

# Critique of Wright

## 2. In Defence of a Post-Sraffian Approach

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In his article 'The Value Controversy and Social Research' Erik Olin Wright has attempted to confront two of the past decade's most serious attempts to reassess Marx's legacy and scientific impact: the sustained post-Althusserian work of Cutler, Hindess, Hirst, and Hussain,<sup>1</sup> concerned chiefly to develop a *methodological-epistemological* critique of Marx's claims; and that of Ian Steedman (whose work can be considered in conjunction with a broader set of findings sometimes labelled neo-Ricardian by critics), concerned more directly with Marx's *economic* claims, and in particular with the labour theory of value and its associated concepts—surplus-value, value rate of exploitation, the structure of capital in value concepts like constant and variable capital, the value-related law of the tendency of the rate of profit to fall, etc. It is Wright's aim to explore the relation of these two challenges to what he terms a 'reconstructed version of the traditional Marxist account based on the labour theory of value'. In conducting his comparison and assessment, Wright chooses to view them all from the 'vantage point of the Marxist labour theory of value itself'. I assume that this means in terms of how well each of the approaches can deal with the concerns, questions, and problems that the labour theory of value presumably handles successfully, or at least puts on the research agenda in a resolvable manner. To focus the analysis and restrict its length he chooses the examination of profits as the basis of comparison. By his own

<sup>1</sup> Anthony Cutler, Barry Hindess, Paul Hirst, and Athar Hussain, *Marx's Capital and Capitalism Today*, 2 vols., London 1977, 1978.

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admission, Wright seems unsure of the results of his work, for he cautiously declares that his essay should be 'seen more as attempting to redefine in certain critical ways the terms of the debate rather than definitively resolving all of the points in dispute.'

When concluding, however, he claims to have established four results about the three approaches to the analysis of profits. My contribution, concerned mainly with Wright's characterization of what he calls the 'Sraffian account', will argue that each of his four conclusions regarding the 'Marx-after-Sraffa' position is either unwarranted wholly or in part, misleading, or simply false. These four conclusions may be summarized as follows.

1. A developed Marxist model of the process of profit determination is 'formally compatible' with much of the Sraffian account of profits; indeed, most of the 'positive propositions' in a Sraffian account are consistent with 'a framework in which surplus labour in the form of surplus-value' acts as 'a basic limiting determinant of profits'. This may be termed the *general compatibility thesis*.
2. The reconstructed Marxian account can incorporate the Sraffian account as a representation of the process of profit determination at a lower level of abstraction: 'Within the limiting process specified in the Marxist model, the Sraffian model defines the selection mechanisms for profits.' This claim that the Marxian model possesses greater generality may be termed the *incorporation thesis*.
3. The Marxist model is sociologically more relevant and powerful than the Sraffian. This contention comprises two parts. First, the Marxist model can introduce class struggle systematically, whereas classes (as Marxists define them) play no 'organic role' in the Sraffian model; second, the Marxian model is required if both circulation and production relations are to be incorporated in the concept of class, whereas in a Sraffian model 'classes' can be no more than Weberian 'market classes'. This may be called the *absence-of-production-relations thesis*, or the *Sraffian-as-Weberian thesis*.
4. Finally, the Marxian model makes it possible to embed a theory of

the determination of capitalist profits within a broader 'theory of structural limitations, selections, and transformations'. The implicit suggestion is that the Sraffian model is intrinsically unable to accommodate such integration. Moreover, through its critiques the Marxist model can reveal the 'possibilities' in existing society, while the Sraffian model is strictly positive and thus cannot reveal 'possibilities'. Two additional claims form part of the ultimate conclusion. First, as a research programme the reconstructed Marxist position is richer, especially as regards the labour process, than the research programme associated with the Sraffian position. Second, Steedman and others like him have been concerned only to *calculate* the rate of profit, and success in calculation alone is not to be confused with a genuine *causal* determination of the real process.<sup>2</sup>

Wright's statement of Steedman's position is admirably concise and largely correct. In two important respects, however, it needs amplification. To start with, the problem of fixed capital and joint production *cannot* be ignored in an argument that claims to establish the greater generality of a reconstructed Marxian approach and seeks to incorporate the Sraffian approach into it. For, as will be evident to every reader, greater generality will be an attribute of the theory/model that can accommodate more states of affairs and greater complexity than a model that is consistent or workable only under simple or restrictive assumptions. The existence in any real capitalist economy of fixed capital and joint production (either in the 'pure' case or as a characterization of the existence of fixed capital) is both evident and pervasive. If the labour theory of value (in Marx's formulation) cannot be successfully applied in a capitalist economy with fixed capital and joint production, and if the Sraffian model can be so applied, then it is the latter that must be ascribed greater

<sup>2</sup> The charge that mere calculation of profit rates avoids a causal account of the profit-determining process was raised earlier by Anwar Shaikh: 'Marx's Theory of Value and the "Transformation Problem"', in Jesse Schwartz (ed.), *The Subtle Anatomy of Capitalism*, Santa Monica 1977, pp. 106-139. Shaikh also argued that the 'transformation' was from a direct expression of values to a more complex, modified expression of values, in other words, that 'prices of production' were modified values and had nothing to do with the prices of orthodox economics.

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generality. Moreover, were that the case, then in so far as an empirical research programme was at all feasible, the Sraffian model would provide more adequate support for it, just because of the pervasive role of fixed capital and joint production in real capitalist economies. Then, if the Marxian model was consistent and relevant in the simpler and more restrictive situations, it would be incorporated into the more general Sraffian model, as relating to a subset of special cases—if indeed any incorporation was to be done.

Second, Wright's assertion that Steedman considers the determination of value categories redundant, and therefore an unnecessary detour, is not quite correct. It is true that Steedman shows that values are wholly determined when the socio-technical conditions of production (STCP) and the real wage are known, and that in this respect they are determined by the same factors as are prices of production and the rate of profit. But value categories are not merely redundant: if conceived in the manner of Marx they can be found, in well-defined contexts, to be *negative* and as such puzzling. Moreover, they are obstacles to and misleading about the analysis of such central issues as the capitalists' decisions about choice of technique, the rate of profit, changes in the quantity and distribution of surplus labour, etc. This is partly because values cannot be known without specifying the technical conditions of production, which are themselves variable and affected by decisions taken by capitalists and other agents in a capitalist economy. But it is also because of the limitations of value categories that arise from the fact that, as Marx realized, if values *are* to be the basis of analysis, then a transformation of values into prices of production and of surplus-value into profits, interest, and so on, is requisite. In other words, if value categories are taken as the basic concepts, then the transformation problem is a relevant question and its accompanying difficulties become significant scientific problems. But, as Steedman has argued,<sup>3</sup> the transformation problem is a trivial non-issue if the conditions that generate it are unnecessary for a coherent analysis of profits, exploitation, etc.

The same point can be put more sharply: if Marxian values can (at least in the simple cases) be coherently calculated from the STCP and

<sup>3</sup> Ian Steedman, 'The Transformation Problem Again', in *Bulletin of the Conference of Socialist Economists*, autumn 1973, pp. 37-42.

real wages, and if prices and profits can be calculated from the same data, then no transformation whatever is required for a scientific theory of capitalist profits and dynamics. Not that the transformation of values into prices of production cannot be achieved in well-defined situations, for this has been precisely and carefully demonstrated by several analysts since Dmitriev.<sup>4</sup> Rather, no theoretical gain is achieved by attempting to follow this route. In any case, in its most general formulation, no transformation can be achieved without returning to the STCP and the real wage.<sup>5</sup>

It is true that in footnote 9 Wright recognizes that Steedman maintains that *puzzles* result from the use of value categories, but he dismisses the grounds for this claim by noting that if Morishima's redefinition of surplus labour and values is accepted, then the mistakes to which Steedman has called attention can be rectified. But readers are given no indication of what Morishima proposes or why, nor of the wider implications of the conceptual shifts involved. It is not merely that values cease to be *additive* (additive values generate the difficulties discovered by Steedman); moreover, they can no longer be considered as embodying or incorporating identifiable quantities of 'socially necessary labour time'—at least not in Marx's sense of depending on the *average* conditions of production in a particular branch of industry in which several actual processes of production (techniques) are in use. On the contrary, Morishima's definition of 'surplus labour' requires that we discover, by linear programming methods, for instance, the *minimum* amount of labour time needed to produce the consumption basket for workers if this consumption is set at subsistence.<sup>6</sup> This *notional* minimum quantity of labour-time is

<sup>4</sup> Some relevant works are: V.K. Dmitriev, *Economic Essays on Value, Competition and Utility*, London 1974; L. von Bortkiewicz, 'Value and Price in the Marxian System', in *International Economic Papers*, 1952; Francis Seton, 'The Transformation Problem', in *Review of Economic Studies*, vol. 24, 1957, reproduced in M.C. Howard and J.E. King (eds.), *The Economics of Marx*, Harmondsworth 1976; M. Morishima, *Marx's Economics: A Dual Theory of Value and Growth*, London 1973, Part III; Luigi Pasinetti, *Lectures on the Theory of Production*, New York 1977, appendix to chapter V, pp. 122–150. The list is ordered in terms of mathematical difficulty from the least to the most demanding.

<sup>5</sup> Arguments and demonstrations to this effect are to be found in Morishima, and Steedman, *Marx After Sraffa*, London, NLB, 1977, chapters 2, 3, and 4.

<sup>6</sup> M. Morishima, 'Marx in the Light of Modern Economic Theory', in *Econometrica*, vol. 42, 1974, pp. 611–632. This is Morishima's inaugural lecture on his appointment to the Chair of Mathematical Economics at the London School of Economics.

then taken as 'necessary labour', and the difference between it and the labour-time *actually consumed* is 'surplus labour'.

Here 'necessary labour' is strictly the minimum labour-time needed to produce workers' subsistence consumption, given *all available techniques of production*, and not simply those actually in use. Since capitalists select their production techniques from the available set according to the highest profit rate yielded and not in an effort to minimize the employment of labour-time, considerable differences may arise between the technology (and hence the physical coefficients of production) actually in use and those that would minimize the labour-time strictly required to reproduce the workers at subsistence level. The actual employment of labour-time in the economy will also be higher than this notional minimum, because positive amounts of labour are employed in the production of luxuries (all consumption goods other than those composing subsistence consumption of workers) and investment goods. Finally, the actual labour-time employed may also differ from the notional minimum defining 'necessary labour' owing to non-equilibrium conditions and sub-optimal operation in the real economy.

It will be noted that the Morishima method leads to an *abstract* conception of 'necessary labour'—not the *actual* labour-time spent in producing wage-goods. Moreover, it is arrived at by taking all available techniques of production into account and solving a minimization problem for the *whole economy*, treating all processes for producing all commodities. It cannot be calculated for particular factories or firms. The rate of exploitation is established for the economy as a whole, and this cannot be assumed to characterize conditions in each production process.

Given the linear-programming problem that yielded the minimum labour-time required to produce the subsistence consumption of workers, it is possible to solve a 'dual' linear-programming problem to obtain 'shadow prices' of the output of subsistence-consumption goods for workers. These 'shadow prices' can be treated as 'optimum values'. As Morishima himself puts it, 'there is an alternative way to formulate the labour theory of value, *not* as the theory of "actual values" calculating the embodied labour contents of commodities on the basis of the *prevailing production coefficients* as Marx did, but as the theory of "optimum values" considering values as shadow prices determined by a linear-programming problem that is dual to another

linear-programming problem for the efficient utilization of labour' (emphasis added).<sup>7</sup>

This is indeed a theoretical advance important to research programmes. But as Steedman has pointed out,<sup>8</sup> the advance goes beyond Marx's use of value categories. His value categories referred to production methods actually used; they were additive, whether for a single commodity, a particular process of production, a sector of the economy, or the whole economy, since values were determined as the sum of the values of all the means of production expended plus the living labour (as abstract labour) performed, and they were *always positive*. Since the exploration of labour-value analysis with fixed capital and joint production has revealed the possibility of negative additive values for some commodities and negative surplus-value, it is clear that all three features of Marx's use of values cannot obtain simultaneously.

It is at this juncture that Morishima takes us further, by showing us that the puzzle of negative values can be eliminated if we reconceptualize values so as to attain greater generality, in terms of the 'optimum values' mentioned above. But whilst value categories are now positive again, they are neither actual nor additive. The difference of opinion between Morishima and Steedman relates only to whether Morishima's proposals can continue to be regarded as basically a version of Marx's labour theory of value. Steedman thinks not. But as regards the central issue in the assessment of the Sraffian model, which is Wright's main concern, Morishima does not help the 'reconstructed Marxian model' at all. He himself emphasizes the objectivity of the calculation of the rate of exploitation under his approach. This rate is now obtained either as the ratio of 'surplus labour' to 'necessary labour' as reconceptualized, or as the ratio of paid to unpaid labour when paid labour is taken to be the subsistence consumption of workers evaluated at the 'optimum values' instead of the actual embodied-labour values. In both cases the rate of exploitation and the corresponding 'optimum value' of workers' subsistence consumption, or the 'necessary labour' in the economy,

<sup>7</sup> Ibid., pp. 615-616.

<sup>8</sup> Ian Steedman, 'Positive Profits with Negative Surplus-Value: A Reply', in *The Economic Journal*, vol. 86, 1976.

are uniquely determined by these factors: the output coefficient matrix, the physical-input coefficient matrix, the labour-input coefficient row vector, the number of workers actually employed, and the subsistence consumption of workers in physical units.<sup>9</sup> This is just what the Sraffian model as developed by Steedman terms the socio-technical conditions of production and a *given* subsistence real wage, namely the minimum possible wage.

It must also be remembered that since we have notional 'necessary labour' and 'optimum values' and are admitting joint production, the STCP here include all feasible technologies known to the capitalists. While Marx's labour values cannot be known until and *unless the problem of choice of techniques is resolved by the relevant agents*,<sup>10</sup> Morishima's notional values and related apparatus can be determined independently of the *actual* choice of techniques. The actual techniques chosen are determined by a number of factors, including the process of class struggle. The point is that nothing in the Morishima proposals contradicts the generality and conceptual precision of the Marx-after-Sraffa approach of Steedman, as will be evident to anyone who has actually worked through Steedman's book, especially chapter 13, where the Morishima proposals are explicitly discussed.

Later in his paper, Wright notes that Steedman and Morishima agree that 'the profit rate and growth rate are positive if and only if surplus labour, as newly defined by Morishima, is positive'. Morishima has called this the Generalized Fundamental Marxian Theorem, which holds for capitalist economies with very few restrictive assumptions. Morishima thinks that the only important restriction (besides the usual qualification that the theory applies only to reproducible commodities) is the absence of *heterogeneous labour*, i.e. the assumption that all labour inputs can be treated as reducible to a common scale, an assumption widely applied in all economic analysis. But Wright allows his readers to be misled into thinking that this vindicates what he has termed the reconstructed Marxian model—without a hint that the 'surplus labour' at issue here is a very

<sup>9</sup> Morishima, 'Marx in the Light of Modern Economic Theory', p. 618.

<sup>10</sup> Ian Steedman, *Marx After Sraffa*, particularly chapter 4, 'Value, Price and Profit Further Considered'.

different concept from that arrived at on the basis of Marx's labour theory of value. Indeed, it is for this reason that Steedman consistently refers to 'surplus labour' and not 'surplus-value'.

This brings us to a second serious weakness in Wright's article: his casual identification of 'surplus labour' and 'surplus-value'. In footnote 10 he writes: '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 appropriated by dominant classes in all societies but it only takes the form of surplus-value in capitalist ones. . . . 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.'

Thereafter he consistently *assumes* that whenever 'surplus labour' as a concept is warranted, it is also appropriate to speak of surplus-value in the traditional Marxist sense. This is a *petitio principii*, since among the points of contention between the Sraffian and reconstructed Marxian models is first and foremost precisely whether the labour theory of value and the Marxist conception of 'surplus-value' are apposite for the analysis of surplus labour and its quantitative assessment. Neither party in this debate disputes the existence of 'surplus labour' in some appropriate sense as a fundamental characteristic of capitalist economies; nor is there any dispute about the *existence* of identifiable relationships between this 'surplus labour', properly understood, and the level and rate of profits. As any reader of his fundamental work knows, it was Sraffa who rigorously demonstrated the existence of a maximum rate of profit given a set of physical production data.<sup>11</sup> He himself attributed the idea to Marx, who spoke of a limit to the rate of profit even if the workers could live on air.<sup>12</sup> Marx in turn seems to have taken the idea from the physiocrats, especially Quesnay, whose notion of a net product in a circular conception of the production system contains the idea that

<sup>11</sup> Piero Sraffa, *Production of Commodities by Means of Commodities*, London 1960, pp. 12-18.

<sup>12</sup> *Ibid.*, p. 94.

the physical input and output proportions set a limit on the potential rate of profit under given production conditions. What is at issue, however, is whether the STCP and the real wage (treated as a variable) determine the rate of profit or whether some additional determinants *not indicated by or related to the STCP and the real wage* are required; and whether the traditional 'labour-embodied' conception of values is appropriate for an understanding of 'surplus labour' and its measurement—in other words, whether 'surplus-value' can be taken as an adequate representation of 'surplus labour' for all capitalist economies (even under the least restrictive assumptions). Wright simply assumes and asserts this, thus either failing to understand what the argument is about or misleading his readers into thinking that if 'surplus labour' exists in any sense whatever, then the labour-value concept of 'surplus-value' is legitimated.

This point is crucial to the rest of Wright's argument. His diagrammatic representation of the *reconstructed* Marxian model (his figure 4) differs from the equally schematic representation of the Sraffian model (his figure 2) in just this respect: the 'surplus labour' of his figure 2 is *not connected* to profits, whereas in his figure 4 there is no reference to 'surplus labour' but only to 'surplus-value', which is given some prominence and *connected* by a line, marked 'limits', to profits. These diagrams are based on a distinction between several modes of determination that Wright elaborated in his book *Class, Crisis and the State*.<sup>13</sup> There, developing an Althusser-influenced, structuralist-Marxist position, Wright listed limitation, selection, mediation, transformation, and reproduction/non-reproduction as the basic modes of causal determination. Models, as distinct from modes of determination, were represented diagrammatically in the manner of systems-theorists, with boxed-in variables and/or structures mutually related by lines representing one or several of the modes of determination. This is the procedure Wright now uses to characterize the differences between the Marxian and Sraffian models. In the 'first approximation' given in his figure 4 only two modes of determination are presented: *selection* and *limitation*.

He argues that the STCP establish a limit on the maximum amount of surplus-value given by a real wage of zero. The actual level of real

<sup>13</sup> Erik Olin Wright, *Class, Crisis and the State*, London, NLB, 1978.

wages then acts as a 'selection determinant' of the actual level of surplus-value, within the upper limit set by the socio-technical conditions of production. Wright uses 'limits' in the plural, thus suggesting that there is a lower limit to surplus-value. Presumably this is zero, and obtains when the full value created by labour-power is received by the workers as real wages. Profits in this case are also zero, and there is no exploitation. So far the analysis parallels the Sraffian approach, the only difference being that the latter would speak of 'surplus labour' instead of values, for the proper conceptualization and role of the value categories is at issue. The treatment of the real wage as variable and distinct from the STCP is a major feature of Sraffa's models in *Production of Commodities by Means of Commodities*. It is in this manner that he establishes that the rate of profit and real wages are *inversely related*, given the STCP and, therefore, the 'net product' including wages.

At this point, it will be evident that in two important respects Wright differs from some others who have attempted criticisms of the Sraffa and so-called neo-Ricardian analysis.<sup>14</sup> First, Wright acknowledges that the STCP *determine values*, since they determine the upper limit of surplus-value. This admission—that the physical input-output data (socially determined in various ways) is sufficient to calculate values—is often disputed,<sup>15</sup> although no better way of arriving at values in order to compare them quantitatively has been proposed. Second, Wright admits the *variability of the real wage*, a position not always granted by those who insist that the equilibrium wage is the 'value of labour-power', presumably determined, like other values, by the STCP at any *given time*, and therefore given once the STCP are given. The problem is the theory of wages in a Marxian analysis. Marx's writings appear to evince two theories of wages. In *Capital* Volume 1 wages are said to fluctuate around the value of labour-power, determined, like other values, by the labour-time required to reproduce it (but incorporating in the reproduction process a 'cultural' component, which over short periods is a given of the society or civilization under consideration). In *Value, Price and*

<sup>14</sup> He differs, for example, from Ira Gerstein, 'Production, Circulation and Value', in *Economy and Society*, 1976.

<sup>15</sup> In addition to Gerstein, see also S. Himmelweit and S. Mohun, 'The Anomalies of Capital', in *Capital and Class*, 1978.

*Profit* Marx expounds a somewhat different, clearly class-struggle theory of wages, according to which wages are inversely related to profits and are indeterminate if only the STCP are given.<sup>16</sup> Wright agrees with Sraffa, Steedman, etc. in treating wages in conformity with Marx's second position rather than in terms of a labour-embodied 'value of labour-power'.

In his recently published lectures Pasinetti<sup>17</sup> suggests that we might think of the wage rate as consisting of two parts: one bare subsistence and determined biologically (this varying according to geographical and ecological conditions), the other a 'surplus' over and above subsistence requirements. The subsistence component can then be written into the technical coefficients of the physical data as itself a technical datum, and the 'surplus' part of the wage would vary as a result of class struggles and 'civilization'. In these matrices the maximum 'surplus-value' in Wright's sense would not require wages to be zero, but the minimum subsistence level. Morishima's 'surplus labour' and 'optimal values', however, require us to go one step further: not only do we put workers' consumption at the subsistence level, but we compute the surplus in terms of the *minimum labour input* requirements *possible* for the economy, given all the available techniques of production. This reduces 'necessary labour' not only to an actual biological minimum, but also to a conceptually meaningful *possible* minimum.

Apart from these two similarities between Wright and Steedman, Wright also judges, at least initially, that there is nothing fundamentally wrong with Steedman's approach, which is merely too limited. It is only on this basis that the incorporation thesis can be convincingly affirmed.

An idea of the source of Wright's confusion may be gleaned from careful examination of his diagrams. In figure 2, representing the Sraffian model, nothing is said of the modes of determination, limitation and selection. But they are relevant to an understanding of the Sraffian model. The STCP establish the *limits* on the level of profit, and the real wage, determined 'exogenously' by the conjunction of various forces (including class struggles, population growth, state

<sup>16</sup> For a discussion of this matter, see M.C. Howard and J.E. King, *The Political Economy of Marx*, London 1976.

<sup>17</sup> Pasinetti, *Lectures on the Theory of Production*.

intervention, limited-access training facilities, demand for labour on the part of capitalists, etc.), *selects* the prevailing rate of profit. The amount of 'surplus labour', of course, can be calculated by subtracting the aggregate real-wage bundle from the 'net product'; alternatively, the Morishima redefinition of 'surplus labour' can be accepted. In general, however, in neither method will 'surplus labour' equal what Marx would call 'surplus-value'. (There are, of course, simple situations, subject to many *restrictions*, in which Sraffa's 'surplus labour' would indeed equal Marx's 'surplus-value'. It is Sraffa's formulation that has the greater generality and that reveals the limitations of Marx's formulation of the labour theory of value). In figure 4, representing the reconstructed Marxian position, the modes of determination are written in, but with several puzzles. Why should the connection between the STCP and profits be one of *selection*, when in the Sraffian model and by Wright's own words it is one of *limitation*? It is *in fact* one of limitation, since by themselves the STCP establish only the maximum rate of profit, while the real wage must be known to *select* the actual rate of profit. In other words, the very same relations that Wright claims exist between the STCP, real wages, and surplus-value exist between the STCP, real wages, and profits. Indeed, it would be odd if both real wages and the STCP exercised a selecting determination on profits without one exercising subordinate selection within the limits established by the other.

Another puzzle is the *limiting* determination exercised by surplus-value. At first, this could seem to make sense if the role of both the STCP and the real wage were that of selection. But that is itself dubious, or at any rate calls for a hierarchical listing of the roles of the STCP, surplus-value, and real wages. By Wright's own account, the STCP exercise a limiting determination on surplus-value, and it is thus an enigma in what sense it *selects* profits. After all, the surplus-value that is limited by the STCP itself establishes only *limits* for profits. For figure 4 to be a serious model alternative to the Sraffian, and for surplus-value to exercise some *limiting* determination on profits not already exercised directly by the STCP, there must be some determinant of surplus-value independent of the STCP and real wages. The model requires at least one missing 'structure', to be placed, say, between real wages and the STCP and establishing limits on surplus-value, these limits either being nested within the limits established by

the STCP or exercising an independent determination that must be somehow 'combined' or 'articulated' with the limits determined by the STCP, as in my figure 1 below.

Without the 'missing structure' to exercise an *independent* limiting determination on surplus-value, the *limits* on possible profits exercised by surplus-value are reducible to those exercised by the STCP, in which case Wright's figure 4 reduces to a correctly identified figure 2, with 'surplus-value' reverting to 'surplus labour' in the general case and becoming 'surplus-value' only in well-defined special cases. The impression that figure 4 represents an informative model different from the Sraffian rests entirely on the unargued decision to describe the effect of the STCP on profits as one of *selection*, for this apparently leaves a niche for surplus-value to establish *limits*! A comparison of my figure 1 and Wright's figure 4 (reproduced below) will show that Wright's representation of a reconstructed first-approximation Marxian model is either confused or quite incomplete. Actually, there is evidence that Wright *is* confused. On pp. 45-6 he writes that the 'socio-technical conditions of production establish the basic limits on the creation of surplus-value'; but on page 47, after producing a diagram

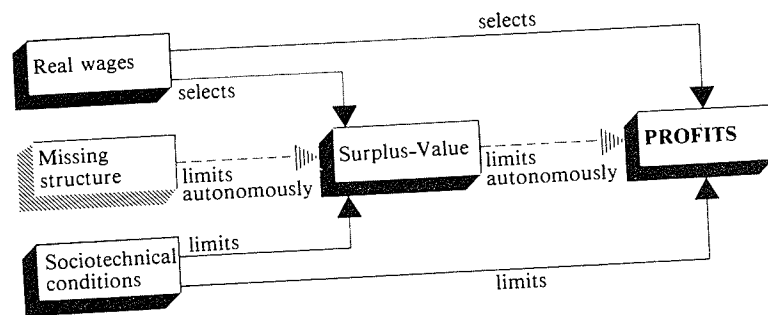


FIGURE 1

that, we are warned, should not be taken to show what it seems to show, he writes: '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.' These two claims are contradictory, for according to the second, the STCP are nested within the limits of surplus-value, whereas according to the first the STCP establish those limits.

Wright anticipates some aspects of the above argument. He notes that one possible objection to the model depicted in his figure 4 is that '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"'. His answer, however, is unsatisfactory, for it begs the question. He asserts that 'it is precisely because surplus-value is an endogenous factor within that process that it can be viewed as a privileged determinant.' He then shifts attention from the model in his figure 4 to that in his figure 3 (the *unreconstructed* Marxian model) and argues that the figure 3 model would be quite adequate in a world of equal organic compositions of

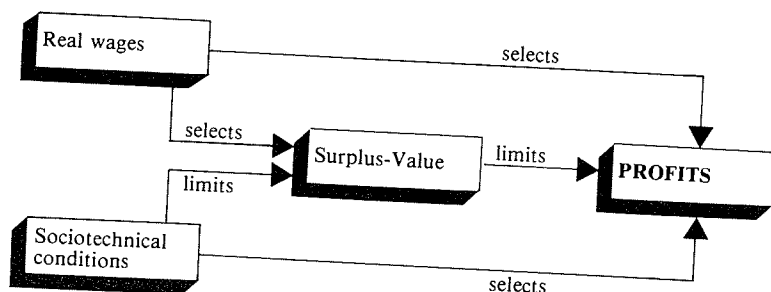


FIGURE 2  
Wright's Figure 4

capital, that in such a case 'surplus-value' would be *endogenous* since entirely determined by the STCP and real wages, and that 'these two factors have their effects on profits only by virtue of their effects on surplus-value'. Finally, he affirms that even when the organic compositions of capital are not equal, the basic relationship between surplus-values and profits remains the same. Except that now, in the more realistic case, changes in surplus-value are not the necessary and sufficient condition for changes in profits; instead, 'they remain necessary and sufficient conditions for changes in the *limits* on possible profits'. But these assertions are by no means self-evident, and once we leave the world of equal organic compositions of capital, we face, if we persist in using Marxian labour-values, the transformation problem. The long history of discussion of this problem has shown that the transformation can be achieved (at least in the absence of fixed capital and joint production), given a normalization condition.<sup>18</sup> But whatever proposed solution is adopted, one or both of two equalities upheld by Marx—the equality of total values and total prices of production and of total surplus-value and total profits—must be lost.

The whole debate about the re-examination of Marx and the reconstruction of a materialist (Marx-inspired but not necessarily Marx-repeating) analysis of capitalist economies with a central focus on the exploitation process arises because of the implications of the discussion about the transformation of values into prices of production. Some have worried about an invariant measure of value and will not do the job.<sup>19</sup> Others have worried about the relation between values and surplus-values on the one hand and prices and profits on the other and found that under *some* conditions the value system is a 'double' of the price system, but that in more general models (admitting fixed capital and joint production) values are not strictly determinate and could be negative, or require drastic redefinition.<sup>20</sup>

<sup>18</sup> See the references in note 4.

<sup>19</sup> For example Sraffa, who devised the 'standard commodity' as a way of solving the problem of an invariant measure of value.

<sup>20</sup> For example, Morishima in his book on Marx's economics, and Andras Bródy in his *Prices, Proportions and Planning. A Mathematical Restatement of the Labour Theory of Value*, Amsterdam 1970. Ian Steedman showed by illustrative hypothetical cases how values could be negative, see *Marx After Sraffa*, pp. 150–162.

One result of these studies has been to view Marx's values and prices, in so far as they are related at all, as twins arising from the physical data once the real wage is given and incorporated into the relevant matrices or equations. Both change with alterations in the physical production data, but neither directly determines the other. They are related as two tines of a fork stemming from the STCP and real wages. But even whilst admitting this duality, some would argue that the price and profit analysis (on the basis of the STCP and the real wage) is more basic, since questions about choice of technique when various techniques are available can be answered in terms of that analysis, whereas the value analysis, by its nature, can be completed only *after* the choice of techniques has been made; alone, it cannot illuminate how the choice will be made. Wright's casual dismissal of one objection that he does anticipate therefore amounts merely to a profession of faith in a dogma; he neither confronts nor refutes the argument. Besides, what is to be made of the notion of a *privileged* endogenous determinant? Why ascribe privileged status to surplus-value except as the re-affirmation of dogma?

Wright uses the problem of natural-resource scarcities largely as a pretext to adumbrate some aspects of the classical Marxian theory of classes and social relations of production. But in the process he appears to concede too much to 'factor-scarcity' approaches to profits and prices, since he writes that the choice of a theory of labour-values with surplus-value as the limiting condition is arbitrary in *calculating* profits and that the reasons for focusing on surplus-value have to do with understanding classes and class struggles and linking them to the specifically capitalist mechanisms by which surplus labour is appropriated. This may strike some readers as a startling admission, coming as it does after so many belaboured points about the importance of surplus-value during the discussion of the Sraffian model. It certainly will not be seen as a strong argument by anyone not already convinced that the Marxist concepts of classes and the details of class struggle provide the correct approach to the study of human history and politics in capitalist societies. It comes perilously close to the popular adage that for those who believe in god no reasons are necessary and for those who do not no reasons can be given.

The issues raised in a comparison of the Sraffian theoretical approach with mainstream neo-classical factor-scarcity analysis of prices and profits cannot be enumerated here. A few brief indications may be offered, however. First, there are some important differences between 'production-reproduction' approaches descending from the work of Quesnay, Ricardo, and Marx and the 'factors of production combined to satisfy consumer demand' approaches enshrined in orthodox textbooks. These have to do with the explanation of profits, the theory of distribution, recognition or not of the class monopoly over the means of production, and conflicting theories of growth and fluctuations in capitalist economies.<sup>21</sup> Second, the labour theory of value, as treated by both Ricardo and Marx, was explicitly intended to apply to freely reproducible commodities (those not subject to a natural-resource or other input limitation). The theory will therefore not directly 'cover' all real-world situations in which various 'constraints' on natural resources, land, and locations might arise (at least for definite time periods). To determine what difference this makes to an *empirical* analysis of profits in a given economy requires both a theoretical method of incorporating such situations into the general model and the particular data for the given case (including, of course, such other 'excluded' phenomena as monopolies, oligopolies, state taxes and subsidies, and so on).

The theoretical method of incorporating all scarcities arising from non-reproducible inputs is dealt with in Sraffa's treatment of rents, since lands of varying fertility, for example, can be considered a particular case of non-reproducible inputs subject to scarcity and exhaustion. In other words, there is a way to incorporate these into the matrices that describe the STCP, although the details cannot be

<sup>21</sup> Luigi Pasinetti, chapter 1, 'A Brief Historical Excursus'. Also see the excellent paper by Mario Nuti, 'The Transformation of Labour Values into Production Prices and the Marxian Theory of Exploitation', originally published in the Polish journal *Ekonomista*, 1974, and reproduced in Jesse Schwartz (ed.), *The Subtle Anatomy of Capitalism*. Nuti writes: 'The *evaluation* of the surplus product at prices (in terms of labour embodied) equal to values and at transformed prices is not necessarily the same, except for a few special cases; the transformation process affects the evaluation of the surplus product, and not merely its distribution among capitalists. This, however, does not alter the findings of Marx's analysis on the origin of profit, his view of profits as exploitation, and his measurement of the degree of exploitation.' This statement, on the whole, would be accepted by those adhering to a Sraffian approach.

discussed here. (Some indications of the relevant sorts of work is provided below.<sup>22</sup>) The point of interest here is that in principle the Sraffa analysis *has* a means of incorporating non-reproducible factor-scarcities while still preserving its structure as a circular production model that maintains the demonstration that profits and wages are inversely related and shows that real wages exogenously determined (i.e. determined by causes not strictly technical-economic) will then determine what surplus product is available to capitalists. This remains more than simply the capitalists' consumption, since it includes investment in means of production and the material basis for the reproduction of capitalists as capitalists and workers as workers.<sup>23</sup>

The Sraffian will concede relatively little to the problem of factor scarcities. The models will be rendered more complex, but not fundamentally different or untenable. To observe this is to identify another point of superiority of the Sraffian over the traditional Marxist approach, with or without Wright's reconstruction. This is *not* to say that there are no difficulties with the Sraffian analysis, especially as regards the introduction of monopolies, changing demand conditions, exhaustible resources, the incorporation of services and public goods, etc. These problems *do* constitute the research frontiers for theoretical work and elaboration for those interested in developing Marx-after-Sraffa. These are the problems that require critical attention. The issues Wright considers still unresolved and excludes from consideration in his paper—fixed capital, varying time-structures of capital, and joint production—are in fact quite well clarified in the work of Sraffa, Von Neumann, Morishima, Steedman, and others.<sup>24</sup>

For Wright, however, the whole issue of input scarcities and their role in the determination of profits was merely a pretext to introduce a complicated systems-theoretic schema representing the Complex Approximation (as opposed to the earlier First Approximation)

<sup>22</sup> Piero Sraffa, *Production of Commodities by Means of Commodities*, pp. 74–91, and Gilbert Abraham-Frois and Edmond Berrebi, *Théorie de la Valeur, des Prix et de l'Accumulation*, Paris 1976, chapter III, pp. 90–165.

<sup>23</sup> Mario Nuti, pp. 101–103.

<sup>24</sup> Sraffa, chapters VII–X, pp. 43–62; Morishima, *Marx's Economics*, chapters 13 and 14, pp. 164–196; Steedman, *Marx After Sraffa*, chapter 12, pp. 163–183.

version of the reconstructed Marxist model: his figure 6. Class struggle and class structure are now introduced as boxed-in structures/variables along with the previous real wages, STCP, profits, and surplus-value. Wright states, correctly, that under 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.' Class struggles transform the STCP and real wages, as well as the class structure itself. Two modes of determination absent from the first approximation now make their appearance: transformation and reproduction. The STCP are seen as exercising a reproductive determination on the class structure. The box with surplus-value now stands on the far right side, and profits are placed left of surplus-value so as to be connected by a selection-determination arrow to class struggles.

Two points must be made immediately. First, this diagram in itself is a *programmatically* statement of connections more than a well-developed model, or even a model with some well-specified relationships. In the absence of greater detail or more precise specification of the nature of the 'limits', 'transformations', and 'selections' suggested, it is a statement of broad orientation more than a model. It represents, however, the normal claims that most Marxists generally consider warranted.<sup>25</sup> Second, if and in so far as it may be elaborated so as truly to 'model' the structures and processes represented, there is little in it that would not be acceptable, *without any inconsistency*, to any Sraffian model analyst who was also a Marxist in matters of sociological and political analysis. The only Sraffians who might not be willing to assent to the broad connections are those who are strictly neo-Ricardian and agnostic or unconvinced about the role and relative importance of class struggles and the inter-dependence of class structure and the STCP. All the Sraffians would do would be to jettison the right-hand box—'surplus-value', and the three arrows associated with it—as *unnecessary*. More strictly, they would simply remove the arrow labelled *limits* arising from 'surplus-value' with its

<sup>25</sup> Steedman probably would include much or all of this in what he takes 'as read' in order to focus with precision on a set of very well defined issues. See *Marx After Sraffa*, pp. 15–16.

head pointed at 'profits', on the grounds that this is unwarranted and, without an appropriate re-definition of 'surplus-value', erroneous.

The statement that 'class struggles do not directly affect surplus-value and exploitation' because they operate through effects on the STCP and the real wage would not be acceptable to Sraffians as regards exploitation. For in a Sraffian analysis, the rate of exploitation depends on the proportion of the net product that goes to workers as real wages. Class struggles over the real wage will therefore directly affect the rate of exploitation and indirectly influence the proportion of 'surplus labour' (in the Morishima definition) that goes to the capitalists.

With regard to his figure 6, Wright re-affirms the dogma noted earlier, without any further argument, namely that 'it is still the case that class struggles have their most decisive impact on profits *by virtue of their effects on surplus-value*' (Wright's emphasis). Perhaps unconvinced of the dogma himself, he adds in a teleological vein that this has 'very important implications' for the empirical research agendas that will emerge, as though these outcomes constitute the best support for the dogma (that Marxian surplus-value is unambiguously identifiable and sets the limits on the possible rates of profit).

Finally, in drawing together his assessment of the Sraffian model, Wright advances a number of claims, some simply stated, one developed at length through a review of some recent studies of the labour process in capitalist industry. He repeats the allegation that the Sraffian analysis is concerned solely with calculation of profits and cannot account for the social possibility of profits. This is quite false. True, Sraffa's own work *is* monastically austere, devoid of any social comment. But it can be used, when combined with socio-historical data, to demonstrate that profits are appropriated by those who own and control the means of production, that their level is the outcome of social processes that determine how much of the net product must be paid out as real wages, and that if real wages rise under given STCP, then profit receivers will garner less profits and will thus attempt to reduce real wages or alter the STCP so as either to bring about a result equivalent to a fall in real wages or to raise the maximum possible level of profits, i.e. raise the net product. All these results arise from Sraffa-type analyses and show that they *do* raise problems of social process and can provide answers, or a locus for

answers, in objective and, in principle, measurable ways. It is false that the concept of 'surplus labour' plays no role in the Sraffian analysis. On the contrary, a precise theoretical sense is ascribed 'surplus labour', and in principle it, too, becomes calculable, at least over the economy as a whole. It is the concept of surplus-value that Steedman urges us to drop, not the concept of surplus labour. The latter is more basic and generic, and is required both for Marxist investigation of modes of production and for the formulation of a theory of social classes and their relations. Surplus-value, on the other hand, is a specific concept proposed by Marx for the analysis of the *specific* features of a capitalist economy, and is found, when used systematically, to be inadequate to its purpose. It is therefore being replaced by new concepts and theoretical proposals, from Morishima and Steedman, among others.

As to the claim that 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', one may easily agree that this is correct, but deny the implied suggestion that such bedding rights are not available to Sraffians. Sraffian models are eminently of the 'circular production' type, so that profits as outcomes do have determinate effects on the STCP, on real wages, and, as Steedman forcefully demonstrates, on the choice of technique and decisions affecting the labour process.<sup>26</sup> It is surprising that one who has actually read *Marx After Sraffa* could make the claim Wright does, for one of its central ideas is that capitalists *take their decisions with reference to prices and profits* and not values and surplus-values, so that profits do indeed become determinants of the structure and dynamic path of capitalist economies. In so far as well specified and determinate theoretical models of the larger theory of social relations are available, they may be accepted by Sraffians (those who see themselves as extending and not merely refuting Marx's work)<sup>27</sup> provided their formulation does not require Marx's theory of surplus-value and his value concepts.

<sup>26</sup> Ian Steedman, *Marx After Sraffa*, pp. 64-65.

<sup>27</sup> Not all those who agree with the importance of Sraffa for economic analysis and take his work as a point of departure would accept Marxist claims regarding historical processes, the theory of modes of production, etc. They would therefore *not* be interested in the construction of *Marxist* theory after Sraffa.

Some, including many proponents of Sraffian theory, may hold that this broader sociology-cum-theory-of-history, insightful and fecund though it is as a framework of analysis, has not yet received a rigorous theoretical expression that would allow the sort of penetrating debate that characterizes assessment of Marx's theoretical work in *Capital*. In the context of very precise analytical issues in the study of production and distribution systems, these wider theories and arguments would therefore be needlessly distracting. Acceptance or rejection of the wider social theory in Marx has little to do with the precise conceptual issues raised in the shadow of Sraffa, by Steedman. Marx's theory of modes of production and the conditions for their reproduction or collapse, or the social and political correlates of his theory of capitalist crises, could, when given a particularly clear exposition, incorporate the Sraffian analysis of commodity-producing economies and be the stronger for it. It is hard to imagine that such an elaboration of the broader aspects of Marx's *scientific* work would be unable to survive dispensing with his formulation of labour-values and surplus-value. What Marxist analysis has to say about human potentialities and feasible futures growing out of present conditions would also be available to Sraffians, if found satisfactory in terms of the knowledge and chain of reasoning advanced. The Sraffians' silence on these matters no more disqualifies them from accepting warranted and rigorously articulated theory about these issues than their silence regarding brain functions excludes them from accepting warranted neurological theory. The apparent silence probably has to do with the difficulty of developing rigorous and (in principle) quantifiable theory on these matters rather than with any principled rejection of the possibility of scientific work in these areas. In fact, it can be argued that the Sraffian theory actually grants greater precision and detail to the investigation of alternative courses of action and the problems of the socialist re-organization of the economy, since in terms of both generality and measurable objectivity, the Sraffa-type models accommodate more situations than do the classical Marxian models.<sup>28</sup> That argument, however, would go beyond the purpose of this article.

<sup>28</sup> For an interesting discussion of how the 'unified' theory of production emerging from the work of Marx, Von Neumann, and Sraffa relates to economic problems of socialist economies, see A. Bródy.

Finally, Wright's *pièce de résistance*, the core of his disquiet with the Sraffian approach, is the question of how the various theories treat the analysis of the labour process and the formulation of a theory of classes and class-based conflicts. Here he impugns the Sraffian approach on two serious counts, and thus finds the reconstructed Marxian approach doubly superior. First, he argues, the Sraffians have a 'market-determined' notion of class, more akin to Max Weber's theory of social stratification than to a Marxist conception. The Marxist theory of class is stated in terms of the social relations of production and is therefore production-oriented and not merely market-oriented. Second, since surplus labour (which Wright takes as equivalent to surplus-value in capitalist economies) is a central concern of Marxists but not of Sraffians, the former can place on their research agenda penetrating questions about the labour process that cannot be seriously and centrally raised in the latter framework. Many interesting empirical questions about monopolies, state intervention, the impact of trade-unionism, game-theoretic studies of collective bargaining and the wage-struggle, imperialism, and real wages, technological change, innovation, and the impact of labour-process conflicts on technical change are allowed the Sraffian approach. These questions are seen to relate to the determination of real wages and the STCP and so are part of the research agenda of Sraffian theory. The alleged superiority of the Marxist theory is that not only can all these be raised as part of its research agenda, but in addition something more can be and is being researched: the changes in surplus labour, the means of controlling workers, and the social relations of domination in the labour process.

I believe that both these claims are mistaken. The reasons for the mistake lie in what we have discussed previously: the confusion of surplus labour with surplus-value, and the failure to understand the 'production-model' aspects of the Sraffian theory. Before examining Wright's claims, it is well to state an important respect in which he, most Marxists, and, I believe, Sraffians would agree. It is that the basic concepts of class theory must be established *independently* of a theory of value, relative prices, and profits in a capitalist economy—so that the theory of classes can be deployed more generally than simply with reference to capitalist societies; and that the theory should contain, as a sub-region, a specific theory of the identification

and relations of classes in a capitalist society—and this with reference to profits and wages, amongst other things.

It is this requirement that gives surplus labour and its specific identity in different modes of production *primacy* over surplus-value, which is a concept in a specific theory designed to account for the basic properties of a capitalist economy. If one assumes, as Wright does, that surplus labour *is* surplus-value (in Marx's understanding of the concept) and that together they stand or fall as relevant scientific concepts (with regard to capitalist economies), then one is likely to consider that all Sraffians have lost a central locus for the exploration of the various ways in which the magnitude of surplus labour can be altered in a capitalist economy. The recommendation that no more time be wasted on surplus-value is interpreted as implying that the analysis of surplus labour and its variation is of no importance. But as I have suggested, this assumption of Wright's is an error, and even a cursory reading of *Marx After Sraffa* will reveal a sustained interest in the formation, magnitude, and variation of surplus labour. The concept itself is understood in some respects differently than in, say, *Capital* Volume I, although the concern with the length of the working day, the relation of paid to unpaid labour, the intensity of the work process, etc. is preserved. This should suffice to show that there is no reason to assume a priori that Sraffians who also accept a Marxian theory of classes are uninterested in the labour process.

The charge that Sraffians are inclined by their theory to a Weberian market-oriented theory of class is the sociological version of the frequently levelled charge that Sraffa-type analysis is concerned with the 'sphere of circulation'—the mechanisms of distribution (for example, the share of output making up real wages)—and not the 'sphere of production', with the production of surplus-value and the structuring of the labour process. It is puzzling why this misconception is so persistent. First, the division of the net product explored in Sraffa-type production models is examined specifically to clarify what happens to profits and relative prices *if and when* the real-wage rate is altered. Such exercises do *not* imply that the net product actually is or can be so casually divided up. Whether or not the real wage *can* rise depends on the exogenous (i.e. exogenous to relative pricing) determinants: class power, alternatives to wage labour,

competitive conditions, etc. Second, the division of the net product is not the same as the sharing out of consumer goods and personal services; it is the distribution of investible resources and funds as well as of what is generally understood as income distribution. Thus, in a highly abstract manner, it includes company expansion funds, transactions in financial asset markets, and capital transactions generally. In this sense, 'primitive accumulation' and the Ricardian-Marxian inquiry into the production and distribution of profits, rents, and wages is also a 'distributive' investigation: the distribution that engenders and reproduces the class monopolies over land and means of production. The distribution and repeated reproduction of a given pattern of distribution of the means of production and financial assets should not be viewed as identical to the distribution of consumption between capitalists and workers. Third, the charge of market orientation appears also to rest on a confusion, on a failure to distinguish between the 'market' for production inputs and the 'market' for final consumer goods. Both exist *simultaneously* in capitalist economies, and so production activities cannot get started without transactions—conducted by agents very differently related to the means of production and selling very different commodities, from labour-power to company shares—in the market for production inputs. In this sense, even the Marx of *Capital* Volume I is market-oriented: labour markets and the level of employment are major concerns. In a later volume of *Capital*, Marx is again market-oriented: the transactions between capitalists of Departments I and II are the focus of interest; and so one could go on. In a capitalist economy one *has* to be market-oriented. The difference is between those who see the whole economy as a *coherent reproducible structure* in which the outputs of some production processes, after passing through markets, become inputs to other production processes, and those who see the economy as an exchange counter in which various individuals with different 'assets' enjoy mutual benefits through exchanges that increase their level of satisfaction. The latter tend to treat primarily the consumer-goods market (the purchase of fish or bread in the standard textbook examples), taking the initial distribution of productive assets and occupations as a given, as a microcosm of the basic features of the whole economy. This is clearly not the method of Marx, but nor was it of Ricardo or Quesnay. And it

is likewise not true of the work of Sraffa or Pasinetti, and in this respect the Sraffa-type analysis is directly concerned with the material basis for social classes and how it is reproduced by and finds expression in the organization of production.

This is not to say that the implications of the Sraffian analysis for a theory of social class are crystal clear. There are still too many unresolved issues in the conceptualization of social classes, let alone empirical measurements, for anyone to be certain of whether the Sraffian work is capable of supporting other than an income-strata notion of social class, or whether it must treat all wage-earners as necessarily belonging to a single class. It may turn out that social class is a highly abstract concept with several subsets of characteristics that may not be well-ordered; conversely it may be so strictly a matter of the modalities of the extraction and distribution of surplus labour as to leave indeterminate its effects on relations in other social spaces. This is an area of analysis that has benefited from Wright's previous work, but which still remains, in important respects, theoretically open.

Finally, there is the important and related (to the theory of class) question of whether the Sraffian analysis inhibits rigorous study of the labour process and how the magnitude of surplus labour available to capital can be varied within it, along with the associated long-term strategies of the organization of work, jobs, and careers. Again, a detailed re-examination of the studies Wright cites in his support, though quite relevant, will not be attempted here. Only three counter claims will be made, which the reader may evaluate in the light of both the studies cited by Wright and the work of Steedman.

First, the studies cited are of very uneven merit, at least in terms of the clarity and precision with which their theoretical claims are developed. They raise several problems for *exploration*, but none presents a theory of the labour process comparable in conceptual rigour and deductive fecundity to, say, Steedman's theoretical discussion of the labour process and the problem of heterogeneous labour in Sraffa-type models. I say this not because I believe that mathematically expressed pure theory is indispensable to scientific work, but because in the absence of such clarity one *can* reasonably remain unconvinced and discover unresolved ambiguities. The debate is then difficult to conduct with the sharpness that has characterized the debates arising from Sraffa's work.

Second, apart from the work by Baudelot and Establet,<sup>29</sup> none of the studies *necessarily requires* the labour theory of value and surplus-value to state its arguments and findings, which are sociological and have to do with relations of domination, decision-making powers, strategic options regarding long-term growth or profitability, etc. That is, if these studies were judged to be sound conceptually and empirically, one could agree with their claims whilst holding to a Sraffa-type analysis of exploitation, the importance of struggles over real wages, and the profit-oriented decisions regarding choice of technique, if certain organizational forms, including wage differentiation etc. are treated as constituting alternative techniques of production or processes.

Third, the Sraffian analysis provides a method of clearly analysing the outcomes of various changes in the labour process and, thus provides a basis for assessing alternative strategies for workers (or capitalists) and for de-mystifying the real implications of certain changes. Steedman's book includes a chapter entitled 'Within the Labour Process'; it is concerned to unfreeze the assumption that there is a fixed relation between the real wage paid to the workers and the amount of work they actually perform: 'the given real wage will be taken to be the wage paid, by the capitalist, for the use of the worker's capacity to work; but while that wage will be held constant, the work actually performed will be assumed to be variable: it will be seen how the rate of profit depends on the amount and the intensity of work which the capitalist is able to obtain from the worker. While the analysis presented will certainly not *determine* the "balance of forces" in the workplace, and thus the outcome of coercion and resistance in the labour process, it will show the importance of that balance for the determination of the rate of profit.'<sup>30</sup>

He goes on to list various contradictory objectives capitalists and workers will pursue as regards the organization and functioning of the labour process. Whilst the list is not exhaustive, and in particular does not include strategic objectives such as division of the workers, promotion of a pro-capitalist ideology (e.g. social partnership of capitalists and workers) etc., it does include a great many issues

<sup>29</sup> Christian Baudelot, Roger Establet, Jacques Malemort, *La petite bourgeoisie en France*, Paris 1974.

<sup>30</sup> Ian Steedman, *Marx After Sraffa*, pp. 77-87.

connected with the labour process. In a considerably more complex analysis all these aspects could be studied in a Sraffian model. With simple illustrations, however, Steedman shows how some of the standard issues in shop-floor struggles are related to the rate of profit, and how many courses of action available to capitalists will have the effects of a wage-cut, although the experience of the workers will be different according to whether there is an actual cut in real wages or, say, an intensification of the work-process that has effects similar to a wage cut. In principle, virtually all Marx's concerns in *Capital* Volume 1 regarding the labour process could be analysed in an appropriately complex Sraffian model (which will, of course, continue to be successful in determining prices, profits, and rents in the general case).

It would seem that *as long as changes in labour-process social relations have effects on and can be indicated or measured by changes in the STCP data and/or real wages*, they can be analysed precisely within Sraffian models. There may, of course, be aspects of the labour process that have no concomitant indicators or measures in terms of the STCP or real-wage data: such as, say, purely ideological effects. These will have to be analysed with the help of appropriate sociological/socio-psychological theories, and such analyses will in no sense be *incompatible* with a Sraffian analysis of those problems with which it is best equipped to deal. The choice between a post-Sraffa Marxian analysis and a traditional, labour-theory-of-value Marxist analysis will not be decided by these *sociological* analyses of the political and ideological processes accompanying the exploitation of labour in the production and consumption of commodities in capitalist economies, because such analyses would be compatible with either type of model.

To conclude, it may be noted that this discussion has attempted to show that Wright's conclusions 1, 2, and 4 are unwarranted; indeed, 1 is false and 2 ought to be *inverted*: it is the Sraffian model that incorporates the traditional Marxist model as a limited, special case. As regards 4, neither model has an intrinsic advantage over the other: the strict-Sraffian is silent on these matters, but a Marxist Sraffian accepts the warrant of Marxist sociological and philosophical claims. The Sraffians may be able to analyse some problems of socialist economies more clearly than traditional Marxists, whose labour

theory of value is a cumbersome and unhelpful tool for the study of socialist economies. Finally, as regards Wright's third claim, it is partly based on a misunderstanding of the 'production relations' aspects of the Sraffian approach, but in an important sense the question of an appropriately specified *theory* of social classes and their relations and effects, as distinct from a typology or classification scheme for empirically identified social classes, remains an open one.

There are, therefore, no research-agenda advantages that can be claimed by reconstructed traditional Marxist models over reformulated post-Sraffa Marxian models. There are, in fact, a few needless handicaps and obstacles in continuing to use the former.<sup>31</sup>

<sup>31</sup> This article, following Wright's contribution, does not use any mathematical demonstrations, although many of the claims advanced rest on mathematical formulations, especially the treatment of joint production and the Morishima redefinition of surplus labour. The rigorous demonstrations will be found in the works cited in the relevant footnotes.