, there could be several nested layers of such selection processes.

The model of determination in figure 3 can now be recast in terms of modes of determination. A first approximation of this more complex model appears in figure 4. To keep this initial elaboration simple, I have limited the model to four elements: the real wage, the socio-technical conditions of production, surplus-value, and profits. The socio-technical conditions of production establish the basic limits

¹¹ See Erik Olin Wright, *Class, Crisis and the State*, London, NLB 1978, chapter 1 for an extended discussion of modes of determination.

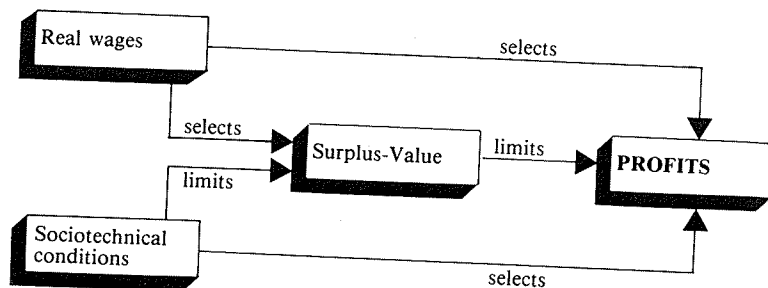


FIGURE 4
Modes of Determination in the Marxist Account of Profits,
First Approximation

on the creation of surplus-value. Since total labour performed in production is one aspect of the socio-technical conditions of production, these conditions clearly specify the maximum possible amount of surplus-value (i.e., the maximum when the real wage is zero). Within these limits, the real wage specifies exactly what proportion of the total labour performed within production will be 'surplus' value, and thus real wages act as a selection determinant of surplus-value within the limits established by the technical conditions of production.

The interesting part of the model involves the mutual interdependence between surplus-value, real wages, technical conditions, and profits. As pictured in figure 4, surplus-value establishes the fundamental limits on the range of possible profits. With a given quantity of surplus-value, there is an absolute ceiling on the possible quantity of profits. When surplus-value is zero, no profits at all are possible; as surplus-value increases, the possible maximum profit also increases monotonically.¹² Within these limits, however, both the socio-

¹² Steedman cites Morishima's analysis in support of the proposition that 'the profit rate and growth rate are positive if and only if surplus labour, as newly defined by

technical conditions of production and the real wage have a selection effect on profits. This means that if we were to hold constant the amount of surplus labour performed (i.e. the amount of surplus-value), and were to vary the techniques of production or the real wage (with the constraint that such variation would not affect the amount of surplus labour), we could in fact alter total profits, *but only within the determinate limits*.¹³ Surplus-value, then, would remain the 'origin' of profits, not in the sense that it is the *only* determinant of profits, but in the sense that the effectivity of all other determinants of profits occurs either by virtue of their effects on surplus-value or within limits established by surplus-value.

Figure 5 illustrates the outcome of this limiting process (the shape of the limits is arbitrary in this diagram). For any given amount of surplus labour performed in production, there is an upper and lower bound on the amount of profits produced. The amount of surplus-value, then, constitutes the explanation of those levels of profits that are impossible; the socio-technical conditions of production and the real wage explain—'predict'—which of the many possible levels of profits actually occurs.

This interpretation of surplus-value as setting the limits on possible profits may not, initially, seem very intuitive. How can it be, in the real world (as opposed to in the mathematics), that the amount of surplus-value places bounds on possible profits? One possible way of looking at this is to see the range of possible profits within those bounds as a consequence of the social process by which values (labour times) are transformed into prices. It has often been remarked that under conditions where there is the same 'organic composition of capital' in all economic sectors (i.e., where the

Morishima, is positive' (p. 204). Positive surplus labour, therefore, generates positive profits. Since any productive technology has a finite maximum possible profit for given levels of inputs, therefore for a given level of surplus labour (surplus-value) the maximum profit will be positive and finite. This implies that as surplus labour is increased, maximum possible profits also increase.

¹³ This argument does not concern the problem of how capitalists actually make their choices among techniques. Capitalists certainly do not in any sense 'hold constant' the amount of surplus labour. The argument here is about a structural constraint on the possible effects of various choices which capitalists make, regardless of how they actually make their decisions. That is, the maximum possible profit which a capitalist can obtain by trying to change techniques of production is limited by the amount of surplus labour generated in production.

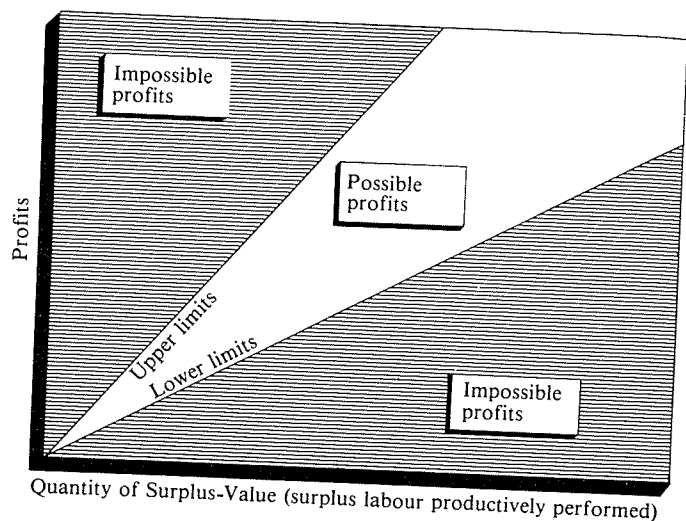


FIGURE 5
Surplus-Value and Possible vs. Impossible Profits

Note: The shape of the limits in this figure must be seen as rather speculative. They have been drawn as straight lines for simplicity, rather than because of a formal theory which indicates that this is indeed the shape of the limits. Anwar Shaikh is currently working on a formal derivation of the shape of these limits.

Shaikh has suggested in a personal communication that the angle between these two lines is determined by two factors: (1) The degree of homogeneity of organic compositions of capital across sectors. In situations where the organic compositions of capital are identical across sectors, the angle becomes zero and the limits collapse into a single straight line. As the organic compositions become more heterogeneous, the angle becomes wider. In a modern economy in which all sectors are highly interconnected, it is extremely unlikely that this heterogeneity of organic compositions of capital is very large. (2) The rate of accumulation (as a proportion of total possible accumulation). For a given structure of socio-technical conditions of production (i.e. a given distribution of organic compositions of capital across sectors of production), the angle between the limits will vary with the rate of accumulation. When all surplus-value is accumulated, regardless of the heterogeneity of organic compositions of capital, the angle will also be zero. The maximum angle, then, occurs when the rate of accumulation is zero, i.e. when all surplus-value is taken out of the cycle of production. (A proposition closely related to this one is proven in Anwar Shaikh, *Theories of Value and Theories of Distribution*, PhD dissertation, Columbia University, 1973.)

If these propositions are correct, then to the extent that the organic compositions of capital in highly integrated economies tend to be relatively homogeneous across sectors and the rate of accumulation tends to be close to the maximum, the limits on possible profits will be fairly narrow. A full defence and specification of these propositions in terms of a theory of limits on profits remains to be elaborated.

technical conditions of production are the same, expressed in labour-value terms), prices will be directly proportional to values and thus the upper and lower bound on profits will coincide. Under these conditions, figure 4 is reduced to figure 3, and the profit/surplus-labour relationship in figure 5 collapses into a single line.

Under normal conditions, of course, the organic compositions of capital are not the same in all sectors, and thus there will be a systematic pattern of deviations of prices from values. In sectors with high organic compositions of capital (e.g., petrochemicals), prices will be above values; in sectors with low organic compositions (e.g., textiles), prices will be below values. Since there is no necessary reason for positive deviations and negative deviations to exactly balance out in the aggregate (even in an 'equilibrium' situation), the quantity of actual aggregate social profits will depend upon the specific distributions of such deviations. In these terms, the upper and lower bounds in figure 5 can be viewed as defining the maximum possible positive and negative aggregate deviations of prices from values that can be generated through the process by which value magnitudes are transformed into actual prices. In this way of posing the question, the transformation 'problem' is understood as a transformation 'process', a real process that occurs in the world and has real effects on the actual levels of profits. The total amount of surplus labour performed defines the limits of what can be converted into profits through this transformation process; the actual distribution of organic compositions of capital in the economy determines the actual profits which will be obtainable within these limits.¹⁴

Two major objections could be raised to the model of determination in figure 4: (1) since surplus-value is itself determined by the socio-technical conditions and the real wage, it plays no autonomous role in the process and is thus still 'redundant'; (2) it is arbitrary to claim that surplus-value establishes the basic limits on the outcome, since if any 'factor of production' is held constant, there will be an upper limit to profits. The first objection basically misses the point of the model. The argument is not that surplus-value is an autonomous

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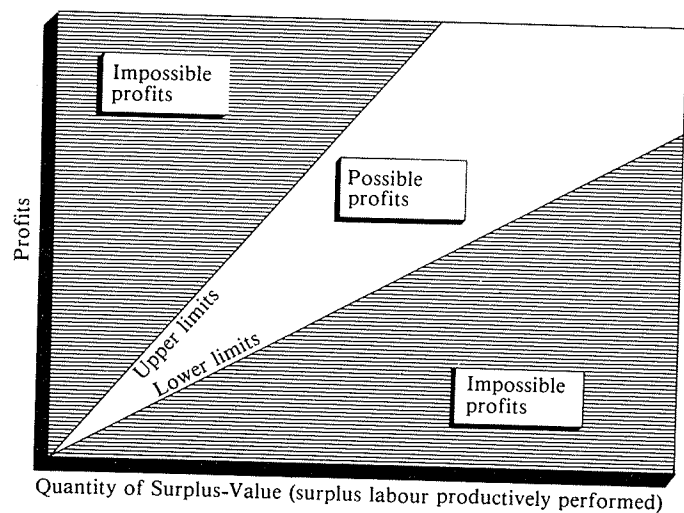


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cause of profits or a primal cause, an 'unmoved mover' in the profit determination process. On the contrary, it is precisely because surplus-value is an endogenous factor within that process that it can be viewed as a privileged determinant. This point is much simpler if we look at figure 3, the model of determination which would hold if organic compositions of capital were the same in all sectors of the economy. In this model, surplus-value is still seen as entirely a consequence of the socio-technical conditions of production and the real wage. But here we can see that these two factors have their effects on profits only by virtue of their effects on surplus-value. You could change the real wage and technical conditions as much as you like, but if those changes did not affect the quantity of surplus-value, then the amount of profits would remain unchanged. Surplus-value, therefore, is the fundamental source of profits in figure 3, in the sense that changes in surplus-value are the necessary *and* sufficient conditions for changes in profits.

The fact that the model becomes more complex in figure 4 does not change this basic relationship. Changes in surplus-value are no longer sufficient conditions for changes in actual profits, but they remain necessary and sufficient conditions for changes in the *limits* on possible profits.

The second objection raises a different sort of problem. Certainly, given the actual availability of resources, if a particular input to production becomes severely restricted, then the maximum amount of profits that is possible in practice could be less than the maximum specified in figure 5. Shortages of specific resources can therefore impose narrower real limits than the amount of surplus labour performed in production. Furthermore, absence of or restriction on a source of raw materials could make it impossible to increase actual productive labour and hence surplus-value and profit. These observations may give rise to the argument that, from the point of view of the formal *calculation* of limits, it is arbitrary to base those limits in labour rather than in any other factor of production. In practical terms, non-labour limits may have a more constraining effect on profits than labour limits (e.g., in an energy crisis).

Ultimately, to answer this objection we must move beyond the simple model represented in figure 4. The reason for selecting surplus-value as the pivotal limiting process is not because in every situation

surplus-value defines the actual limits to profits. It could well be that in some circumstances shortages of raw materials or energy or some other factor of production put a ceiling on profits that is more restrictive than the surplus-value limits. Rather, the central reason for selecting surplus-value as the key limiting process is because it enables us to construct a theory of the social determination of profits, in particular a theory of the systematic linkage between class structure, class struggle, and profits.

To understand the rationale behind this claim, we need briefly to examine the concept of classes in Marxist theory and see how the specific theory of profits plays a role in the general theory of classes. For our present purposes the key point is that classes are defined above all by positions within production relations, not by their positions within market relations or other aspects of social relations. The decisive aspect of those production relations centres on the ability of one class to force another class—the direct producers—to perform labour beyond what is needed for the reproduction of the direct producers themselves, and to appropriate the products of that 'surplus labour'. In all class modes of production, the dominant class is defined by those positions which appropriate surplus labour, the subordinate class by those positions which have their surplus labour appropriated.¹⁵

Different modes of production differ in the precise mechanisms through which this surplus labour is produced and appropriated. In feudalism, as has often been pointed out, the mechanisms of appropriation are transparent: the feudal peasant is directly forced to perform surplus labour for the feudal lord in the form of labour dues. How, then, does it come to pass in capitalist society, where workers are not forced to perform labour dues, that the capitalist class manages to appropriate the labour of workers? The labour theory of

¹⁵ It is impossible here to present a sustained justification for defining classes in terms of social relations of production, and in particular in terms of the social relations of domination over labour and surplus labour. This definition is not simply posed as an analytical convention on the part of the theorist, but rather as a way of understanding the real dynamics of social struggle and social change. For a more elaborate defence of the underlying logic of this conception of class, see Erik Olin Wright, *Class Structure and Income Determination*, New York 1979, chapters 1 and 2, and 'Varieties of Marxist Conceptions of Class Structure', discussion paper, Institute for Research on Poverty, University of Wisconsin, Madison, 1978.

value in general, and the theory of surplus-value in particular, provide a framework for understanding this relationship, i.e., how it happens that capitalist profits—the monetized value of the surplus product—embody the mechanism through which capitalists appropriate surplus labour from workers. The focus on surplus labour as the underlying process which establishes limits on profits, therefore, is itself derived from the class analysis of exploitation in general and of the specific forms of such exploitation in capitalism.

There is, therefore, an element of truth in the charge that the choice of surplus-value as a limiting condition is 'arbitrary'. It is arbitrary with respect to the specific problem of *calculating* profits, and if this was the only reason for a theory of profit determination, then indeed there would be no grounds for choosing surplus-value over any other factor as a limiting condition (furthermore, one would want in principle to refuse any a priori claim about limiting conditions and would simply observe empirically which factor-scarcities tended to impinge most consistently on profits). But the choice is far from arbitrary with respect to a broader theoretical project—understanding classes and class struggle in terms of social relations of production, and linking such class struggles to the specific analysis of capitalist mechanisms of appropriating surplus labour through surplus-value and profits. It is because we are interested in understanding class relations and class struggle that we seek a model of determination of profits that allows us to link classes to profits, not because we have an autonomous interest in profits as such, independently of their social determinants and consequences. In these terms, the specific way in which one formalizes the model for the calculation of profits is conceptually subordinated to the qualitative theory of social relations within which profits acquire their social content.¹⁶ The theory of profit determination is an element in the theory of classes rather than vice versa.

¹⁶ This answer to the objection that the focus on surplus labour as a limiting process is arbitrary comes perilously close to a Weberian methodological stance on theory construction, namely that the categories we choose are strictly subordinated to the subjective preferences of the analyst. Because Marxists are subjectively committed to a certain set of values and thus have an interest in studying exploitation, an ideal-type model revolving around surplus labour is appropriate. In fact, the argument does not rest simply on the value preferences of the theorist, but on the realist claim that classes

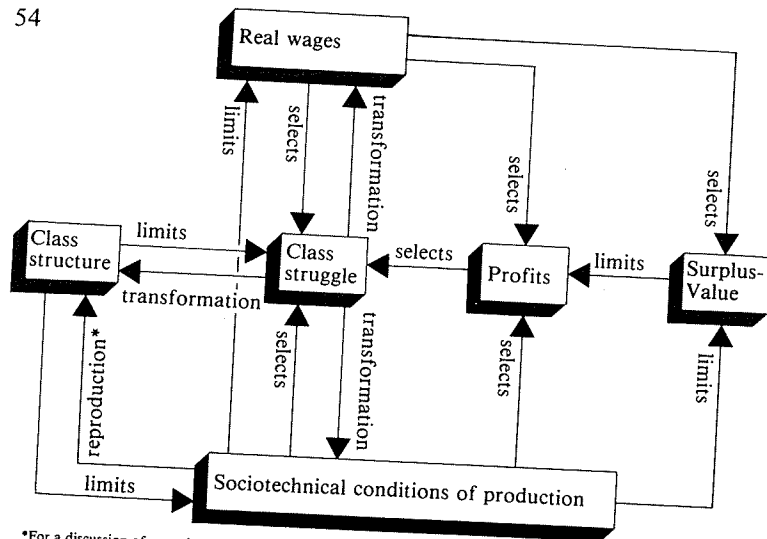
Figure 4 does not, by itself, illustrate this broader theoretical structure. In the first place, class struggle does not explicitly appear in the model, and it must be formally reincorporated for this model to serve as a guide for research. Secondly, the model as it stands is rather undialectical, in the sense that the determinations all run in one direction and there is no mechanism internal to the model for restructuring the elements in the model themselves. A Marxist theory of profits must not simply be an account of the 'variables' which determine profits, but of the total social process within which profit determination represents one particular aspect.

In order to make the model more dialectical in this sense, we need to introduce one additional mode of determination: *transformation*. This is a mode of determination in which the practices of individuals and classes act to restructure (transform) elements within a social process. The very concept of 'practice' within Marxist theory must be understood in terms of transformation as a relation of determination: practices are activities through which nature, social relations, and experiences are transformed. Like 'selection', transformation relations occur within structurally defined limits; not every transformation is possible at any given moment in the history of a social structure. Transformations differ from selections in involving the conscious activities of classes and individuals rather than simply the relations between structural elements.¹⁷

With this understanding of transformation, we can now further extend the model of determination to include class struggle and class structure. This model is presented in figure 6. Within this model, forms of class struggle act as transformation determinants of real wages within limits established by the underlying socio-technical conditions of production. Given those technical constraints, only certain transformations of real wages are possible. Similarly, class

and class struggle, defined in terms of production relations, are the decisive social forces which shape social change. Classes are real, not simply analytical conventions. Surplus labour also establishes real limits on possible profits, not simply analytical limits (although actual profits may generally fall well within those limits). The model of profit determination in figure 4, therefore, provides a way of linking these two categories within a theory of profit determination.

¹⁷ For a more extended discussion of transformation as a mode of determination, see Wright, *Class, Crisis and the State*, pp. 21–3.



*For a discussion of reproduction as a mode of determination, see Wright, *Class, Crisis and the State*, pp. 18-21.

FIGURE 6
Modes of Determination in the Marxist Account of Profits,
Complex Approximation

struggles transform the technical conditions of production themselves, in particular in the form of struggles over the labour process and technological change. And, of course, class struggle transforms class structure. Class struggle, in turn, is structurally limited by class structure and is influenced by the level of profits in a selection relationship: when profits are low, the capitalist class will attempt to engage in class practices which lower the real wage and transform the technical conditions of production in ways which increase surplus value; when profit rates are high, the working class will be able more effectively to struggle for increases in real wages and to resist proletarianization within the labour process. In this sense, profits act as a selective mechanism on class struggle, particularly on economic forms of class struggle. Real wages and the socio-technical conditions of production also act as selection determinants of class struggle, within limits imposed by class structures.

One particular aspect of this model is especially worth noting. Class struggles do not directly affect surplus-value and exploitation, but operate through effects on the socio-technical conditions of production (in particular on the total amount of labour performed,

i.e., the length and the intensity of the working day) and on the real wage of workers. This is one of the distinctive features of capitalism. In pre-capitalist modes of production class struggles were directly struggles over surplus labour, i.e., over that portion of total social labour which was appropriated by the dominant class. This was particularly true when such appropriation took the form of forced labour. In capitalism, precisely because the performance of surplus labour is disguised through the exchange process and the organization of production as a capitalist labour process, class struggles are never over surplus labour as such.

If the model in figure 6 is correct, however, it is still the case that class struggles have their most decisive impact on profits *by virtue of their effects on surplus-value*. As we shall see later on in this paper, this has very important implications for the kinds of empirical research agenda which this model generates.

The model as it stands is underdeveloped in a number of respects. First of all, there are critical elements which are totally absent from the model: the state, forms of class organization, ideology, etc. Particularly in assessing the relationship between class structure and class struggle these additional elements play a central role.¹⁸ Secondly, there are a number of connections between the elements in the model which have not been specified. For example, profits probably have a selective effect on technical conditions of production even apart from their impact via class struggle, since a given level of profits makes possible certain kinds of innovations and not others. The connections appearing in the model, therefore, do not exhaust the possible linkages between elements. Finally, the model itself does not put any concrete content on the various relations of determination, though it does indicate their general character. There is no indication, for example, of how narrow or broad the limits of profits imposed by surplus-value actually are. There is no specification of the actual range of possible real wages imposed by the socio-technical conditions of production, nor of the range of forms of class struggle imposed by the underlying class structure. In order to add such concrete content it is necessary to transpose the model from the high level of abstraction at which we have discussed it so far and use it in

¹⁸ See Wright, *Class, Crisis and the State*, pp. 97-110.

the investigation of specific class structures, socio-technical conditions of production, forms of struggle, etc. In these terms, the model should be seen as a road map for a research agenda rather than as a summary of the results of an investigation.

2. Theoretical Assessment

From the vantage point of the Marxist labour theory of value, both the causal-agnostic model and the Sraffian model of profit determination are partially correct but incomplete. They are correct in that, in different ways and at *different levels of abstraction*, they do in fact specify real relations, real effects. They are incomplete in that they inadequately theorize the conditions under which they in fact represent the real process of profit determination.

In the case of the causal-agnostic account, the model can be viewed as a collapsed *description* of all the processes which have determinate effects on profits. Figure 1 is a causal account at the lowest level of abstraction, a level in which it is impossible to order causes within any kind of systematic structure of determination. All one can do is give an account of the various 'factors' which have effects.

The Sraffian account of profits is a considerable advance beyond this simple, descriptive model. It can be interpreted as specifying the determination of the level of profits at a middle level of abstraction. Given the basic limits on profits imposed by the underlying structure of class relations and balance of class forces, reflected in the level of surplus labour, the Sraffian model provides an account of the selection determinants of profits. If one's interest in studying profits is limited to calculating profits, then this level of abstraction is as far as one needs to go. As in any causal process, a complete prediction of the outcome is possible simply on the basis of the analysis of all of the selection processes.¹⁹

¹⁹ A simple way of illustrating this argument is by comparing pluralist theory with the Marxist analysis of the capitalist state. The pluralist theory of electoral politics may be able quite accurately to predict the outcomes of specific elections, the kinds of coalitions which form in the US Congress around competing 'interest groups', and the likelihood for given pieces of legislation passing. Pluralism as a theory of politics (at least in its sophisticated versions) may in fact provide a rich account of the selection

A complete social explanation of the outcome, however, requires an understanding of the social determinants of structural limitation, and this requires moving to a higher level of abstraction. This is precisely what the Marxist model of profit determination attempts to do in the analysis of the relationship of surplus labour to profits. This analysis goes beyond the Sraffian account in two critical aspects. First, it specifies the structural limits within which the Sraffian selection processes have their effects. Whereas the Sraffian account accurately calculates the level of specific profits, the Marxist account explains the social possibility of those profits. Second, the Marxist account embeds its analysis of the determination of profits in a larger theory of social relations and determinations, a theory in which profits themselves act as determinants, not just outcomes.

Such a broader theory has advantages over both the causal-agnostic and the Sraffian accounts. It enables us to go beyond a simple, positive account of societies as they are, and develop a critical theory of societies as they might become. In this context, the analysis of structural limitations as a mode of determination becomes very important, for it is by grasping the limits of possibility within a given social structure that we can begin to understand scientifically the changes in those possibilities that will result from the transformation of the social structures themselves.

This assessment of the causal-agnostic and Sraffian models, it must be stressed, assumes the adequacy of the Marxist account itself. From the standpoint of the causal-agnostic theory advanced by Cutler *et al.*, both the Marxist and Sraffian accounts make totally arbitrary claims about the ordering of various causal processes. In particular, Cutler *et al.* argue that the Marxist claim about the centrality of surplus labour is a purely ideological claim. The category of surplus labour is introduced into the analysis because it is necessary in order

processes of policy outcomes within the state. But it is totally incapable of providing a theory of the limiting processes, of the determinations of the range of possible policies considered by legislative bodies or the range of possible candidates in elections. The Marxist theory of the class character of the state is precisely an account of such limiting processes. If all one wanted to do was to predict (calculate) which policy is actually passed in a legislature, the pluralist theory would be adequate to the task; but if one wants an explanation of the outcome, it is necessary to develop a theory of the limits, and this is what the Marxist theory of the state accomplishes.

to analyse capitalism as a system of exploitation. But there is no scientific basis, they insist, for arguing that exploitation or surplus labour have any particularly distinctive effects on *any* outcomes, including profits. And thus there is certainly no reason to elevate them to the status of 'fundamental' determinants.

Similarly, those who espouse the Sraffian framework would reject the claim of its incompleteness. Since an account of determination and calculation are seen as equivalent, and since the mathematical thought-experiment demonstrates that the calculation of profits can be entirely derived from the technical conditions of production and the real wage, surplus labour can play no role in a model of determination of profits. To be redundant in a calculation implies having no real effects in the world. 'Structural limits', therefore, are simply irrelevant and metaphysical.

If one accepts the methodological strictures of either the causal-agnostic or Sraffian stances, then the category surplus labour or surplus-value at most can be considered one of many causes (the first stance) or an irrelevant category (the second stance). But if we reject both of these methodological prescriptions and argue both that causes are structured in systematic ways and that certain causes establish limits within which other causes have their effects, then the possibility for surplus-value to play a pivotal role is reintroduced.

Rather than debate these methodological principles in the abstract, I would like to turn to the question of the empirical agendas which would flow from each of these models. In the end, the cogency of any defence of a particular methodological or epistemological stance within social science depends a great deal upon the richness of the research which it is capable of stimulating and the power of the explanations of social processes which emerge from that research.

3. Implication for Social Research

Theoretical frameworks impinge on empirical investigations in four basic ways.

1. *Questions.* Theory defines the range of possible questions that can be asked in an empirical investigation. As Althusser has stressed, this

implies both a positive and negative process: certain questions are 'unaskable' within a given theoretical framework. This is not to suggest that simply by knowing the broad theoretical framework we know precisely what questions will be asked. Theories impose limits on questioning, but there are many possible questions that can be posed within a given theory.

2. *Concepts.* Theories also provide the conceptual categories used to answer a given question. They define the range of admissible categories which could potentially enter into an explanation or be used to formulate specific hypotheses within a general explanation. Concepts are always produced within theories; they are never somehow given by a neutral cognitive process 'outside' of theory. Different theoretical frameworks, therefore, do not merely shape the questions we would ask of the world, but the categories we would use in framing an answer.

3. *Expectations.* Theories also contain specific types of expectations about the alternative possible answers to a given question. Obviously, if there was only one possible answer, there would be no need to conduct research at all. The importance of empirical investigation stems precisely from the fact that there are generally multiple possible answers to a particular question, given the conceptual tools available. But a theory generally does specify the relevant, interesting, alternative expectations; research then contributes to understanding the precise mechanisms or processes which lead to one alternative over another.

4. *Answers.* To the extent that a theoretical framework has been used to ask questions, with specific concepts exploring specific sets of expectations, then gradually the theory also develops a set of received answers, a set of substantive theses which have been examined through various investigations. These answers constitute the body of knowledge within the theory which is augmented through research. Such answers are always, of course, provisional and are subject to transformation in light of new research, new investigation. As is often remarked, there can be no final guarantee that an answer is 'true', but only a methodology for adjudicating the cogency of contending answers.

All of these elements are constantly in a process of transformation. New questions are posed in the light of unexpected answers (anomalies, to use Kuhn's expression); new concepts are produced to explore new questions; new expectations are formulated in the light of conceptual breakthroughs. The relationship between theory and research cannot be a static one, any more than can the relationship between theory and practice.

In the discussion which follows I shall focus on the first of these aspects, the ways in which a theoretical structure defines the relevant range of questions. In many ways this is the most decisive, for the specific concepts one adopts and the range of alternative expectations one might entertain are themselves shaped by the particular objects of investigation. In any event, the sharpest contrasts between the three perspectives we are examining centre on the kinds of questions they generate, so it is on this level that we will concentrate.

Causal-Agnostic Models

A causal-agnostic model of profit determination begins with the presumption that there are multiple, pertinent, necessary conditions for the existence and magnitude of profits. A theoretical argument would then be used to elaborate a list of such necessary conditions; an empirical investigation would be used to establish their relative importance in the actual determination of profits.

One of the critical general questions which a causal-agnostic might ask in this context would be: Under what conditions does factor A or B become relatively more important in the determination of profits? For example, it could be argued that the more agriculture is mechanized, the less do the profits generated within the agricultural sector vary with the weather. Both mechanization and meteorology are pertinent causes of profits, but the development of the former reduces the effectivity of the latter. Another example would centre on the relationship between scientific knowledge and profits. Cutler *et al.* argue, in passing, that as direct, living labour becomes a smaller portion of the total costs of production, scientific knowledge is likely to increase as a determinant of profits.²⁰

²⁰ Cutler *et al.*, *Marx's 'Capital' and Capitalism Today*, 1, pp. 43-4.

All such questions involve investigating the relative weight of different factors within a process of causation. Since there is no logical ordering of causes possible, the only task of research is to establish relative empirical importance, and the conditions under which that relative importance itself varies.

Such a research agenda is likely to produce a rather rich descriptive picture of the principal sources of variation in profits. As Cutler *et al.* suggest, one of the outcomes of the research could be a systematic account of the various forms of the production process as a whole (not just the labour process as one aspect of that production), and of the relationship of these different general processes to different levels of profit and forms of distribution.

What such research would not do, however, is provide an account of how these sources of variation produce their effects. A causal-agnostic stance is incapable of generating theories of the actual mechanisms through which profits are generated, since it rejects the possibility of a structural ordering of determinations. To say that the entire process is the 'mechanism' is to say no more than that profits are the outcome of everything which determines them; it is not to specify the internal logic which generates that outcome.

Both the Sraffian and Marxist models of profit determination organize their research agendas around such mechanisms.

The Sraffian Model

The heart of the Sraffian model is the claim that the socio-technical conditions of production and the real wage constitute the actual mechanisms which determine real profits. An empirical investigation of the determinants of these two processes, therefore, could be interpreted as an account of how the mechanisms which determine profits work in the real world, i.e., what role they play in translating the decisions of actors, the weather, or the political conditions of social conflict into a specific kind of outcome, profits.

The pivotal research question which this model generates is thus: What are the determinants of the real wage and of the technical conditions of production? This leads immediately to two general objects of empirical study: the determinants of the market power of wage labourers and capitalists, and technological change. The first of

these concerns would involve investigations of such things as the impact of trade unionism on the collective bargaining power of workers; the effects of monopoly concentration on the relative power of capital; the role of the state, particularly the welfare state, in regulating the market conflict between labour and capital and in guaranteeing a certain real wage for workers; or the role of imperialism in making possible higher real wages for workers in the imperialist centres. All of these empirical questions would contribute to understanding the process through which the real wage was concretely determined.

The study of technological change would be equally important within the Sraffian model of profit determination. Such an investigation would include such things as the role of competition in technical change, the relationship of changing market conditions (including changes in the real wage) to technical innovation, and the role of social conflict within the labour process itself in technical change.

Taken together, all of these factors would define the broad social determinants of actual profits. The specific theory of profit determination within the Sraffian framework then provides an account of the structural mechanisms which link these determinants to the outcome.

The Marxist Model

All of the questions which are suggested by the Sraffian model of profit determination can be asked within a Marxist framework as well, since the Sraffian model is in a sense contained within the Marxist model. The difference between the two models centres on the ways in which class struggle intervenes in the process.

In the Sraffian model, as in the Marxist model, class struggle within the market plays a critical role in the determination of the real wage. The real wage is conceptualized as a zero-sum game between wage-earners and capitalists, in which every gain for workers is—at least in the short run—a loss for capital (a deduction from profits); thus the market conflict between labour and capital over the real wage is intrinsic to their very relationship.

But what about class struggle within production, within the labour process itself? In Sraffian theory, social conflict over the labour process is simply one of many influences on the technical conditions

of production. Since the labour component of the technical conditions of production has no theoretically salient role in the socio-technical conditions of production, the social struggles within the labour process have no a priori importance. It may turn out, on examination, that such struggles are important, but there would be no particular reason for a Sraffian theorist to focus research on that aspect of the determination of the socio-technical conditions of production over any other aspect.

It is quite otherwise within Marxist theory. Because surplus-value is seen as defining the absolute limits on profits, the central research question immediately becomes: what are the social processes which influence the amount of surplus labour performed? On the one hand, as in Sraffian theory, this directs our attention to the process by which real wages are determined. But unlike Sraffian theory, the Marxist model also directs our research efforts toward those transformations of the socio-technical conditions of production that directly impinge on surplus labour. It is for this reason that the Marxist analysis of production revolves around the analysis of the *labour process* as such, and not simply the technical input-output matrices of production.

The distinctive questions that Marxists would ask in the investigation of the labour process all centre on the relationship between the labour process and the performance of surplus labour: In what ways does technical change impinge on the struggles over control of labour within the labour process?²¹ What is the relationship between the changing structure of *skills* within production and the problem of extracting surplus labour from the working class?²² Do the imperatives of social control within production mean that different categories of employees perform different amounts of surplus labour?²³

²¹ See especially David Noble, 'Social Choice in Machine Design', and Michael Burawoy, 'Towards a Marxist Theory of the Labor Process', both in *Politics & Society*, special issue on the labour process, vol. 8, nos. 3-4, 1978.

²² See Harry Braverman, *Labor and Monopoly Capital*, New York 1974, for a discussion of the relationship of degradation of labour to exploitation.

²³ For discussion of income determination and the social relations of production, see Erik Olin Wright and Luca Perrone, 'Marxist Class Categories and Income Inequality', *American Sociological Review* (42:1), 1977; Erik Olin Wright, 'Race, Class and Income Inequality', *American Journal of Sociology*, May 1978, and *Class Structure and Income Determination*, New York 1979; and Christian Baudelot, Roger Establet,

At first glance it might seem that the differences between the Marxist and the Sraffian accounts are not so drastic. After all, it is in principle possible for these questions to be asked by a Sraffian, even if they would play a less central role in the theory. Ian Steedman certainly insists on this point when he argues that all of the basic Marxist questions about the labour process are compatible with the Sraffian account of the determination of profits.

On closer inspection, however, the centrality of surplus labour within the Marxist account produces certain fundamental differences from a Sraffian analysis. In particular, the concept of 'class' and 'class struggle' is different in the two frameworks. Within Sraffian theory, classes play a *systematic* role only in terms of the determination of the real wage, and the combatants in the class struggle are defined by their location within the market. All wage-earners, therefore, would be part of the working class, since the income of all wage-earners takes the form of a deduction from profits. The Sraffian account of the determination of profits is thus much more consistent with the Weberian definition of classes and class struggle than the Marxist conception.

In Marxist theory, the concept of class is closely linked to the question of surplus labour. Classes are defined by the social relations of production, not primarily by market relations. Within those social relations of production, the control over surplus labour is a particularly salient dimension. Not all wage-earners, in fact, fall into the working class, since not all wage-earners are excluded from control over surplus labour.²⁴ The class struggle within production, therefore, is structured by class relations, defined in terms of the social relations of domination within the labour process. While both Marxists and Sraffian theorists might look at the impact of class struggle on technical change, the content of the categories used in such an investigation would be different.

and Jacques Malemort, *La petite bourgeoisie en France*, Paris 1976. The work of Baudelot *et al.* in particular attempts to examine value relations in studying the income of various privileged categories of wage-earners.

²⁴ See Wright, *Class, Crisis and the State* (chapter 2) and 'Varieties of Conceptions of Class Structure', University of Wisconsin, for detailed discussions of the definition of the working class and of the problem of domination/subordination within production with respect to control over surplus labour.

There is, of course, one other alternative. A theorist could derive the categories of a class analysis from Marxist theory and the categories of the technical economic analysis from the Sraffian framework. This is very close to what Steedman, in fact, does. The advantage of such eclecticism is that it may enable a research project to draw on the theoretical strengths of different traditions; the limitation is that the categories drawn from the different traditions may cease to have any coherent theoretical relationship to each other. Given that surplus labour has no privileged status within Sraffian theory, it is hard to see why classes defined in terms of social relations of production should have any special role to play in the theory or its empirical applications.

The advantage of the developed Marxist model of determination in this respect is that it incorporates the predictive capacity of the Sraffian account while sustaining the theoretical centrality of surplus labour in the explanation of profits. Within this model, therefore, there is an internal basis for conceptualizing classes in terms of production relations and still empirically investigating the concrete determinants of profits in terms of the real wage and the technical conditions of production.

4. An Example: Value and the Labour Process

A great deal of solid empirical research has been done in recent years on the labour process, focusing both on the historical transformations of the labour process in the course of capitalist development and on the patterns of variations in the labour process in contemporary capitalism. While the labour theory of value has been implicit in most of this research, rarely is it explicitly incorporated into the conceptualization of the problem. What I would like to do here is show how the labour theory of value can directly inform the study of the labour process and its conflicts and transformations.

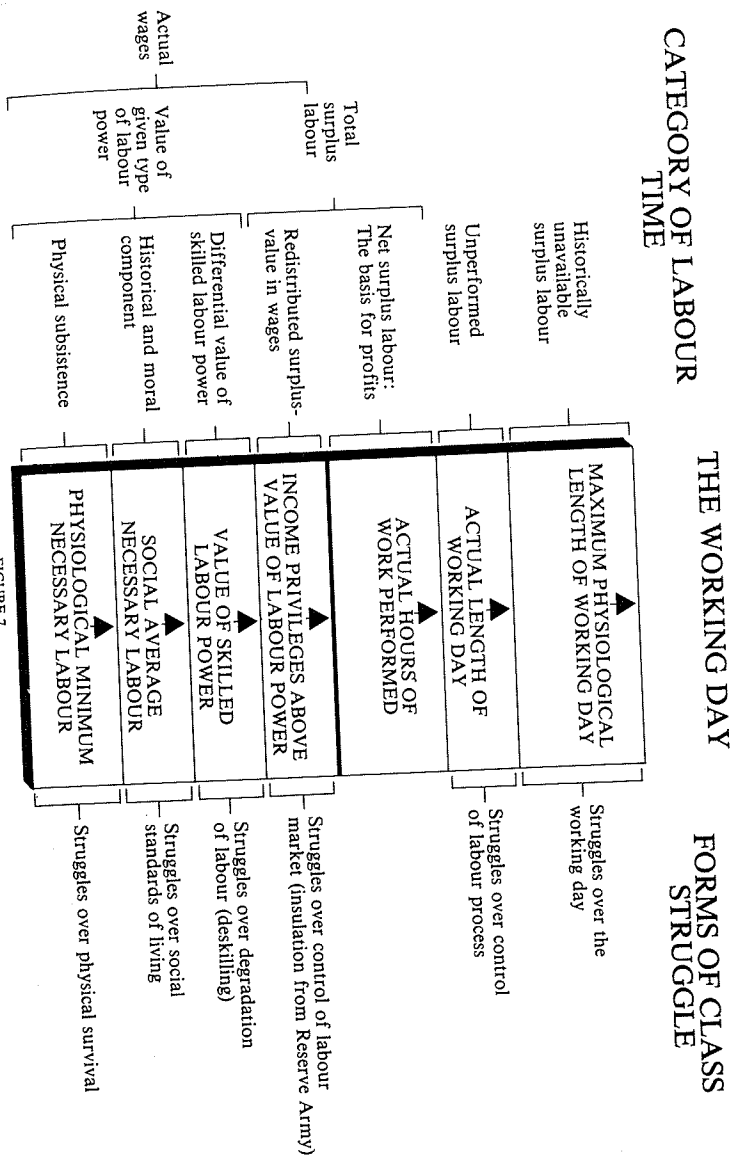
In order to link the labour theory of value to the study of the labour process, it will be helpful to systematically decompose the working day into a number of subcomponents. This is a familiar task in Marxist theory, since the fundamental division between 'necessary labour' (the labour needed to reproduce the direct producers) and

'surplus labour' is metaphorically conceived as a partition of the total number of hours worked within the working day. We can, however, make a number of additional distinctions within the working day which will facilitate our analysis of the labour process. These are schematically illustrated in figure 7.

Beginning at the bottom of the diagram, these components should be understood as follows.

1. *Physiological minimum necessary labour.* This is the amount of labour time it takes simply to reproduce the direct producers at a minimum subsistence level. With rare exceptions in advanced capitalist countries, the actual wage of workers is well above this level.
2. *Historical and moral component.* Above and beyond the physiological minimum labour, there is a component which Marx referred to as the 'historical and moral component' of the wage. It constitutes that part of the working day of an average worker (of average skills) devoted to producing the means of consumption of that worker beyond the physical minimum. Taken together, these first two components therefore constitute the social average value of labour power.
3. *Differential value of skilled labour-power.* Not all workers, however, have skills at the social average, and since skills themselves take labour time to produce and reproduce, an additional part of the working day must be devoted to covering the added value of skilled labour-power. The value of different types of the working day, therefore, is the sum of the first three components of the working day. These constitute, together, what Marx referred to as 'necessary labour'.²⁵
4. *Redistributed surplus-value.* Certain employees (some workers, but mainly people outside the working class who work for wages, such as managers) have incomes which are kept permanently above the value of their labour-power. That is, their wages do not reflect the costs of producing or reproducing their skills above and beyond

²⁵ Note that in many cases this third component will be insignificant or zero, and necessary labour becomes simply the first two components.



socially average labour-power. In addition, they have an increment of redistributed surplus-value in their wage. This redistribution can result from various kinds of control over the labour market which restrict the entrance of people into a particular line of work and thus force employers to pay wages above a competitive labour-market value; or they may result from the capacity of certain positions to appropriate part of the surplus-value because of their positions of power within the production process itself (as in the case of managers). In either case, this component constitutes an 'income privilege' embodied in the wage.²⁶ These four components together constitute the empirical wage.

5. *Net surplus labour (value)*. Net surplus labour performed constitutes the number of hours of labour actually performed above the first four components. Note that this may be less than total surplus labour if in fact part of the wage contains an income-privilege component. Net surplus labour (value) is the component of the working day which directly constitutes the basis for capitalist profits. The critical objective of the capitalist class, then, is to expand this component by reducing, in various ways, the other components in the diagram.

6. *Unperformed surplus labour*. Generally speaking, workers will not actually perform as much labour on the job as the number of hours they are employed. Through a wide variety of mechanisms, a great deal of time is 'wasted' (from the capitalist point of view). The

²⁶ It is important to note that many Marxists would deny the existence of this component of the working day. It is often argued that wage differentials that result from special market privileges should be viewed as a special kind of 'historical and moral' component of the wage. Doctors, in this sense, would simply have 'won' through their forms of struggle a higher historical/moral standard of living than manual workers. This seems to me to be a much less powerful way of understanding the problem. Just as a capitalist who managed to gain a monopoly in the market could keep prices systematically above the value of the commodities produced, so various categories of wage-labourers who manage to establish privileged positions in the market or production are thereby able to obtain a 'monopoly rent' in the form of increased wages; a price of labour-power above and beyond the value of labour-power. For most workers, of course, this component of the wage will be extremely small. But for some positions, such as managers and executives, it may be extremely large. See Baudelot *et al.*, *La petite bourgeoisie en France*, and Wright, *Class Structure and Income Determination*, for discussions of this component of the wage.

difference between the length of the working day and the amount of labour actually performed can be referred to as unperformed potential surplus labour.

7. *Unavailable surplus labour*. The maximum possible amount of surplus labour technically possible, given a particular value of labour-power, is represented by the physiological maximum length of the working day. With extremely rare exceptions, the actual working day is much less than this. The difference between the two constitutes an historically unavailable quantity of surplus labour.

The diverse forms of economic class struggle can be interpreted as struggles which impinge differentially on each of these components of the working day. Although the research on these forms of struggle have not explicitly taken as their point of departure this entire schema, nevertheless the essential logic of this decomposition of the working day underlies many of the empirical studies of the labour process and class struggle.

Perhaps most obviously, class struggles over the length of the working day directly affect the amount of historically unavailable surplus labour. While such struggles were particularly salient in the nineteenth century, they continue today in the form of struggles over mandatory overtime and the thirty-hour week.

Struggles over the control of the labour process determine the amount of unperformed potential surplus labour. Much of the current research on the labour process has centred on this issue. Harry Braverman's discussion of the progressive separation of conception and execution is at root an argument about the loss of the capacity of workers to control the labour process, and conversely, the increasing capacity of capital to ensure that labour power is converted into labour within that process (i.e. that unperformed surplus labour is reduced).²⁷ Michael Burawoy's brilliant studies of the labour process within machine-tool production have also centred on this issue.²⁸ He argues that the pivotal problems facing capital within production are the 'securing' and 'obscuring' of the surplus.

²⁷ Harry Braverman, *Labor and Monopoly Capitalism*.

²⁸ Michael Burawoy, 'Towards a Marxist Theory of the Labor Process', *Politics & Society*, 8: 3-4, 1978; and *Manufacturing Consent*, Chicago 1979.

Securing surplus, in the present context, refers to minimizing unperformed surplus labour. Burawoy argues that within the monopoly corporation which he studied there has been a basic change in the form of control used to accomplish this securing of the surplus. He has characterized this transformation as a change from the despotic organization of consent on the shop floor to the hegemonic organization of consent. In the former, the surplus is secured largely through direct supervision and discipline; in the latter it is ensured through a complex structure of 'games' which workers play within the labour process, games which imply an accepted set of rules and strategies which guarantee a relatively low level of unperformed surplus labour.

Finally, Richard Edwards's research on forms of managerial domination also revolves around the problem of this component of the working day. His distinction between simple control, technical control, and bureaucratic control is intended to identify the different general mechanisms by which unperformed surplus labour is reduced within the production process.²⁹

The proportion of the working day represented by redistributed surplus-value is in some ways the most complex element. Broadly speaking, social struggles over the control of the labour market decisively impinge on this element. Where wage-earners are capable of systematically restricting the supply of labour into a given occupation so that a 'competitive equilibrium' price of labour-power is prevented, then the actual wage will generally be above the value of labour-power. Within monopoly capitalism, the development of complex forms of internal labour markets—i.e. internal systems of promotion and recruitment within the corporation such that certain positions are insulated almost completely from the general labour market (and thus from the reserve army of labour)—also directly affects this component of the working day.³⁰

In addition to dynamics embedded in restriction of the labour market, there is an additional mechanism which generates re-

distributed surplus-value in the wage, a mechanism which is particularly important in contemporary capitalism. Wages should not simply be seen as a reimbursement for costs of production (of labour-power) realized in an exchange relation; wages can also constitute an element in a strategy of social control within production. This is particularly important for those positions within the production process which I have characterized elsewhere as 'contradictory locations within class relations'.³¹ Take the example of managers, the contradictory location between the working class and the capitalist class. Managers are defined as positions which while directly subordinated to capital also dominate workers. They thus have a certain amount of real power within the production process, delegated power to be sure, but power nonetheless. The delegation of power to managers poses certain problems to capital, in particular, the problem of ensuring that this power be used in responsible and creative ways. It is not enough to ensure conformity of managers to the bureaucratic rules of the corporation through the use of repressive controls; it is also important to stimulate responsible behaviour. Income, as a graded structure of bribes, is a crucial element in creating the motivational inducements for such behaviour. And this implies, in terms of the schema laid out in figure 7, that managers' incomes will contain an element above and beyond the costs of reproducing the value of their labour-power (i.e. reimbursing them for the costs of the production and reproduction of skills), an element which reflects their position as a contradictory location within class relations.

The work of Baudelot, Estabiet, and Malemort on the new petty-bourgeoisie in France has attempted to measure the amount of this component of the wage of various positions.³² Their strategy was to take a skilled worker as the social standard and then attempt to monetize the costs of production/reproduction of the additional skills of various occupational positions by estimating training costs, retraining costs, even recreation costs needed to reproduce 'mental' energy. (In order to avoid any accusation of underestimating the value of labour-power of such privileged occupations, they also

²⁹ Richard C. Edwards, *Contested Terrain*, New York 1979.

³⁰ For discussions of segmented labour markets and internal labour markets, see Richard C. Edwards, Michael Reich, and David M. Gordon, *Labor Market Segmentation*, Lexington 1975, and Peter Doeringer and Michael Piore, *Internal Labor Markets and Manpower Analysis*, Lexington 1971.

³¹ See *Class, Crisis and the State*, chapter 2.

³² Baudelot et al., *La petite bourgeoisie en France*.

included the costs of reproducing the next generation of incumbents in such positions.) Their estimates, therefore, represent a minimum estimate of the redistributed-surplus-value part of the wage among managers, professionals, and technicians. Their results indicate that among *cadres supérieurs* (top managers) some 55 per cent of the average wage is above and beyond the value of their labour-power; among *cadres moyens* the figure was 43 per cent, and among technicians 27 per cent.

My own research on class structure and income determination used a different strategy to assess the magnitude of this component among managers. By using statistical techniques of multiple regression analysis, it is possible to compare a worker and a manager (where a manager is defined as a wage-earner who has subordinates and who says that he/she has some say in the pay or promotions of the subordinates) who have approximately the same value of labour-power and see if their expected incomes would still differ.³³ Using this strategy, it was found that the expected income of male managers was some \$3,200 higher than male workers with the same value of labour-power, which represents approximately 20 per cent of the manager income. What is more, this income differential can be shown to increase with the value of labour-power. To put it in more conventional Marxist terms, the rate of exploitation of managers compared to workers declines with the value of labour-power.

In all of these investigations of redistributed surplus-value, the ultimate issue is the extent to which a particular position is subject to pressures from the reserve army of labour. Either through restrictions on the movement of people into an occupation, or through restrictions on promotions and job ladders, or through contradictory locations within production relations, certain positions are systematically insulated from the full pressures of the price of labour-power, and thus the tendential equalization of the price of labour-power and the value of labour-power is reduced. In some cases this may in fact generate a stable and more or less permanent divergence of the two.

³³ See Wright, *Class Structure and Income Determination*, and Wright and Perrone, 'Marxist Class Categories and Income Inequality', *American Journal of Sociology*, May 1978.

Struggles over the degradation of labour—the destruction of skills in various ways—directly affects the differential value of skilled labour-power. Economic struggles over redundancy (featherbedding) are the most common form of conflict over this component in contemporary capitalism.

Finally, struggles over the historical and moral component of the wage represent struggles over the basic, social, average standard of living of the working class. Increasingly in contemporary capitalism such struggles are waged through the state, in the form of demands for social welfare, social insurance, medical benefits, etc. It is also this component which is perhaps most bound up with the question of imperialism. The position within the world capitalist system of imperialist centres has historically given their ruling classes considerable room to manoeuvre in conflicts over this component. Modest increases in the historical and moral component of the wage could be granted since they could be recuperated through the international transfers of surplus-value from Third World countries. The current squeeze on this component of the wage in the United States and Western Europe is in part at least a consequence of the disruption of imperialist domination due to class struggles in the Third World, coupled with the fiscal crisis of the state within the imperialist centres themselves.

5. Conclusion

Four basic conclusions can be drawn from the arguments of this essay.

First, a developed Marxist model of the profit determination process is formally compatible with much of the Sraffian and causal-agnostic accounts of profits. Most of the positive propositions within either perspective are consistent with a framework in which surplus labour (in the form of surplus-value) acts as a basic limiting determinant of profits within which technical conditions and the real wage have selection effects, as illustrated in figure 6.

Secondly, not only are all three models largely compatible, but we can also substantively incorporate the Sraffian and causal-agnostic models of profit determination within the Marxist model if they are

viewed as representations of the process at lower levels of abstraction. Within the limiting process specified in the Marxist model, the Sraffian model defines the selection mechanisms for profits; and within the selection mechanisms specified in the Sraffian (and Marxist) accounts, the causal-agnostic model defines the range of concrete determinants of profits. What is incorrect about these models is not that they purport to represent real processes, but that they deny, in different ways, the more abstract levels at which these processes may be determined.

Third, the Marxist model provides us with a systematic way of introducing class struggle into the account of profit determination, at the level of both circulation and production. Furthermore, it does so in a way that sustains a definition of classes in terms of the social relations of production. While classes, understood in these terms, can be used in analysing the determinations in the Sraffian model as well, they play no organic role within that theory. In the absence of the Marxist model of determination, the classes within Sraffian theory could be no more than Weberian 'market classes'. If, on the other hand, we regard the Sraffian model as a specification of the Marxist model at a middle level of abstraction, then there is no difficulty in using Marxist class concepts in the empirical investigation of the elements in the model.

Finally, the Marxist model of determination of profits makes it possible to embed the specific analysis of profits within a broader social theory of structural limitations, selections, and transformations. On this basis, the theory moves beyond a positive account of the concrete determination of profits, and becomes part of a critique of the very structure of possibilities in the existing society.

Critique of Wright

1. Labour and Profits

Geoff Hodgson

The transfer of allegiance from paradigm to paradigm is a conversion experience that cannot be forced. Lifelong resistance, particularly from those whose productive careers have committed them to an older tradition of normal science, is not a violation of scientific standards but an index to the nature of scientific research itself. The source of resistance is the assurance that the older paradigm will ultimately solve all its problems, that nature can be shoved into the box the paradigm provides.

THOMAS KUHN

The Structure of Scientific Revolutions

Marxist theoreticians have been preoccupied with several key debates during the 1970s.* Perhaps the one that has drawn most attention is the controversy about value theory, in which one side has urged that drastic surgery is required on the body of theory laid down in *Capital*. Initially, the discussion was not primarily about acceptance or rejection of the labour theory of value, but it has since developed in that way. Opponents of the labour theory are perhaps more confident and intransigent. Its supporters are divided into groups ranging from repetitive fundamentalists to inventive and sophisticated defenders of its indispensability. Erik Olin Wright, in his contribution 'The Value Controversy and Social Research', comes close to the latter end of the spectrum. His graphic rigour, and his aversion to the fundamentalist habits of label-daubing the opposition or appealing to the hallowed

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