On a Controversy over Ricardo's Theory of Distribution

The long-present controversies over the evaluation of Ricardo's contribution, approach and mode of theorizing have recently intensified. There have been concerted efforts, on the one hand, to revive and advance 'surplus-based' theories, investigating their origin and development in Smith, Ricardo and Marx and, on the other hand, to argue, as did Marshall for a doctrinal continuity from Smith to the modern neoclassicists. Samuel Hollander’s The Economics of David Ricardo (1979) underlines the continuity thesis, maintaining that both Smith and Ricardo shared a theory of resource allocation which rested upon a supply-and-demand analysis, akin to 'neoclassical procedures'. Thus Hollander argues against the idea of dual development in analytical history. His canvas is vast and controversial as are his interpretations. Here we take up only one theme: Ricardo's theory of value and distribution with which Hollander is 'particularly concerned' as forming the 'analytical core' and which Ricardo himself regarded as his original contribution. After presenting some comments on the overall position of Hollander on this issue, we examine his interpretation of the genesis and development of Ricardo's theory of profits in three chronological parts: (1) the early period of the bullionist controversy; (2) the pre-Essay correspondence of 1814, the Essay, and the post-Essay debates between Ricardo and Malthus; and, (3) the Principles. In the last section we take up Hollander's view of Ricardo as a precursor of general equilibrium theory.

1 The Analytical Core of the Ricardian Theory:
Counter-Positions on the Genesis and Development
of Ricardo's Theory of Profit

Hollander's view that Ricardo's original contribution lay in the domain of value and distribution and that his value theory furnishes essentially 'a necessary preliminary' for the determination of the rate of profits is not disputed. However, Hollander sees 'the essence of the Ricardian
contribution' and the development of Ricardo's theory of profit differently from Sraffa in his editorial introductions to Ricardo's *Works* and reconstructs the passage along a different - although apparently parallel - route. To Hollander 'the essence of the Ricardian contribution and the significance, indeed the primary objective, of Ricardo's analytical work' lay in his 'fundamental conception' that 'wage rate increases are non-inflationary and at most generate an alteration in relative prices within limited bounds' (p. 7). This position, Ricardo formulated as a direct challenge to Smith's proposition that all wages increases are passed on by capitalists in the form of higher prices of manufactures; in particular, that the price of corn regulates the prices of all other things. Hollander argues, more specifically, that the weakness of the Smithian position was recognized by Ricardo even during the bullionist controversy. Hence his inference that, from those early times onwards, Ricardo had cast his problem in terms of a relation between the (money) wage and the rate of profits; in fact that 'Ricardo was, throughout, preoccupied by the link between the money price of corn, the money wage, and the money price of manufacturers, and sought to demonstrate rigorously that an increase in the money-wage rate - assuming constancy in the 'value' of money - must entail a fall in the general profit rate' (pp. 11-12). Hollander regards his own view of the genesis of the theory of profit as having 'profound implications for any evaluation of the intended scope of Ricardo's model construction' (p. 7). In particular, the well-known reading of the *Essay* on profit, given by Sraffa, wherein Ricardo resorted to corn quantities to establish unambiguously a strict relation between wages and the rate of profits, is challenged (see below). Hollander's contention is that in the correspondence prior to the *Essay*, in the *Essay*, and after, as much as in the *Principles*, Ricardo was working in terms of a relation between changes in the *money* wage rate and the rate of profits, and further, that Ricardo utilized explicitly or implicitly principles of resource allocation, 'learned from the *Wealth of Nations*', relying on 'supply and demand mechanisms'.

This may be contrasted with the line of development of Ricardo's theory of profit traced by Sraffa in his editorial introduction to the *Principles* (I, pp. vii–lxxi). Up to March 1813, Ricardo was preoccupied with currency questions and by August 1813 the discussion between him and Malthus turns to the question of the effect of increase of capital on the rate of profits. While the issue of importing corn is not yet explicit, the essential elements of Ricardo's theory of profit appear to be already present; That, 'only improvements in agriculture, or new facilities for the production of food, that can prevent an increase of capital from lowering the rate of profits' (IV, p. 3). When, in February 1815, Malthus' (and others') pamphlets on rent appeared, Ricardo incorporated them easily into his already developed theory of profits, to be presented in the *Essay*. In the *Essay*, and in the letters of 1814, and early 1815, a basic principle is that the profits of the farmer regulate the profits of other trades. This principle disappears from the later *Principles* and is substituted there by the more general proposition that the productivity of labour on land which pays no rent is
fundamental in determining general profits. Sraffa offers the by now well-known rational foundation for the principle of the determining role of the profits of agriculture, that ‘in agriculture the same commodity, namely corn, forms both the capital (conceived as composed of the subsistence necessary for workers) and the product; so that the determination of profit by the difference between total product and capital advanced, and also the determination of the ratio of this profit to the capital, is done directly between quantities of corn without any question of valuation’ (I, p. xxxi). If there is to be a uniform rate of profit in all trades, the exchange value of other products would have to adjust so as to yield the same rate of profit in them as in the growing of corn. While trying to expand this argument of the Essay and to generalize it, in the face of the persistent criticism of Malthus, Ricardo was bedevilled increasingly by the question of the relative values of commodities. Ricardo appears to have realized the unavoidable necessity of dealing with the subject of value when he wrote to Mill: ‘I know I shall be soon stopped by the word Price’ (VI, p. 348, letter dated 30 December, 1815). In the Essay, at the cost of considerable simplification, he had been able to demonstrate how the rate of profit is determined without having to confront the problem of ‘reducing to a common standard’ a heterogeneous collection of commodities. It was only after he had adopted a general theory of value (labour theory) in the Principles that Ricardo was enabled firstly to demonstrate his principle of profit in a general setting and secondly ‘he was enabled to abandon the simplification that wages consist only of corn’ (I, p. xxxii, italics added). The surplus approach to profit determination, transparently evident in the corn case, could then be vindicated in a more general setting: ‘It was now labour, instead of corn, that appeared on both sides of the account ...’ (I, p. xxxi). Ricardo realized that difficulties would be created by relative values changing with a change in wage, thanks to differential compositions of capital and labour and of capital itself – all reducible to one of ‘time’. The problem of value that engaged Ricardo until the last was one of finding a consistent measure which would be invariant with respect to changes in the division of profit between wages and profits so that, adopting such a measure, the relation between changes in the wage-share and the rate of profits could be clearly and unambiguously perceived.

Sraffa comments that another theme is to be discerned developing parallel to this in Ricardo’s thought. At first, Ricardo had not regarded the generally accepted view, derived from Smith, that a rise in corn prices, through its effect on wages, generates a rise in all other prices, as being contradictory to his own theory of profits. The contradiction did not emerge ‘so long as the latter has been expressed in its primitive agricultural form’, but appeared inevitably with his successive attempts towards a more general formulation of the theory ‘since the supposed general rise of prices obscured the simple relation of the rise of wages to the fall of profits’ (I, p. xxxiii). Already in the Essay the later developments were foreshadowed in certain passages (more on this, later). The hints present in the Essay, reflecting partially some elements
in Ricardo's approach, were later taken up in the *Principles* 'with the addition of several new ones which were to be characteristic features of Ricardo's theory. The turning point in the transition from the *Essay* is suggested, according to Sraffa, when Ricardo realized, *encountering the criticism of Malthus in the post-Essay correspondence*, at the end of 1815, the need for a systematic theory of value providing the basis for a general solution to the distribution problem. He saw the need to distinguish clearly between causes which affect the value of money and those affecting relative values, to discover the substantive principles for the invariance property of the value-standard and to provide a rigorous basis for his opposition to Smith's view (that the price of corn regulates all other prices). Further, Sraffa maintains that 'the importance which Ricardo came to attach to the principle that the value of a thing was regulated by the quantity of labour required for its production, and not by the remuneration of that labour, reflected his recognition that what his new theory was opposed to was not merely the popular view of the effect of wages on prices but another and more general theory of Adam Smith (of which that effect came to appear as a particular case) - what Ricardo referred to in writing to Mill as Adam Smith's 'original error respecting value'" (I, p. xxxv, italics added). This latter theory maintained that, with accumulation of stock and appropriation of land (that is emergence of profits and rents) the price of a commodity is arrived at by a process of adding up the wages, profits and rents.

The central theme in Sraffa's reading of Ricardo is the determination of the rate of profits, applying the surplus principle. The manner in which Ricardo arrived at and viewed the successive difficulties in resolving the questions of the profit rate determination and the wage/profit relation as well as the approach he took in seeking the resolution of those problems reveal the peculiarities of the underlying surplus approach which continues through his successive formulations.

While Sraffa's account thus turns on the elaboration and the extension of the surplus approach in Ricardo, Hollander spins his account around a particular proposition - the effect of corn prices, via the money wage, on all other prices. According to him, the weakness of the Smithian proposition is recognized by Ricardo as early as during the bullionist controversy; the *Essay* 'corn-quantity calculations' are a temporary reversion to a grossly simple 'strong case', and the *Principles* is only a further extension and elaboration of the money wage/profit rate relation, under the assumption of fixed factor proportions whereby use of labour values is validated or under the explicit/implicit rules of 'resource allocation guided by the supply and demand mechanisms'. This interpretation leads, among others, to the following points of attack on the surplus-based interpretation of Ricardo, and with which we would be mainly concerned in the following:

(a) It seeks to refute Sraffa's view of the 'material rate' basis for the profit determination in the *Essay* and, at the same time, underplays the substantive importance of the determining role
of the agricultural rate of profit in the early theory of profits. Hollander thereby negates the 'turning point' arguing that Ricardo was always, even in the pre-Essay period, preoccupied with the money wage\textsuperscript{rate of profit relation}.

(b) Hollander's exposition of the Principles is directed by a two-fold aim. He attacks, on the one hand, specific elements in the surplus explanations and, on the other hand, uses his own interpretations to forge links with 'the neoclassical procedures', adopting the by now familiar technique of attributing special assumptions to Ricardo, which, when relaxed, would, it is argued, establish compatibility with the neoclassical general equilibrium theory. To Ricardo, for whom money (or 'gold') was like any other commodity, the relation between money wage and the rate of profits posed an identical -- and no other -- requirement than the one that would arise in the case of a general relation between real wage, as a complex of commodities, and the rate of profits; namely, a consistent general theory of relative values and correspondingly defined 'invariant standard'. Hollander, however, reduces the labour theory of value and Ricardo's basis for defining an 'invariant standard' to 'an empirical principle'. Consequently, he negates any substantive role played by the more sophisticated standard proposed in the third edition of Principles while bypassing without comment the difficulties seen by Ricardo in measuring the 'quantity of capital'. He also rejects the generic similarity between Ricardo's attempts to deal with 'modifications' of the labour theory and Marx's transformation of values into prices. These specific elements and features of Ricardo which Hollander attempts to refute are indeed peculiarities characteristic of Ricardo's (surplus) approach.

2 The Pre-Essay Period of the Bullionist Controversy

Attempting to find the nature and timing of Ricardo's transition from the Smithian proposition on value stated above, Hollander finds the first clear indication of a theory of profit in early 1813, with roots extending back to 1811. The major significance\textsuperscript{10} of this carrying Ricardo's theory of profit backwards to the period of the monetary debates is that thereby Hollander bolsters up his thesis that, all through, Ricardo was concerned with establishing the relation between money wage and the rate of profits and that he explicitly considered the effect of changes in wages via the corn price on commodity prices, using relative values.

What supporting evidence and arguments does Hollander offer? First, Hollander refers to an early letter of Ricardo to Mill (dated 26 September 1811) where Ricardo 'shows an awareness' of the notions of relativity of value and, distinguishing between 'value' and 'price' mentions the 'invariable measure' (VI, p. 54). It is highly doubtful whether we can at all infer from this piece of evidence a clear perception of a theory of
relative prices. At this juncture, the distinction between value and price remains purely definitional: value is expressed in terms of any other commodity, while price is expressed in terms of money. This involves no theory of relative prices. Again, while the invariance of the standard is mentioned in Ricardo's writings of this period, it is done incidentally, the context of the stability of prices being very different. As we shall see, the requirements of the 'invariant standard' in later Ricardo were intimately connected with his explanation of profit and the theory of exchange value developed in that context and, furthermore, these requirements changed along with his attempts at more rigorous formulations of the theory of exchange value. It is clear that, even at this early stage, Ricardo regards money as a commodity, so that its value varies when its conditions of production alter. However, no general analysis of these relations obtains and the notion of 'intrinsic value' is suggested to be dependent upon 'scarcity' which is described alternatively to mean the high quantity of labour bestowed in procuring the commodity (III, p. 52).11

By Hollander's own statement (pp. 105–6) Ricardo is a full-fledged Smithian during the bullionist debates, on all issues touching upon value and distribution. We find Ricardo denying any relation between money supply and the rate of interest and fully supporting the Smithian doctrine of the rate of profits in terms of 'competition of capitals'. In particular, Ricardo holds the view that a rise in corn price is followed by a rise in all prices.

Hollander offers a reconstruction of the transition from the Smithian phase to its refutation. He suggests that the constituent elements of Ricardo's theory of profit were available to him from a very early date (1811) and 'could logically have been brought together in 1813 to form a new (though incompletely formulated) theory of profit...’ (p. 118, italics in original).12 This suggestion is built upon a number of speculations. First, Hollander alleges Ricardo to be insistently holding the view that an increase in money supply is an essential condition for a (permanent) rise of general prices 'except where taxation is responsible for higher prices' (p. 108). This position would have been inconsistent with the Smithian proposition that money wage increases will be passed on to the consumers in higher prices. Indeed, Hollander stresses that Bentham (1954, p. 131 n) had already raised this difficulty of non-viability of a general rise in prices without an increased money supply. Thus Ricardo would appear to have grounds to dispute the Smithian proposition.

Hollander's interpretation faces two basic difficulties. It is questionable, first, whether Ricardo asserted the essentiality of an increased money supply in the stated context and, second, whether he himself perceived any such connection between the proposition and its incompatibility with the Smithian proposition. On both, Hollander's arguments are weak. The more extensive evidence that he offers on the first, in fact, concerns Ricardo's argument against Bosanquet,13 that no additional money supply would be required for the same amount of commodities to be circulated when commodity prices increase due to taxation. Ricardo had argued that taxation brings about only a reallocation of purchasing
power between government and private consumers. From this Hollander derives an implication in the contrary case: `if a higher general price level is to result from an increase in wages – the latter increase itself due to some cause other than taxation – a higher volume of currency would be required'. But this inference is not ascribable to Ricardo with any degree of confidence nor does it follow uniquely from Hollander's evidential support. In fact, Ricardo's discussions of the period point to various alternative possibilities. In the Reply to Bosanquet, Ricardo, alluding to the scarcity of corn and consequent increase in price, had argued that 'because its value is doubled, that double the value of money will be necessary to circulate it' is 'by no means obvious or necessary' (III, p. 244). Since Ricardo at that time accepted that a rise in corn price increases all other prices and Bosanquet was himself alluding to that result we may (as Hollander himself does) infer that the situation under consideration is of a general price-rise. In the Notes on Bentham, cited by Hollander (p. 110), Ricardo considers the rise in prices associated with reduced production and thus requiring no additional money supply for their circulation. Ricardo in some places considers a rise in prices to imply a fall in the relative value of money, the latter being considered like any other commodity. In the High Price of Bullion, he discusses the laws which regulate the value of money, its exports and imports, as being the same as for any other commodity, and traces the effects of 'successive bad harvests' on exports of money. Furthermore, Ricardo explicitly considered various distributive implications of the rise of prices, not only between the private consumer and the government when the price rise follows upon taxation, but among different social classes. Hollander himself discusses the former case. Hollander wrote about the differential impact of the change in the price of produce on farmers and landlords, the creditor, the stockholder and the annuitant, etc. (III, pp. 137–8). These redistributive effects are not dissimilar to the ones attributed to taxation. Hollander's inference, therefore, that Ricardo insisted upon an increased money supply as a precondition for a higher level of prices does not find adequate support. Further, Hollander himself appears uncertain as to whether Ricardo saw the difficulty that such a position would have posed for the Smithian proposition that a money wage increase will be passed on to the consumers in the form of higher prices.

The second building block in Hollander's reconstruction happens to be Trotter's formulation (Trotter, 1810) of the principle of diminishing returns – that, with increasing population poorer soils are taken under cultivation, 'and the produce therefore will be obtained and must be sold at an increased expence' (quoted, p. 112). This argument, however, was explicitly rejected by Ricardo, in favour of the Smithian position that increasing capitals, through their competition, lead to declining prices. Hollander has to concede that Ricardo himself was 'unaware of the potent mixture' which should have, in Hollander's view, yielded his theory of profit. Furthermore, not only does Ricardo reject Trotter but does so, not on the basis of the monetary arguments, but on the
basis of the Smithian 'competition of capitals'. Hollander's 'attractive reconstruction' is confessedly weak (p. 118). In fact, the 'papers on profits' of 1813 were written by Ricardo while he continued allegiance to the Smithian result on the effect of a corn-price increase. And when he subsequently questioned the Smithian result it was not on monetary grounds. Hollander himself finds this surprising and has to maintain that 'Ricardo's attention was now [1814] upon the need for a real cost theory of money value, and accordingly reliance upon a form of quantity theory may not have been as attractive or as self-evident an expedient in 1814 as it has been a year earlier' (p. 123). A good reason for this unexplained shift of ground may be that Ricardo indeed, in the very first place, had not relied on such arguments as are used in Hollander's reconstruction. Further, what is missed out in the reconstruction is that Ricardo, in order to link up effectively changes in corn price and the rate of profit via effects on money wage, would have required a systematic theory of relative values and not just variations in the 'general price level' permissible or otherwise on quantity theory grounds.

The Pre-Essay Correspondence: The Theory of Profits in 1814

Hollander turns to the pre-Essay correspondence mainly to propose that Ricardo's theory of profit of 1814 developed as a sequel to that in 1813, taking into account the effect of corn-price increases upon the profit rate, manufacturing prices tending to rise in consequence of higher wages but in less proportion. Hollander's main concern here is to challenge, on the basis of the 1814 evidence, the view: 'that Ricardo in his Essay accorded agricultural profits the determining role on the basis of the assumption that only in agriculture does the same commodity constitute both input and output, and with the further notion that the Essay and Principles constitute two substantially different systems' (p. 123). An explicit statement of the theory of profit, regarded by Sraffa as substantially the same as in the Essay, appears in Ricardo's letter to Trower dated 8 March 1814. The letter contains the striking proposition that 'it is the profits of the farmer which regulates profits of all other trades', for which Sraffa provides the rational foundation (see above). Hollander introduces, in the course of his arguments, a distinction between the 'strong proposition': 'that the agricultural profit rate determines the profit rate elsewhere', or a more sophisticated variation thereof, 'that the state of agricultural productivity on the margin of cultivation is the unique determinant of the general profit rate, in so far as corn is the sole wage good'; and the 'weaker' proposition: 'that the state of agricultural productivity exerts an influence on the general profit rate although not to the exclusion of other forces' (p. 138, italics as in the original). Hollander's aim is to establish that Ricardo's position in the correspondence of 1814 as well as in the Essay implies the 'weak' formulation which is but a step from the Principles. To do this, he has first to explain (away) Ricardo's explicit statements on the determining role of agricultural profits, and then, second, he has to challenge the evidence preferred by Sraffa in support of his position, providing alternative interpretations of the correspondence.
Furthermore, he has to explain how Ricardo could have established at this early stage a general relation between money wage and the rate of profits, requiring recourse to a scheme of 'relative prices'.

At the outset, certain general observations may be made regarding the pre-Essay 1814 correspondence between Ricardo and Malthus. Both remain far from formulating a systematic theory of relative prices. Not only that, they appear not to have clearly grasped the source of their difficulties in the lack of such a formulation. In fact, the question of relative prices emerges, and Ricardo decides to confront it, only after realizing the inadequacy of his earlier arguments resting basically on the material rates of produce (corn) and their analogous extensions to include other necessaries besides corn, in the course of the post-Essay debate with Malthus. We must also bear in mind an aspect of Ricardo's method brought out by Garegnani (1982). Ricardo, at this stage not yet possessing a theory of relative values, could not have obtained a general relation between money wages and the rate of profit. It appears that he asserted with confidence a theory of profit derived on the basis of corn quantities and extended it, relying on the strength of an analogy to other necessaries entering wages. The recurrent emphasis on 'corn', 'food', 'raw produce' which is a feature of the 1814 correspondence (and of the Essay), the numerical illustrations therein (referred to by Hollander himself as a 'better' evidence of the corn argument) informs a style of reasoning by Ricardo wherein a general proposition linking wages to the rate of profits is closely followed by, or follows upon, a specific proposition referring to cheapening or otherwise of 'food', 'corn' or 'raw produce'. These illustrate the intuitive logical basis of Ricardo's derivation and insistent assertions and the method of analogy, referred to earlier. The corn (or material rate) argument appears, in unambiguous terms, when Malthus states Ricardo's position in order to controvert the determining role of agricultural rate of profit. Garegnani (1982) has dealt intensively with these issues, including Hollander's handling of the evidence adduced by Sraffa in support of his interpretation. We shall focus on other supplementary issues.

A close look at the correspondence of 1814, keeping to the sequence in which arguments between Malthus and Ricardo develop, would be important in order to recognize the peculiarities of Ricardo's theory and, in that light, to view Hollander's interpretations. Even prior to the well-known letter to Trower, containing the farmer's profit principle, Ricardo, referring to his 'theory' maintains, in a letter to Malthus (dated 17 August 1813; VI, pp. 94–5) that 'increases in wealth and prosperity' need not necessarily be attended with increased profit; the latter is connected with 'facilities in the production of food'. Ricardo was to summarize his position to Trower (letter dated 8 March 1814, cited above).

Nothing, I say, can increase the profit permanently on trade, with the same or an increased Capital, but a really cheaper mode of obtaining food. A cheaper mode of obtaining food will undoubtedly increase
profit says Mr Malthus but there are many other circumstances which may also increase profits with an increase of capital. The discovery of a new market where there will be a great demand for manufacturers is one. (VI, pp. 104-5)

Immediately following, Malthus must have raised the issue of a rise of corn price stimulating demand and hence profits. For, Ricardo, replying on 26 June, argues that corn-price-rise, without any augmentation of capital must necessarily diminish demand for other things. Ricardo, we note here, resorts to the Smithian proposition — all prices rising with corn — without recognizing the difficulties it would pose for his theory of profit. Further he maintains that with the same capital and higher prices there would be less production and hence less demand since ‘demand has no other limits but the want of power of paying for the commodities demanded. Everything which tends to diminish production tends to diminish the power’ (VI, p. 108). We note that, while reacting to the issue of demand raised by Malthus, Ricardo presents his view on the determination of the rate of profit as a separate issue: ‘The rate of profits and of interest must depend on the proportion of production to the consumption necessary to such production, — this again essentially depends upon the cheapness of provisions, which is after all, whatever intervals we may be willing to allow, the great regulator of the wages of labour’ (VI, p. 108). Sraffa considers this as the nearest explicit statement by Ricardo now extant, indicating the use of material-rate-of-produce argument and of which Malthus’s refutation in the following words is an echo: ‘In no case of production is the produce exactly of the same nature as the capital advanced. Consequently, we can never properly refer to a material rate of produce, independent of demand, and of the abundance or scarcity of capital’ (letter dated 5 August; VI, p. 117). Hollander treating this remarkable phrasing of Malthus as casual stresses the contextual connection with the debate between Ricardo and Malthus on aggregate demand. That Ricardo’s determination of profit is independent of the issue of demand is evident from the same letter of 26 June where he draws implications from a restriction on imports of ‘raw materials … of which corn is the principal’, different from those following restrictions on other commodities. The former affects profits (‘lowers the rate of interest’) while the latter deprives the country of luxuries and abundance ‘but the rate of interest would not fall’ (VI, p. 109). Changes in ‘demand’ therefore affect the rate of profits only as mediated through changes in wage.

Malthus responds by letter dated 6 July, to argue that dearness of labour, following upon a rise in the corn price, would diminish, and necessarily so, he adds in a subsequent letter — faster than revenue, so that there would be a smaller quantity of both corn, and of all other commodities, and ‘every monied accumulation would command less labour and less produce’. The usual result of diminution of capital — a rise in the rate of profit — would follow. Malthus does not clarify whether the diminution of capital is only in terms of ‘value commanded’ or implies
absolute reduction. Further, Malthus himself appears to recognize that Ricardo views his profit determination as a separate issue. For having controverted against the latter's position that anything which diminishes production tends to diminish effective demand, citing the case of wars when profits rise despite destruction of stocks, Malthus writes: 'But you must mean that it is the rate\textsuperscript{29} of production, not the absolute quantity of produce which determines profits' (VI, p. 111). He proceeds to argue however, that 'even this rate of production ... seems to be determined by the quantity of accumulated capital, and not by the mere difficulty and expence of producing corn'. Not only does he thus cite the 'corn' case but goes on to illustrate using corn quantities.\textsuperscript{30} He holds that 'the difficulty of procuring corn would result in a diminution of capital, less produce and a diminution in real wages or their price in corn, but not a diminution in profits' (VI, p. 111).

Ricardo view (cf. letter of 25 July to Malthus) the 'reduction of capital' and corn imports 'as separate causes with distinct effects on profits that may go together or entirely in opposite directions'. With reduction of capital, effective demand 'cannot augment or long continue stationary' but if capital diminishes faster than demand, profits could be augmented. 'This', he adds, 'is totally independent of the rate of production.' His meaning comes out clearer in a later letter of 16 September to Malthus. There he agrees that 'when capital is scanty compared with the means of employing it, from whatever cause arising, profits will be high (VI, p. 133). So stated, it is almost a truism. Hence, 'it is very important to ascertain what the causes are which make capital scanty compared with the means employing it - and how far when ascertained they may be considered temporary or permanent'. Ricardo was then to reaffirm that the state of cultivation of land is almost the only great permanent cause. Even the state of demand for capital, he was to contend, is regulated by 'the difficulty or expence of producing corn'. All these were Ricardo's attempts to retain the primacy of 'corn' in its profit-determining role even within the frame of Malthus's arguments relating to effective demand. That Ricardo himself must have continued to found his theory on the 'material rate of produce' proposition is evident when Malthus in his letter of 5 August protests: 'In no case of production, is the produce exactly of the same nature as the capital advanced. Consequently we can never properly refer to a material rate of produce, \textit{independent of demand, and of the abundance of capital} (italics added), which confirms that Ricardo maintained such an independence.\textsuperscript{31} Ricardo, arguing within the context of Malthus, was attempting to show that ultimately 'the state of capital in relation to demand' would work through the 'state of cultivation': real diminution of capital would discourage the cultivation and raise the rate of profits while import restrictions on corn would encourage cultivation and lower the rate of profits. Further, he proposed a distinction between 'temporary' and 'permanent' influences. 'It will often happen that the scarcity of a commodity, or the increasing demand for it will for a time increase profits, but it is not therefore correct to say that where profits are high
they are so because the demand for produce is great compared with the supply' (VI, p. 128). The state of cultivation was in fact the single permanent cause determining the rate of profits.

Parallel to this argument runs the controversy and mutual clarifications about what is demand and how it is determined. Ricardo rightly suspects that the term 'demand' is used in different senses by the two (VI, p. 129). For Ricardo, demand is increasing (decreasing) when actual quantity consumed increases (diminishes) and the power to purchase is represented by the 'produce of the country'. Malthus, distinguishing between 'the power' so represented and the 'will to purchase', believes that the latter 'will always be the greatest, the smaller is the produce compared with the population and the more scantily the wants of the society are supplied'. Malthus thus tended to recognize a situation as one of demand exceeding supply when all prices rise along with corn and associated a higher rate of profit with it. It is also in this context that Malthus holds that the power to purchase need not necessarily involve a proportionate will to purchase and challenges Mill's idea that supply can never exceed demand. Ricardo, however, holds that 'the will is seldom wanting where the power exists, for the desire for accumulation will occasion demand just as effectively as a desire to consume, it will only change the objects on which the demand will exercise itself' (VI, p. 133). As Meek (1950) argues, the equality of savings and investment was accepted by both Ricardo and Malthus, and under that premise, Malthus's position was logically weak.

In the letter of 9 October, Malthus raised doubts about Ricardo's theory ('that the state of production from the land, compared with the means necessary to make it produce is almost the sole cause which regulates profits of stock') pointing out 'contemporaneous effects'.

But unless it could be shewn that no improvements were ever to take place either in agriculture or manufacture, that upon a rise in the price of raw produce, new leases would be immediately granted, new taxes levied, and that the price of labour and of every other commodity both foreign and domestic would rise without delay exact in proportion, the doctrine is evidently not correct in practice. (VI, p. 140)

Further, Malthus criticizes Ricardo for almost exclusively considering 'the expence of production without attending sufficiently to the price of produce'. He himself identifies a fall in the effective demand with a situation when 'the price of produce falls compared with expence of production and considers this as the only cause for fall of profits, and conversely, the case of a rise in effective demand.'

Ricardo's reply of 23 October 1814 is extremely interesting because it brings out indirectly the structure of his early theory of profits. First, he clarifies that his theory of profit can easily accommodate the 'effects' Malthus talked about. Improvements of techniques or changes in wages of labour did not disprove this theory. "These points then are expressly allowed for in my proposition [that, the rate of profits is determined by
the proportion of production to consumption necessary for that production] and are by no means at variance with it" (VI, p. 145). Furthermore, during temporary variations, the great cause, namely, the accumulation of capital, may be paving the way for permanently diminishing profits 'so that the state of cultivation' cannot long be ignored. He also notes, as a reminder to Malthus, that the causes occasioning a rise in the price of raw produce could be many, with diametrically opposite effects on profits (Malthus, we remember, associated high profits with high prices.) There may be temporary causes like a fall in the value of money or bad harvests that raise the price of corn. However, he considered a rise in the price of corn occasioned by gradual accumulation of capital, promoting cultivation of inferior lands, was the permanent cause of low rates of profits. In fact, he maintained 'a permanent rise in the rate of profits is never preceded by a rise but by a fall in the price of raw produce' (VI, pp. 146–7).

Of particular interest is the way Ricardo deals with Malthus's case of wages of labour not rising in proportion to the price of the produce.35 Ricardo upholds the general validity of his principle on the same ground as in the case of improvements in agriculture above. He was to repeat the argument later (in a letter of 18 December to Malthus).

A diminution of the proportion of produce, in consequence of the accumulation of capital, does not fall wholly on the owner of stock, but is shared with him by the labourers. The whole amount of wages paid will be greater, but the portion paid to each man, will in all probability, be somewhat diminished ... (VI, pp. 162–3)

What Ricardo was concerned with was that the 'whole value of wages paid as a proportion of produce will be greater compared with the whole value of the raw produce' in the case of extended cultivation. Hollander focuses on this point to challenge Sraffa's corn-profit-rate interpretation (pp. 128–9). Referring to a corn calculation of Ricardo,36 taken on from an example of Malthus, where the capital employed estimated in money does not rise in proportion to the corn-price-rise, Hollander infers that the per capita corn wage declines in the given case,37 having picked it out as an illustration of wages consisting entirely of corn. Hollander then concludes: 'The notion of a fixed corn wage per head was not part of the Ricardian scheme as the "corn profit" interpretation has it; a reduction in the ratio of corn profits to corn capital was the predicted pattern despite a fall in average corn wage' (p. 128). Thus a declining average corn wage is considered as casting doubt on the validity of the corn-profit interpretation (p. 129). Here we may note that what is required for the corn-profit interpretation is a 'given' level of wages and not necessarily a 'fixed' wage; similarly, it takes a certain technique or the state of cultivation as 'given' (and not as 'invariant'). Ricardo could very well accommodate in his principle of
obtaining the rate as 'proportion of production to consumption necessary for the production' both, changes in techniques as well as in wages.  

Ricardo's letter of 24 October to Malthus is also significant in shedding light on another aspect of the structure of his theory. He writes: 'I am not aware that I have underrated the effect of the wants and tastes of mankind on profits, they frequently occasion large profits on particular commodities for short periods - but they do not I think often operate on general profits because they do not often influence the growth of raw produce.' (VI, pp. 147–8) Further, he elaborates the assumption behind Mill's (and his) theory:

It does not attempt to say what the proportion will be to one another, of the commodities which will be produced in consequence of the accumulation of capital, but presumes that those commodities only will be produced which will be suited to the wants and tastes of mankind, because none other will be demanded. (VI, p. 148, italics added)

Thus Ricardo first of all distinguishes between the temporary profits and the (long run or natural) rate of profits that he is concerned with. Secondly, he clarifies the notion of effectual demand as a given position, similar to Adam Smith's notion, that underlies his theory of profits.  

As a counter to the corn-profit interpretation, Hollander ascribes to Ricardo a general reasoning in terms of a relation between money wage and the rate of profits. In support, he cites Ricardo's letter to Malthus, of August 1814, wherein he hints that rising money wages lead to a decline in profits in manufacturing goods: '... the rise of his [manufacturer's] goods will not be in the same proportion as the rise of labour'. (VI, p. 120) Does this argument substantiate the claim that Ricardo was already using a systematic reasoning in terms of relative prices? It is doubtful. First, it was in a letter, not much earlier, of 25 July 1814, to Malthus, that Ricardo had taken a clear Smithian position that prices of all commodities must increase if the price of corn increased, and the trace of that reasoning occurs also in the August letter. Secondly, what strikes us in the Malthus–Ricardo correspondence of this period is precisely the absence of (or unpreparedness for) the confrontation with the theory of relative prices. Throughout the discussion, the recurrent, most-frequently-used phrases concern 'the rate of production' (used equivalently for 'the proportion between production and consumption necessary for it'), or the ratio of profits to capital or in terms of aggregates like 'the rise of wages of labour', 'the rise of commodities'. That Ricardo often argues from analogy, generalizing from the corn case, is evident from the fact that he reverts so characteristically to the 'case of food' while stating a general principle. Further, he has no means of demonstrating why manufacturing prices should rise more slowly than money wages do (consequent upon a rise in the price of corn) except by intuitively presuming a lower rate of profit. The only logical basis he has to presume so, is the corn-profit argument. Malthus is equally remote from any general theory of relative prices. We have
already seen how his arguments in terms of 'scantiness or abundance of capital' or high or deficient aggregate demand run the risk of circularity in definitions. Also Malthus spoke of 'the increase in the value of the whole mass of commodities in the country, estimated either in money, or in corn and labour' (VI, p. 153) when Ricardo had to remind him about the relative value aspect, namely, 'If the mass of commodities be increased we diminish their exchangeable value as compared with those things whose quantity is not augmented' (VI, p. 163). It is clear, however, that no conception of a systematic theory of value and its relation to the theory of profit emerges.

Hollander himself notes that while the letter of August 1814 contains the assertion that the prices of manufactured goods rise less than proportionately to money wages, 'in the case of agricultural produce Ricardo did not allow for any price increase due to higher money wages' (p. 131) and considers it to be an oversight. However, this is not surprising. Ricardo, indeed, did not yet have any theory of relative prices resting on their detailed structure of production. In fact, an incidental suggestion of Malthus contained in his letter of 9 October 1814, that the principal difficulties in the debate 'arise from different effects of an increase, or diminution of capital on the land, and in manufactures and commerce; particularly with regard to price, occasioned by the different nature of the instruments employed' (VI, p. 142), is elaborated by neither Ricardo nor Malthus until well after the Essay. The lack of any clear perception and formulation of the relative value formation is evident in the tangled discussion between Ricardo and Malthus on the effect of a corn-price-rise on the value of capital engaged in agriculture.

Thus Hollander's construction of Ricardo's position, on the basis of the correspondence of 1814, that 'the rate of profit in agriculture does not strictly determine the profit rate elsewhere. Rather the general profit rate varies inversely with the movements in money wages' (p. 132), appears not to be substantiated. It has to ignore emphatic, explicit statements of Ricardo and Malthus concerning the determining role of the agricultural rate of profit. It is also striking that Ricardo upholds, in this period, his theory of profit simultaneously with the Smithian proposition regarding the effects of an increase in corn price. Moreover, not only is a systematic theory of relative prices not yet in hand but the issues are yet to be perceived with any clarity in terms of relative commodity pricing.

The Essay on Profits (1815)

Hollander's main contention is that, in the case of the Essay, as in the 1814 correspondence, Ricardo held the 'weak proposition' (see above). Hollander refers to a remark of Ricardo to argue that he did not imply that the general profit rate is 'literally governed' by the agricultural rate. The remark is: '... I am only desirous of proving that profits on agricultural capital cannot materially vary, without occasioning a similar variation in the profits on capital, employed on manufactures and commerce.' This is a footnote attached to a rather strong statement indicating a strict relation between agricultural and the general rate of profit.
Here, however, Hollander neither gives the proper context nor indicates that he is quoting only a part of the footnote where the preceding part reads: ‘It is not meant, that strictly the rate of profits on agriculture and manufactures will be the same, but that they will bear some proportion to each other’ (IV, p. 12 n). Ricardo further elaborates to clarify that the ‘uniformity of the rate of profits ‘can still allow for a systematic proportional variations in profit rates due to such differences as in ‘security, cleanliness’, etc. of different employments (as in Adam Smith). Thus Ricardo here is not modifying or weakening the determining role of agricultural rate of profit, as Hollander suggests, but amplifying the content of ‘uniformity’ of profit rates.

Further, Hollander observes that Ricardo’s proof of the equalizing of profit rates does not preclude possibilities of variations induced by changes emanating from outside the agricultural sector. Indeed so, and this points to the need for providing a rational foundation to Ricardo’s position. Hollander believes that Ricardo ‘reverts’ to the sophisticated ‘weak’ position of the 1814 correspondence in the latter part of the Essay, having adopted the ‘strong’ proposition in the opening part. If Hollander is correct in believing that Ricardo had reached a general relation between money wages and the rate of profits, it is not explained why Ricardo found it necessary to revert to the strong proposition and not only choose particular corn quantities but assert, in direct terms, the determining role of the agricultural profit rate (see, for instance, IV, pp. 12, 14, 18, 23, 26). While corn is used as a numéraire in the Table and in the text, Ricardo at times used corn quantities directly in arguments. Ricardo is explicit that expanded trade or technical progress in manufactures will have no influence upon the profit rate, ‘because they do not augment the produce compared with the cost of production on the land, and it is impossible that all other profits should rise whilst the profits on land are either stationary, or retrograde’ (IV, p.26).

We must note an important structural feature of the Essay: Ricardo’s theory of profit was already formulated before the theory of rent appeared in the pamphlets of West, Torrens and Malthus and the first part of the Essay is probably a revised version of the text before the appearance of Malthus’s two contributions (Malthus, 1815a and 1815b). The later part of the Essay is mainly addressed to issues raised by Malthus. The references to relative prices occur entirely in the later part of the Essay, while the determining role of the agricultural profit rate is expanded and illustrated with the Table in the first part. The references – rather ‘piecemeal’ – to relative prices (of corn and manufactures) occur specifically when Ricardo contests opinions of Malthus concerning the consequences of the ‘imports of a cheaper corn’ on the ‘real value’ of rents, wages and profits in terms of their ‘command over other commodities’. Ricardo is concerned with refuting Malthus’s contention that cheapness of corn affects adversely the command over other commodities of rents and wages. That the issue of relative prices is taken up in this specific context is clear from Ricardo’s statement: ‘This fact [concerning prices] is of more importance than at first sight
appears, as it relates to the interest of the landlord, and the other parts of the community' (IV, p. 20). It is also in this context that a footnote, highlighted by Hollander, challenging the Smithian proposition on prices is attached.47

What is interesting is that the discussion involving relative prices appears after the inverse relation between rents and other incomes has already been worked out (in terms of corn) in the earlier part of the Essay. Not only that: It is taken as already established and forms the basis of the arguments that follow in the second part. In this later part of the Essay, Ricardo takes for granted a definite association, as analytically established, between the extension of cultivation, higher rents, lower rate of profits, on the one hand, and lower rents, lower price of corn and higher profits, on the other. The former situation is identified as affected by restraints on corn imports and a higher price of corn and the latter with free corn imports and cheaper corn. Following this, 'a rise in the price of corn' or a 'fall' become key phrases to represent typically the whole situation. Thus the relation between wage and the rate of profits does not seem to be analytically founded on the basis of a theory of exchangeable value. This also explains better the observation of Hollander on a peculiarity of Ricardo's arguments at this stage, quite distinct from the Principles (p. 140). Ricardo's argument in the Essay has two strands, notes Hollander: 'two (separable) causal influences on profits: the decline in agricultural productivity in the agricultural sector itself, and the rise in money wages (reflecting the higher corn price) in manufacturing', whereas, in Principles, the effect of a change in wage-rate is considered simultaneously on all prices without such a separation. Hollander also notes that Ricardo does not consider the effect of the corn price changes on the corn sector itself. The simplification in terms of corn prices ('capital' consisting of wages alone) and the lack of a systematic theory of relative prices would provide a consistent rationale for Ricardo's particular procedures noted by Hollander.

There are, no doubt, hints of a theory of value and a brief criticism of Smith's proposition, as noted above. The piecemeal applications, arising in a specific context, are what Sraffa probably has in mind when he speaks of passages in the Essay foreshadowing his theory of value to appear in Principles. Hollander's reading (that Ricardo had already obtained the money wage-rate of profit relation in the Essay and that there was no substantive 'turning point' in moving over to the Principles) faces the difficulty of having to explain the predominantly agricultural form of the theory of profits and why the principle of the determining role of agricultural rate of profit disappears in the Principles48 (see Garegnani, 1982).

The Post-Essay Debate
The deficiency of a piecemeal treatment of value revealed itself progressively in the post-Essay debate between Ricardo and Malthus. In Ricardo's letter to Malthus, immediately following the publication of the Essay (9 March 1815, VI, p. 179), Ricardo realized that he had not made adequate
allowance for the altered value of raw materials in manufactured goods, which would be an influence separate from wages on their price. In the subsequent debate, the central question concerned the effects on the size of the surplus and 'the ratio of that surplus produce to the whole capital employed' following a relative cheapening of manufactured goods which formed a component of capital employed in cultivation.\(^{69}\) Malthus argued that the surplus would be enlarged in such a case and Ricardo opposed the view, holding that a high price of corn is accompanied by (or even due to) increased expenses of cultivation, a rise in the corn price of labour and hence a fall in profits (VI, p. 189). Many of the confusions arise precisely because neither Ricardo nor Malthus appear to have possessed a rigorous perception of relative price formation and much of the debate is carried out in terms of aggregates like 'expenses of cultivation in terms of corn or labour'.\(^{50}\) At this juncture, even the formulations and role of a labour theory of value in the explanation of the profit rate, appears not to have been clearly and rigorously perceived.\(^{51}\)

The struggle to establish his case under alternative assumptions concerning the influence of the corn price on manufacturing prices (VI, pp. 212-14) was seen by Ricardo to be leading to 'a labyrinth of difficulties' in 'an endless succession'. He tended to return to the anchor of his 'simple theory', entreaty Malthus 'to give my simple doctrine fair consideration' since it accounted for phenomena 'in an easy and natural manner' (VI, p. 214). However, the difficulties that emerged in the debate were far more serious than making allowances for commodities other than corn in wage goods. They raised the question of the structure of production of different commodities and demanded a rigorous theory of relative price formation.

It is this realization that probably prompted Ricardo to write to James Mill, 'I know I shall soon be stopped by the word price', at the end of 1815 (VI, p. 348) and to give prominence to the value question in Principles.

3 The Theory of Profit in Principles

Following the protracted post-Essay debate with Malthus, Ricardo formulated, in his Principles, the theory of profit in most general terms, using the labour theory of value. Hollander proceeds first to give his interpretations of particular aspects of the labour theory of value and the notion of 'invariant standard' and, in the following chapter, attempts in a 'general overview', to establish continuity between Ricardo's theoretical framework and Marshall's 'allocation mechanisms'. Here, we take up some of his interpretations.

Hollander sees Ricardo's discussions on value to be mainly concerned with (a) countering Smith's rejection of the labour theory in a capitalist economy with private property in land, (b) explaining 'conditions under which a labour theory retains its validity', and (c) attempting 'to justify the use of a labour measure of value, in terms of which there will be no alterations in relative prices, and therefore in the value of output to be
shared, in the face of changes in distributions\textsuperscript{52} (p. 191). Hollander acknowledges that Ricardo’s objection to Smith’s confining the labour theory to the ‘early and rude state’ and to his proposing the labour-commanded measure in its place was theoretical and not purely definitional.\textsuperscript{53} Ricardo argued that it was fallacious to regard the mere emergence of rents and profits among revenue shares as exerting an influence on relative prices \textit{independently} of the conditions of production. Despite the modifications admitted to the doctrine that commodities exchange at labour values, arising from the differential composition of the means of production of different commodities, Ricardo did not consider them weighty enough to invalidate the doctrine.\textsuperscript{54} He played down the effect of wage variations, Hollander observes, on the ground that, relevant to his theory were relative rather than absolute changes in values and that, the effects due to a rise (fall) in wages would be much less in extent as it would be necessarily accompanied by a fall (rise) in the rate of profits and profits themselves constitute ‘but a small portion of price’. We note again that, despite the reference to the ‘comparative extent’ of effects, Ricardo’s arguments rest primarily on a theoretical – and not empirical – basis. He presumes here the theoretical result of the inverse relation between wage and the rate of profits so that the net price is seen as composed of the two elements, wages and profits, moving in contrary directions. Hollander himself notes that Ricardo often adopts the ‘not very elegant’ procedure of presuming the inverse relation in the context of relative price movements. Not having the artillery of simultaneous equations, it would seem that Ricardo attempted to construct the device of the invariant measure to derive the inverse relation in situations where the simple labour value theory needed to be ‘modified’.

Hollander’s position that Ricardo’s primary concern, in all his work, was to refute the Smithian proposition that all prices rise along with a rise in wages (which proved a ‘stumbling block’ in establishing the money-wage profit relation of Ricardo) has certain connotations for Hollander’s evaluation of the ‘invariant standard.’ He argues that Ricardo had already achieved his objective in the first edition of \textit{Principles} where he could show, on the basis of a standard suggested therein, that prices actually fall with a rise in wages. Hollander also points out that, despite the change in the standard in the third edition, the chapter on profits is not altered. He concludes therefore, that ‘The more sophisticated medium of the third edition plays no substantive role in analysis; the issue of the effects upon the price structure due to a change in wages is set aside by resort to the assumption that commodities are produced by processes involving identical factor ratios’ (p. 221).

Here, we need to give a closer look at the issue of the ‘invariant standard.’ As Sraffa puts it:

... the problem which mainly interested him [Ricardo] was not that of finding an actual commodity which would accurately measure the value of corn or silver at different times and places; but rather that of finding the conditions which a commodity would have to satisfy in
order to be invariable in value – and this came close to identifying the problem of a measure with that of the law of value. (I, pp. xi-xii)\(^5\)

Sraffa also notes a peculiar consequence that, corresponding to the version of value theory Ricardo adopts, there would be an appropriate ideal invariant standard with definite properties. When he adhered to simple labour theory of value, the invariant measure was a commodity requiring a constant quantity of labour. However, 'in so far as there are exceptions to the theory, to the same extent the accuracy of the measure is affected' (I, p. xii, n. 1). In the first two editions of *Principles* the invariant standard was identified as 'requiring at all times and under all circumstances, precisely the same quantity of labour', while in the third edition, the standard adopted was gold 'produced with such proportions of the two kinds of capital as approach nearest to the average quantity employed in the production of most commodities' (I, p. 45). However, this standard adopted in the third edition turned out, for Ricardo, to be the same as in the first edition, that is 'a commodity produced by labour employed for a year', considered now as 'the mean proportion'. Hollander, therefore, should not be surprised to find the chapter on profits unaffected although a number of textual changes were introduced elsewhere (see p. 1, 28, n. 1, 29, n. 1). Hollander also suggests that Ricardo had cut the knot, despite his preoccupation with modifications of the labour-value principle, by the 'simple expedient of assuming identical factor proportions across the board'. While it is true that Ricardo considers some simple illustrations of the type, he nowhere adopts the assumption as a general case.

What is particularly notable is this: while Hollander refers repeatedly to the problem encountered by Ricardo in the derivation of the rate of profit in keeping the net output of constant value, in the face of variations in wage – and for which Hollander acknowledges the usefulness of the invariant standard – he bypasses entirely the parallel problem arising with the measurement of capital. In fact, while discussing Torrens's criticism of labour theory and his proposal for an alternative theory (that commodities are valuable according to the capital employed in their production and the time for which it is so employed), Hollander observes that Ricardo apparently missed the characteristic feature of Torrens's approach.\(^5\) Surprisingly, however, Hollander makes no reference to the very significant objection Ricardo explicitly puts down against Torrens's theory, both in the 'Absolute Value and Exchangeable Value' and in the letter to McCulloch (IX, pp. 358–62) where Ricardo is perplexed by the problem of quantification of capital and asks pointedly: 'What means have you of ascertaining the equal value of these agents?' (IX, p. 357) Ricardo argued that 'the means of ascertaining their equality or variation of value is the very thing in dispute' (IX, p. 359 n). It is amply evident from Ricardo's references that he was seeking to strike at such a 'mean' commodity to be adopted as a standard that 'those commodities on one side of this medium, would rise in comparative value with it, with a rise in the price of labour, and a fall in the rate of profits; and those on the other side might fall from the same cause' (VIII, p. 193). Consequently, as Sraffa indicates,
‘If measured in such a standard, the average price of all commodities, and their aggregate value, would remain unaffected by a rise or fall of wages’ (I, pp. xlv–xv). Thus the ‘sophisticated’ invariant standard was suggested by Ricardo consistently in line with the ‘modifications’ that were attempted to be incorporated into the theory of value.

Hollander suggests emphatically that Ricardo’s concern was with an empirical theory of exchange value: the labour theory and the choice of the invariant standard to be viewed in that light. His judgement is based on three characteristics of Ricardo’s defence of his measure of value that he notes: first, that Ricardo was in pursuit of a hypothetical measure and admitted that the ideal measure may not exist. Second, Ricardo asserted that an adequate approximation to the ideal may be achieved in practice and, third, he was prepared to maintain the inverse relation between wages and profits even if such an approximation was unachievable. Indeed, Ricardo was seeking to define theoretical properties of an abstract standard consistent with his theory of value and which would measure suitably the heterogenous aggregates involved in profit determination. He was amply conscious that such a measure may not exist in practice. In fact, while with the measure of the first two editions, of constant labour value, the difficulty appeared to be a practical one, with the second, the difficulty was theoretical. Ricardo could not find an easy or consistent way of defining an average or mean proportion between fixed and circulating capital, with their differing durabilities. Knowing full well the practical difficulties, Ricardo continued the pursuit of discovering the properties of the ideal standard. In this he did not succeed but he laid down the direction and the logical basis for the search which have been used in the latter-day ‘transformation’ procedures. The problem of deviations of natural prices from labour values took a particular form in Ricardo. It appeared in the form of a second cause of variation in relative values, apart from the changes in the labour requirements, namely a change in wage. The use of the invariant standard was a means of making manageable the deviations on that account. There is thus an intimate connection between the transformation problem and Ricardo’s attempts at incorporating modifications of the labour theory in his theory of profit. Further, even while Ricardo sought for an adequate approximation, failing to get the ‘ideal’ solution, his ‘approximation’ had a theoretical basis. Confronted with the difficulty of finding any one ‘unexceptionable’ commodity to serve as a measure, he proposes a measure ‘though confessedly an imperfect one’ which will give some idea whether, when labour varies as compared with commodities, it is the value of labour which has undergone a change or whether it is the commodity which rises or falls. His argument against Malthus’s measure in so far as it constitutes an extreme case of variation and not therefore suitable for the theory of profit, is a theoretical one. Despite failing to resolve the problem satisfactorily, Ricardo showed considerable confidence in the correctness of the direction of his search and pursued his efforts at defining accurately the theoretical properties of a standard, despite discouragements from James Mill and McCulloch.
Also of importance is the fact that Ricardo’s opposition to the alternative measures suggested by Malthus, Torrens, McCulloch and James Mill rested entirely on their theoretical inadequacy and not on their empirical unsuitability. Furthermore, if the labour theory was merely an empirical proposition, as Hollander maintains, Ricardo should have been using wage costs rather than labour values. In that case, he would not have opened his Principles with the bold statement: ‘The value of a commodity ... depends on the relative quantity of labour which is necessary for its production, and not on the greater or less compensation which is paid for that labour’ (I, p. 11).

Hollander raises another important question: Did Ricardo or did he not assume commodity and factor substitution in relative price formation? He finds a rather conflicting situation. Ricardo’s characterization of the invariant standard appears to Hollander to rule out substitution relations, for the standard would be unmanageable if the capital structure of the commodities alters with every wage variation. However, several instances appear not only in the third edition (with its celebrated discussion of machinery) but even in the first edition where substitution is discussed. Hollander therefore concludes:

The model was developed [by Ricardo] despite awareness of the phenomenon, on the grounds that the complications would not be ruinous to the basic structure – a theoretical model which illustrated the effect on the rate of profits of rising wage costs may be satisfactory although its assumptions are ‘unrealistic’ (p. 227).

A better interpretation could be that Ricardo, for the value-distribution question, adopted a framework of ‘given’ effectual demand, known methods of production in use and a given (but not a fixed) wage (see above). While changes in these elements and interactions among them were important, these would be dealt with in a broader socio-economic perspective. No rigid price-quantity relations bind these changes in functional forms and there would be no necessity to lay down a priori the extent or direction of the ‘substitution effects’. It would seem, therefore, that while Ricardo did not shy away from discussing changes in methods of production, or in demand composition, etc. he did not have to posit for his theory the specific nature of the substitution effects. This is not a matter of ‘unrealistic assumptions’ but a characteristic of the structure of the underlying theory.

4 'Allocative Mechanisms' in Ricardo

In 'a general overview' Hollander suggests that Ricardo, explicitly or implicitly, relied upon 'demand and supply based allocation mechanisms', along Marshallian lines. More specifically, he argues that Ricardo’s
formulation of the principle of profit rate equalization rests on allocation
governed by supply-and-demand forces, as in the neoclassical theory.
Further, that Ricardo extends these principles to factor-utilization.

In presenting Ricardo's principles of profit rate equalization, Hollander
draws attention to two separate situations in Ricardo. One generating
'an alteration in quantity, and consequent alteration in price' so as 'to
ensure the (unchanged) general rates of wages and profits' and second,
'a disturbance affecting all sectors equally' and also bringing about a
change in the general rate of profit (p. 271). The distinction between
the two cases is highlighted by Hollander in the context of competitive
process of profit rate equalization as well as of the consequences of a
change in wages. He does not, however, provide a satisfactory rationale
for this distinction within the logic of a general equilibrium framework,
which he suggests is Ricardo's. A lame rationale is provided for the
second case (where 'a disturbance' affects the general rate of profit),
suggesting that much of Ricardo's analysis proceeded on the assumption
of identical factor proportions (p. 242) - a suggestion hard to support
by textual evidence.

In fact, these peculiarities of Ricardian procedure can be more consist-
ently fitted into the surplus framework. Ricardo assiduously maintains
a significant distinction between 'market' and 'natural' prices, based on
a characteristic separation of 'temporary' or 'accidental' from 'perma-
nent' or 'stable' forces at work in the economy (I, pp. 90-2). The
'temporary variations' that would quite often arise when supplies do
not match demand in single industries, would result in changes in prices
and temporary differences in profits. This, in turn, would set into motion
'apportionment of capital' whereby the tendency towards profit rate
equalization asserts itself. Ricardo, however, added: 'It is perhaps
very difficult to trace the steps by which this change is effected' (I, p.
89), implying that rigorous analysis of this process was tenuous. Even
more interestingly, he envisages situations where the mere possibility of
altering output is sufficient to reinforce the tendency towards profit rate
equalization, without actual changes in quantities. These cases of single
industries (with individual prices altering and temporary variations in
individual, but not in the general rate of profit) occur mostly in the
context of 'market prices'.

Changes in quantities affect the 'natural price' only through either changes
in the method of production or a change in wage. A change, not
purely accidental, in any one of these two elements alters the 'natural rate
of profit', but not every quantity variation does. Thus a tax or subsidy
would have different consequences on the rate of profits for Ricardo,
depending on whether the commodity taxed enters the wage basket or is
a 'luxury' good. In the latter case, a change in quantity and/or price of the
good is not followed by a variation in the general rate of profits. On the
other hand, Ricardo attempts to show that, with methods of production
unchanged, a change in wages would bring about an inverse variation in
the rate of profits (relative prices remain unaffected only under the simple
labour theory case).
Hollander, however, hopes to establish that the 'natural prices' are themselves an outcome of the process of supply-and-demand mechanism and to show that Ricardo's treatment of demand is closer to that in neoclassical theory than has thus far been recognized. We already have had occasion to observe, however, that Ricardo appears to have a notion of 'effectual demand' similar to that of Smith, as a position of average social demand around which temporary deviations could take place. Emergence of once-for-all changes, in the shape of new commodities, new uses, changes in habits, would call for a revision of effectual demand position. While for the discussion of value and distribution, the social demand would be taken as known, Ricardo (and Smith) allowed for changes in demand arising from the process of accumulation and from shifts in consumption habits, etc. The price-demand response was very rarely treated in isolation, and that, too, more in relation to 'temporary causes and effects'. Hollander himself has to admit that 'there is no evidence that Ricardo recognised the conception of response of demand to relative changes in price assuming unchanged purchasing power' (p. 276), and notes the absence of substitution effect in this sense. No doubt, the effect of a price variation on demand was discussed by Ricardo at specific places (more, in the context of 'market prices'). However, the price responses were neither systematic nor consistent complying with what a supply-and-demand-based theory would require. Hollander has to concede that 'he [Ricardo] insisted on ranges of inelasticity'. Individual vagaries, 'new uses' of commodities, stickiness of habits, 'income' rather than 'substitution' effects – as Hollander calls them – are so predominant in Ricardo's descriptive statements that Hollander has to read specific 'elasticity properties' into individual cases. When we recognize that an 'elasticity property' can be always read into a statement relating price to quantity and a surrogate demand function ascribed to each situation, the exercise loses much meaning particularly when we must note that a general and rigorous supply-and-demand theoretical explanation would have to insist on well-behaved demand (as well as supply) functions all round and the imputed price quantity relations may not obey the properties of such well-behavedness.

Hollander has further to concede that Ricardo 'failed to appreciate the conception of marginal utility'. Hollander's counter-examples to show Ricardo's reliance on utility, indicate that he deemed it to be only a necessary attribute for commodities to possess value, and clearly separated the notion of riches from value. Hollander, however, suggests that 'the absence of a conception of diminishing marginal utility should not be exaggerated. For Ricardo, like Smith before him, was thoroughly conscious of the fundamental role of scarcity in value formation' (p. 278). The examples cited by Hollander are again cases of temporary supply deficiencies, leading to a rise in (market) prices. 'Scarcity itself has a different connotation, it would seem, in Ricardo. As is well known, Ricardo's preoccupation was with commodities that could be reproduced to an unlimited extent with human effort and on which the force of competition exerts itself. Scarcity would, as in the case of land, show itself in the fact that a superior method of production could not
be extended to additional output and methods of unequal productivity would permanently coexist. There could also be 'scarcity' in the sense of deficient supply as a 'temporary' situation in the case of reproducible commodities. Scarcity, moreover, seen as 'difficulty in production' was used as synonymous with greater labour requirement.

Hollander also believes that 'allocation mechanisms' can be extended to include factor-pricing in Ricardo. He attributes to Ricardo 'an implicit assumption throughout much of the analysis' that consequent upon a variety of disturbances, factors are released (and absorbed) in proportion - the profit rate remaining unaltered consequently (p. 293). Hollander has in mind Ricardo's analysis of the effects of taxation and of free corn imports on effectual demand. Ricardo had reasoned that these would cause a redistribution of purchasing power among various parties (government, consumers) and among revenue classes, so that there would be no glut while there could be reallocation of labour and capital. Since, in some contexts, Ricardo presumed no variation in the general rate of profit, Hollander attributes to him the assumption of identical factor proportions in all sectors. Apart from the fact that Ricardo assumes no such thing, Hollander's interpretation here presumes rather than proves that Ricardo was employing a supply-and-demand-based allocation framework. The presumption goes against Ricardo's insistent opposition to Smith's explanation of profit in terms of 'competition of capitals'. Moreover, in the celebrated machinery problem where Ricardo considers displacement of labour by machinery, Hollander himself observes, 'he said little about the further consequences of excess labour on the original wage' (p. 299). Also Ricardo's recurrent and systematic practice of posing situations where 'changes affect factor returns in the particular industries involved but not the general rates', which Hollander sets aside 'as not involving a matter of principle', illustrates characteristically the method of Ricardo in separating temporary (market) prices from natural prices (see pp. 99–100 above). Further, Ricardo nowhere arrives at full employment of labour or of capital as a logical consequence of the 'allocative mechanisms' - a prominent result of the 'neoclassical procedures' of resource allocation.

5 Conclusion

Whether by 'scientific' or 'personal exegesis' - the criteria adopted by Hollander - Sraffa's reading of Ricardo stands. With respect to the first criterion Sraffa's interpretation of the development of Ricardo's theory of profit within the surplus approach helps us understand the peculiarities of Ricardo's theoretical propositions, the form they successively assumed in the development of the profit principle, the manner in which Ricardo envisaged the difficulties, the direction he took in resolving them and, more importantly, the stands he took vis-à-vis his contemporaries (Malthus, McCulloch, Torrens, Mill) on controversial issues. In terms of the personal exegesis, Sraffa's interpretation reveals, quite remarkably,
the route Ricardo chose in his attempts at resolving his theoretical problems, particularly the question of simultaneous interdependency between prices and the rate of profits by adopting analytical short-cuts. Hollander's interpretation leads him continually to resort to discovering a difference between 'Ricardo's formal statements' and 'intentions'. It leads to odd twists and turns in explanations, for example, when Ricardo is thought to be reverting midway to unrealistic and probably faulty constructions (like the corn simplification), or to 'strong cases' even while the more general and theoretically powerful results are supposedly in hand. It fails to explain the peculiarities like the disappearance of the determining role of the farmer's profit rate from the *Principles*, or the doggedly persistent search for a 'sophisticated standard'. On the other hand, Hollander has to attribute assumptions like identical factor proportions in all sectors, or specific 'elasticity properties' to bring Ricardo into the neoclassical fold. Hollander's attempted reconstruction fails to convince.

Notes: Chapter 4

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1 All page references in this chapter when the source is not indicated refer to this work.
2 Hollander's stated purpose in the work is to reduce 'the Ricardo Problem' to 'manageable proportions' (p. 5). He covers in this pursuit, a vast territory, confronting a number of commentaries on Ricardo. His main thrust is, however, two-pronged: one line of argument runs to refute the readings of Ricardo that place him as a major proponent of the surplus theory, viewed as having a distinctly separate structure from the marginalist theories. Hollander nowhere identifies the framework of that theory but contests particular assumptions and interpretations or formulation by different authors, clubbing together diverse constructions serving different purposes (see Appendix B of the book). Piero Sraffa, as the most prominent scholar whose commentaries on Ricardo have been important in the recent revival of classical approach, looms large, sometimes in the background but often in the forefront. The second strand seeks to develop the continuity thesis.
3 David Ricardo's *An Essay on the Influence of a Low Price of Corn on the Profits of Stock* (See *Works IV*, pp. 1–41) was published around 24 February 1815; hereafter referred to as the Essay. References to the *Works and Correspondence of David Ricardo* (1810–23 [1951–73]) are indicated by volume number in roman numerals followed by page number.
4 David Ricardo, *Principles of Political Economy and Taxation* (Works, I); hereafter *Principles*.
5 Here the more important aspects of Sraffa's reading which are explicitly or implicitly contested by Hollander and hence significant for our arguments.
are recorded.

6 Ricardo also wrote to Malthus (as late as on 7 February 1816), 'If I could overcome the obstacles in the way of giving a clear insight into the origin and law of relative or exchangeable value I should have gained half the battle' (VII, p. 20).

7 The difficulty appeared in the form of a consistent measure of heterogenous aggregates: 'Even though nothing has occurred to change the magnitude of the aggregate, there may be apparent changes due solely to change in measurement, owing to the fact that measurement is in terms of value and relative values have been altered as a result of a change in the division between wages and profits' (I, p. xlviii). It also appeared in the case of the measurement of capital (see below).

8 Cf. Letter to James Mill where he writes, 'I know I shall soon be stopped by the word Price' (VI, p. 348).

9 Hollander, on the other hand, characterizes the 'original error' to be Smith's proposition that a rise in corn price raises all other prices (p. 5).

10 A more incidental use of the argument made by Hollander is to conclude that any stimulus provided by the corn law debates for Ricardo's new theory is not a self-evident one' (p. 122).

11 The condition for stability of the measure is seen by Hollander to be 'the stability of the conditions of supply of the monetary medium', although he believes Ricardo 'clouded the issue' in the High Price of Bullion by stating that 'gold and silver like other commodities have an intrinsic value which is not arbitrary but is dependent on their scarcity, the quantity of labour bestowed in procuring them' (III, p. 52).

12 A first reference to the theory of profit occurs in Ricardo's letter to Malthus of 17 August 1813 (VI, pp. 94–5) and a clear statement in a letter to Trower of 8 March 1814 (VI, pp. 103–4).

13 Bosanquet (1810) and Ricardo's Reply to Bosanquet (III, pp. 155–279). Bosanquet had ascribed the rise in prices in the contemporary period to increased taxation.

14 'If the tax were laid upon bread, and in consequence, the wages of labour were raised, the tax would eventually fall on all those who consumed the produce of the labour of man. It would make no real difference to these consumers if they had at once paid the amount of such tax into the exchequer, or if it had gone through the circuitous channel which it would then take'. Further, 'nor would any additional sum be required. Government would be in the daily receipt of a portion of taxes, whether it was paid to the exciseman or to the tax-gatherer, and their expenses in the one case would be precisely the same as in the other. Whatever the government expended would cause a diminished expenditure in the people to the same amount' (III, p. 245).

15 'If any rise in the price of commodities is caused in the way here supposed it must be by diminishing the amount of commodities, which will make the money which circulates them more relatively abundant' (III, p. 300).

16 'Commodities measure the value of money in the same manner as money measures the value of commodities' (III, p. 104).

17 Ricardo reasons: 'Whatever the government expended would cause a diminished expenditure in the people to the same amount: the same amount of commodities would be circulated, and the same money would be adequate to their circulation' (III, p. 243). In Notes on Trotter, he writes 'Taxation does not require any addition of money, or if any so little as not to be worth
computing' (III, p. 385).

18 '... Whatever, therefore, lowers the price of produce is injurious to him [the farmer] ... The landlord will gain a great part of what the farmer loses' (III, p. 137).

19 A similar theme reappears in a later work, *Protection to Agriculture* (1822) (IV, pp. 229–30; also p. 257).

20 Evidently, Hollander has Piero Sraffa's explanation of the rational foundation of Ricardo's argument in mind (see pp. 78–9 above). His wording, however, is misleading: first, Sraffa does not attribute to Ricardo the 'assumption' in the strict sense of the term (see Garegnani, 1982). Also while Sraffa indicates a turning point when the basis of the argument shifts from quantities to values, the surplus principle underlying the profit rate determination is preserved.

21 cf. (VI, 103–4). 'I contend that the arena for the employment of new capital cannot increase in any country in the same or greater proportion than the capital itself, unless capital be withdrawn from the land — unless there be improvements in husbandry — or new facilities be offered for the introduction of food from foreign countries, that in short it is the profits of the farmer which regulate the profits of all other trades ...' In an earlier letter of 17 August 1813, to Malthus (VI, pp. 94–5), Ricardo refers to 'my theory' and Trower refers to 'your very interesting papers on the profits of capital' in his letter of 2 March 1814 (VI, p. 102). The 'papers' are not extant.

22 Hollander needs to justify attributing to Ricardo the 'sophisticated variation' of the farmer's profit principle while replacing his directly worded expression of the principle. A critique of Hollander on these issues is to be found in Garegnani (1982).

23 See, for example, VI, pp. 94, 104, 108–9, 113–15, 119, 133, 144, 162.

24 See VI, pp. 111, 118, 139–40, 152, 155.

25 Ricardo, we see later, tends to identify demand with 'quantity consumed' and production with 'power to purchase'.

26 'Although this argument', Sraffa remarks, 'is never stated by Ricardo in any of his extant letters and papers, he must have formulated it either in his lost “papers on the profits of capital” of March 1814 or in conversation' (1, p. xxxi). Hollander suggests, thereby giving an erroneous impression, that this statement of Ricardo 'according to Piero Sraffa, implies a model yielding the determining role of agricultural profits by assuming that agricultural capital and output both consist of the same physical commodity.' (p. 105, italics added). He suggests that Ricardo's definitional statement could hold also in value terms — which is true indeed. However, Hollander gives an entirely different twist to Piero Sraffa's cautious and well-chosen expressions by using phrases like 'implied', 'model', 'assuming', as if the statement of Ricardo being quoted is taken by Sraffa to correspond exactly to the 'rational foundation' he offers.

27 'Ricardo's treatment of the rate of profit cannot be fully appreciated unless the position of his opponent regarding these issues is kept in mind'. Also, that 'Ricardo clearly believed that the success of his own theory of profits implied the corresponding failure of the entire Malthusian theory of effective demand, wherein the profit rate would be influenced by capital accumulation by way of a relative variation in aggregate demand' (pp. 125–26).

28 On Ricardo's pointing out that Malthus was raising a new and separate point, Malthus insists that the diminution of capital is a necessary consequence of import restrictions.
Malthus elaborates the phrase in the next sentence: as 'the proportion of production to the consumption necessary for that production' (VI, p. 111).

'If it [is] necessary to employ a hundred days labour instead of fifty, in order to produce a certain quantity of corn, there seems to be no reason whatever that the person who possesses an accumulation sufficient to make the necessary advances should have a less remuneration for his capital' (VI, p. 111). See p. 89 above for Ricardo's response to Malthus and Hollander's use of this illustration.

It is significant that Malthus adds: 'The more I reflect on the subject, the more firmly I feel convinced, that it is the state of capital, or the general profits of stock and interest of money, which determines the particular profit upon the land; and that it is not the particular profits or rate of produce upon the land, which determines the general profits of stock and the interest of money' (VI, pp. 117-18, italics added).

Further, he writes 'I consider the wants and tastes of mankind as unlimited. We all wish to add to our enjoyments or to our power. Consumption adds to our enjoyments, accumulation to our power, and they equally promote demand' (VI, pp. 134-135).

Malthus writes: '... Upon the supposition that a greater effective demand means a greater excess of the price of produce above the expence of production, you would surely allow that effective demand would always be greatest when the quantity of capital was comparatively the smallest, or the profits of stock highest' (VI, p. 142). We note that this is hardly a theory of aggregate or effective demand; rather Malthus proposes only alternative vocabulary to describe a situation. Ricardo was to remark in his Notes on Malthus 'What Mr Malthus calls a demand for capital I call high profits' (II, p. 331).

'... improvements in agriculture, or in machinery, which shall facilitate or augment production, will, according to my proposition, increase profits, because "it will augment production compared with the means necessary to that production" ...' (VI, p. 145).

Malthus had again asserted this in his letter of 23 November 1814. 'The diminution of wages is a more directly necessary consequence of a difficulty in obtaining food, than the diminution of profits' (VI, p. 155).

'The capitalist "who may find it necessary to employ a hundred days labour instead of fifty in order to produce a certain quantity of corn" cannot retain the same share for himself unless the labourers who are employed for a hundred days will be satisfied with the same quantity for their subsistence that the labourers employed for fifty had before. If you suppose the price of corn doubled, the capital to be employed estimated in money will probably also be nearly doubled - or at any rate will be greatly augmented ... how it is possible to conceive that the rate of his profits will not be diminished?' (VI, pp. 114-15). See Malthus's example in note 30 above.

Garegnani (1982), interprets the non-proportional rise in money value of capital to suggest the inclusion of non-corn elements in wage where capital is all wage-advances.

In fact, as Sraffa observes, Ricardo was often to use the phrase 'Value of wages' in the sense of 'proportion of total product going to wages' (I, p. lii).

Elsewhere defining 'natural price' Ricardo writes: 'By natural price I mean the usual price as is necessary to supply constantly a given demand' (II, p. 227).
The just-cited passage continues: 'Consequently his percentage of profit will be diminished if he values his capital, which he must do, in money at the increased value to which all goods would rise in consequence of the rise of the wages of labour' (VI, p. 120).

The following passage from Ricardo's letter of 18 December 1814, to Malthus is typical: 'I have been endeavouring to get you to admit that the profits on stock employed in Manufactures and Commerce are seldom permanently lowered or raised by any other cause than by the cheapness or dearness of necessaries, or of those objects on which the wages of labour are expended. Accumulation of capital has a tendency to lower profits. Why? because every accumulation is attended with increased difficulty in obtaining food, unless it is accompanied with improvements in agriculture ...' (VI, p. 162).

See note 36 above.

'In this state of society, when the profits on agricultural stock are fifty per cent, the profits on all other capital, employed either in the rude manufactures ... or in foreign commerce ... will be also, fifty per cent' (IV, p. 12).

'If the profits on capital employed in the trade were more than fifty per cent, capital would be withdrawn from the land to be employed in trade. If they were less, capital would be taken from trade to agriculture' (IV, p. 12).

Interestingly a clear watershed dividing the two parts can be identified when Ricardo, moving into the controversial arena, begins with a reference to the area of agreement between himself and Malthus (IV, p. 15 n).

Ricardo argues: 'Not only is the situation of landlord improved, (by the increasing difficulty of procuring food, in consequence of accumulation) by obtaining an increased quantity of the produce of the land, but also by the increased exchangeable value of that quantity' (IV, p. 20).

'It has been thought that the price of corn regulates the prices of all other things. This appears to me to be a mistake ... Commodities, I think, cannot materially rise or fall, whilst money and commodities continue in the same proportions, or rather whilst the cost of production of both estimated in corn continues the same' (IV, p. 21n).

Hollander's rather involved attempt to reconstruct an alternative explanation meets difficulties. He argues: 'if the agricultural margin is fixed, the productivity of labour (and capital) on land is unchanged and so accordingly is the price of corn. If, then, the money-wage rate is dependent upon the corn price alone, it is too constant, so that the agricultural profit rate remains unchanged. In this case the only way equality across the board can be achieved is if the profit rate elsewhere comes into line as a result of expansion of commerce and manufacturing' (p. 145). There are many ambiguities in the logical sequence of results. Evidently, wages consist of corn alone since the money wage depends upon corn price alone. Also capital here should consist of corn since he considers the corn price to be fixed with the fixity of the agricultural margin without reference to manufacturing prices. Would it not seem that Hollander is implicitly reaching out to a corn rate of profit?.

In an important letter to Horner (VI, pp. 186–8) Malthus had pinpointed that 'the fault of Mr Ricardo's table which is curious, is that the advances of the farmer instead of being calculated in corn, should be calculated either in the actual materials of which the capital consists, or in money which is the best representative of a variety of commodities'.

At one stage, while Ricardo concedes Malthus's argument to be ingenious, he continues: '... but I think you err in supposing it possible that the
proportion of the whole corn expenditure, to the produce obtained, can fall, with an increase of the price of corn. The two are incompatible – either the whole corn expenses of production will be increased or not. If they be, the price of corn will rise – but if they be not I can see no reason for a rise in the price of corn’ (VI, pp. 192–3). Here, Ricardo shows very little appreciation of the relative value question which is a hallmark of Principles.

51 For example, in an illustrative example (VI, p. 193) where Ricardo first supposes the price of corn to increase in proportion to the number of men employed, he adds: ‘... the price of corn would not I think rise in proportion to the greater number of men employed but to the greater amount of wages paid’ (VI, p. 193). This stands in bold contrast to the very opening statement of Ricardo in Principles that the value of a commodity does not depend ‘on the greater or less compensation which is paid for labour’ (I, p. 11) (See Garegnani, 1982). Also when Ricardo discusses the applicability of his ‘Table’ with Malthus (letter dated 21 April 1815, VI, p. 220), it is striking that even after stating the labour theory of value in its incipient form, he harks back to the quantities of the ‘Table’.

52 It is interesting to compare this with Sraffa’s reading of the role of labour theory. ‘The surplus principle of profit determination is advanced from the corn case to a general one as, with the adoption of the labour theory, heterogenous aggregates like output, wages and capital entering that determination can be all reckoned in labour terms. Labour is the ideal standard sought corresponding to that of theory of value’. (see I, p. xxxii).

53 Hollander having maintained so, adds: ‘In his [Ricardo’s] view Smith went too far in modifying his original emphasis upon labour input as an explanation of exchange value’ (p. 193), suggesting that Ricardo’s objection is to the extent of modification. Such a suggestion is in line with Hollander’s general view that adoption of labour theory is justified mainly on empirical grounds (see below).

54 Hollander supports the view of Piero Sraffa, in saying ‘between the first and the third edition of Principles, there was no retreat from the strict labour theory’ (p. 217, italics added), although on p. 209 he states that Ricardo ‘has never formulated a strict labour theory’. It is interesting that Hollander goes on to argue that ‘the quantitative significance’ of modifications is actually increasingly played down in subsequent years’, using Ricardo’s arithmetical illustrations in support. A contrast between the basic arguments of Hollander and Sraffa against the ‘weakening’ is evident when we look closely at their interpretation of the change of wording in the third edition from the first which formed the ground for Cannan’s suggestion about ‘the weakening’. (In the third edition, ‘almost exclusive determination’ of relative values by labour replaced ‘the sole determination’ in the first.) While Sraffa explains that the change was necessitated by the properties of the different invariant standard adopted in the third edition – and hence by requirements of theoretical consistency – Hollander attributes it to Ricardo’s ‘need for greater care in avoiding excessively strong statements, which he had sometimes allowed to stand in the original edition’ (p. 217, n. 77). This again links up with Hollander’s interpretation of the choice of labour theory as primarily dictated by pragmatic, empiricist considerations.

55 Ricardo asks: ‘Is it not clear then that as soon as we are in possession of the knowledge of the circumstances which determine the value of commodities, we are enabled to say what is necessary to give us an invariable measure of value?’ (IX, p. 358).
... Ricardo seems to have missed the characteristic feature of Torrens's approach to value which in effect amounts to an explanation of the structure of prices solely in terms of accumulated labour, current labour playing no part at all' (p. 211).

... These capitals are not the same in kind ... and if they themselves are produced in unequal times they are subject to the same fluctuations as other commodities. Till you have fixed the criterion by which we are to ascertain value, you can say nothing of equal capitals' (IX, p. 360).

In the 'Absolute Value and Exchangeable Value', Ricardo attempted to reduce price to labour remaining dormant over various periods and sought to define the standard in terms of an average time duration over which advances are made. However, Ricardo recognized that 'the proportions in which immediate labour and accumulated labour enter into different commodities are exceedingly various and will not admit of definite enumeration' (IV, p. 379, italics added).

Hollander, however, is of the contrary opinion (p. 238).

'What we want is a standard measure of value which shall itself be invariable, and therefore shall accurately measure the variations of other things ... Whatever commodity any man selects as a measure of real value, has no other title for adoption, but with being a less variable commodity than any other' (II, pp. 29–30).

Hollander, therefore, opposes the view of Blaug (1958, p. 70) that the substitution effects of the third edition is an 'unintegrated afterthought' (p. 225).

Hollander equates the approach also with Walrasian general equilibrium.

'A disturbance limited to a single industry, such as a change in input coefficients or a tax or subsidy, will generate an alteration in quantity, and consequent alteration in price, to re-establish the original return on capital in that industry and assure that in the new long-run equilibrium price will again cover costs reckoned on the basis of the (unchanged) general rates of wages and profit. But a disturbance affecting all sectors equally (such as a change in wage rate) will have no differential effects on profitability at going prices and therefore will generate no changes in activity and will thus leave prices unchanged. The only effect will be on general profits; the unchanged prices will still cover costs but the make-up of costs will be altered' (p. 271).

For a discussion, see Eatwell (1975), Garegnani (1984), Bharadwaj (1978a) and Roncaglia (1978 and 1982).

'In the ordinary course of events, there is no commodity which continues for any length of time to be supplied precisely in that degree of abundance, which the wants and wishes of mankind require, and therefore there is none which is not subject to accidental and temporary variations of price'. Further, 'It is only in consequence of such variations, that capital is apportioned precisely, in the requisite abundance and no more, to the production of the different commodities which happen to be in demand' (I, p. 88, also p. 119).

The 'natural rate of profit' is defined when the effectual demand, the methods of production and wage are known. It is not necessary that the natural rate of profit prevails actually or that the actual rates of profit are uniform in all sectors. This is clear in all the classical writers, including Ricardo. If the methods of production remain unchanged, the movement in the rate of profit when wage changes, is along the same wage profit frontier; if the methods change, the frontier itself would shift.
CONTROVERSY OVER RICARDO'S THEORY

67 Ricardo's unequivocal rejection of utility governing value in his comment on J. B. Say, is deemed by Hollander 'as hasty in his own terms' (p. 278 n. 22).
68 See Bharadwaj (1978b), Chapter 6 below) where the classical distinction between use value and exchange value is emphasized and Marshall's attempt to read the 'total/marginal' distinction in Ricardo is criticized.
69 The classical value and distribution system also involves simultaneous determination of prices, and the rate of profit in a different theoretical framework from that of Walras.

References: Chapter 4

Dobb, M. H. (1973), Theories of Value and Distribution since Adam Smith (Cambridge: Cambridge University Press)
Hollander, S. (1975), 'Ricardo and the corn profit model: reply to Eatwell', Economica, XIII (May), pp. 188-202
Hollander, S. (1979), The Economics of David Ricardo (Toronto: Heinemann)
Malthus, T. R. (1815b), An Inquiry into the Nature and Progress of Rent and the Principles by which it is Regulated (London: Murray)
Malthus, T. R. (1836), Principles of Political Economy, 2nd edn, with additions and an original memoir (London: Murray)
Mill, James (1821), Elements of Political Economy, 1st end (London: Bohn)
Roncaglia, A. (1978), Sraffa and the Theory of Prices (New York: Wiley)
Trotter, C. (1810), The Principles of Currency and Exchange (London)
Walras, L. (1926), Elements of Pure Economics, ed. by W. Jaffe (London: George Allen & Unwin)