**RICARDO ON THE RELATIONSHIP BETWEEN PRICING AND DISTRIBUTION:
A SURVEY OF THE SECONDARY LITERATURE**

by

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ABSTRACT

Ricardo's theory of value and distribution has been the subject of intense controversy in recent years. The aim of this essay is to review certain themes within this debate, drawing a contrast between interpretations which entail a logical separation of pricing and distribution and those which suggest their interdependence. In addition, the wider implications of this debate, especially for Ricardo's place in the history of economic thought, are explored. The positions of different commentators regarding specific areas of Ricardo's thought which are crucial to an understanding of the relationship between pricing and distribution - the corn-model interpretation of his early theory of profits, the question of whether he held a subsistence theory of wages, and the role of demand and resource allocation mechanisms in his theory - are examined. This is followed by a more general assessment of the rival interpretations. The major conclusions are in favour of the corn-model and exogenous-wage interpretations. The attribution to Ricardo of a "sophisticated" theory of demand is rejected. More generally, it is concluded that Ricardo is better classified within a 'surplus' tradition on the basis of the analytical problems he addressed. Finally, it is suggested that many of the differences between commentators are attributable to an 'absolutist' approach, and that studying economic thought within its historical context may be more fruitful.

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CHAPTER 1

INTRODUCTION

David Ricardo (1772-1823) is widely regarded as one of the most important figures in the history of economic thought. His significance is reflected in the continuing controversies which are a prominent feature of the large and growing volume of exegetical literature seeking to interpret his theories. The most fundamental of these debates concerns the theory of value and distribution, which occupies a central role in Ricardo's economics: the first chapter of his major treatise (Ricardo, I)⁽¹⁾ is devoted to value, while he refers to distribution as ".....the principal problem in Political Economy" (*ibid*, 5). In general terms, a distinction can be drawn between interpretations, such as those of Dmitriev (1974), Sraffa (1951), Dobb (1973), Garegnani (1984) and Bharadwaj (1988), which place Ricardo within a tradition of economic thought in which the determination of the distribution of income is logically independent of the process of the determination of product prices, and those, most notably that of Hollander (1979; 1987), which regard distribution and pricing as being simultaneously determined within his system. The latter view emphasises the affinity of Ricardo's theory with the general equilibrium framework of neoclassical economics, while the former suggests closer links with the 'surplus approach' of the Physiocrats and Marx (Garegnani, 1984), and has been used as an inspiration for the development of the contemporary Sraffian school of economic theory. Our review is structured around this fundamental distinction⁽²⁾, and has the aim of understanding the sources of these divergent interpretations and of exploring some of their implications,

(1) All references to Ricardo are to Ricardo (1951-73).

(2) An alternative formulation of this distinction (adopted by Walsh and Gram, 1980) treats both classical and neoclassical economics as systems of general equilibrium, but retains the idea of their separateness.

as well as of critically evaluating the contributions of the participants in the debate.

As our emphasis is on the *relationship* between the theories of value and distribution, we shall not examine debates concerning the theory of value *per se*, or those relating to issues of growth and capital accumulation. Our main areas of interest are the dispute regarding Sraffa's 'corn-model' interpretation of Ricardo's early theory of profits, the question of whether Ricardo is best viewed as having assumed a fixed or a flexible wage, and the role of demand in Ricardian theory. Thus, some of our concerns overlap with those of Peach's (1988) recent survey. However, we shall concentrate more narrowly on recent literature and utilise the distinction outlined above in order to clarify the theoretical and historiographical points at issue. This survey also provides an opportunity to evaluate Peach's own contributions (1984; 1986; 1990) to the debate, to update the discussion by considering more recent works, and to explore the broader implications of these divergent accounts of Ricardo's significance in the history of economic thought.

This topic is of great importance for a number of reasons beyond the intrinsic value of understanding Ricardo's economics. It poses questions about the nature of his contribution and his place in the history of economic thought - whether he represents a "detour" on the road to modern neoclassical economics, as Schumpeter (1954, 474) asserts, whether he forms part of a 'surplus' approach distinct from mainstream economics, as Garegnani (1984) suggests, or anticipates neoclassical general equilibrium theory, as Hollander (1979) claims. It also has a bearing on our understanding of other economists, such as the 'dissenters' (Hollander, 1977), John Stuart Mill, Marx and Sraffa. More generally, this debate casts

light on broader aspects of the history of economic thought - for instance, on the question of whether two streams of economic theorising can be identified, or whether all economic thought can be accommodated within one unified analytical framework. The methodological issue of whether the history of economic thought should be studied from the standpoint of prevailing economic doctrine (the practice followed by Schumpeter and Hollander, among others) or within its historical context (as advocated by Dasgupta (1985)) is also relevant; one of our conclusions is that the widespread adoption of the former approach is one cause of the divergence in the interpretations of Ricardo. Finally, this debate also pertains to recent theoretical controversies, especially in the field of capital theory. The substantive issues addressed by Ricardo in his treatment of value and distribution thus remain relevant, as illustrated by the capacity of Ricardian economics to inspire a revival of the classical paradigm in the form of Sraffa (1960), thereby giving rise to a significant contemporary school of economic thought⁽¹⁾.

We have chosen to stress the question of the independence or interdependence of product prices and income distribution in Ricardo's theory as the most fundamental issue dividing his commentators. This choice reflects the far-reaching consequences for our understanding of Ricardo's thought and place in the history of economic thought implicit in the adoption of one or the other of these positions. These consequences can be illustrated by considering the varying responses of different commentators to the critique of the Ricardian approach to value and distribution advanced by Walras (1954; Hollander, 1979, 9; Porta, 1985,

(1) Some commentators (eg Hollander, 1979, 684f; Hicks, 1985; Tosato, 1985), however, question the extent of the kinship between Ricardian and Sraffian theory.

217f). Walras (1954, 424-5) represents the classical⁽¹⁾ theory of value by an equation of the form

$$P = \Pi + W + R$$

where

P:	Price
II:	Profits
W:	Wages
R:	Rent

Wages are exogenously fixed at the subsistence level, and, at the margin of cultivation, $R = 0$. Even so, Walras argues, we are left with only one equation with which to determine both P and Π , and, hence, the classical system is under-determined. He concludes that "...the English economists are completely baffled by the problem of price determination" (*ibid*, 425). Clearly, Walras' critique would, if accepted, invalidate the entire approach to the theory of value and distribution exemplified by Ricardo.

There have been two main approaches to the defence of Ricardo's theory from the strictures of Walras. The first can be illustrated by the interpretation proposed in 1898 by Dmitriev (1974, 50f). He expresses the theory in the form of a series of equations for the cost of production of each of n commodities (*ibid*, 58f). This yields a system of n equations in $n+2$ unknowns - the n prices, the price of the wage-good (ie corn), and the rate of profit. If one of the prices is set equal to unity (as the *numéraire*), we still have n equations in $n+1$ unknowns, and Walras' criticism appears to be borne out. However, Dmitriev (1974, 59) notes that one of these n equations - that representing the price of the wage-good - can be used to determine the rate of profit directly, independently of the other equations. Having solved for the rate of profit (which is determined by the technical conditions of production in the wage-goods industry), it is possible to solve

(1) He refers (1954,419) specifically to John Stuart Mill, but his characterisation of the 'English School' applies equally to Ricardo.

the remaining $n-1$ equations for the $n-1$ relative prices (Porta, 1985, 218). Thus, Dmitriev's interpretation not only demonstrates the logical consistency of Ricardo's theory, but also involves the separation of distribution and pricing, inasmuch as the determination of the rate of profit is logically prior to that of relative prices⁽¹⁾.

The famous 'corn-model' interpretation of Sraffa (1951) can also be placed in this tradition. In his interpretation of Ricardo's theory of profits in the 1815 *Essay on Profits* (Ricardo, IV, 1-42), Sraffa (1951, xxxi) suggests that Ricardo's apparent belief in the determining role of agricultural profits had a "rational foundation" (*loc.cit.*) in the idea that, as both the output and input of the agricultural sector consists of corn, its rate of profit can be determined as a physical ratio. Assuming an uniform rate of profit, the prices of products in other sectors of the economy must adjust in order to bring their rates of profit into conformity with that in agriculture. Such a 'corn-model', assuming a given labour force (L) and corn-wage (w), and the absence of fixed capital, can be represented as follows:

$$C = f(L)$$

is the production function for corn (C), where

$$f'(L) > 0 \text{ and } f''(L) < 0$$

Rent (R) is determined by the "marginal principle" (Kaldor, 1955-6, 84):

$$R = C - L \cdot f'(L)$$

The wage bill (W) equals the stock of circulating capital (K):

$$\begin{aligned} W &= K \\ &= Lw \end{aligned}$$

(1) This interpretation also makes it clear that the separation of pricing and distribution does not depend on the special assumptions under which a labour theory of value holds.

The level of profits (Π) is determined as a residual:

$$\begin{aligned}\Pi &= C - R - W \\ &= L \cdot f'(L) - L \cdot w\end{aligned}$$

Hence, the corn rate of profit (r) is

$$\begin{aligned}r &= \Pi/K \\ &= (f'(L)/w) - 1\end{aligned}$$

This model has been generalised to the two-sector case by Pasinetti (1974, 1-28). In his formulation, the economy is divided into a sector producing the wage-good (corn) and another producing a luxury good (gold). Nevertheless, the rate of profit is

$$r = (f'(L_1)/w) - 1$$

where L_1 is the quantity of labour devoted to corn production. Thus, r depends only on the technical conditions of production in the wage-goods industry (*ibid*, 11), a result very similar to Dmitriev's. Moreover, the 'corn-model', in Sraffa's (1951, xxxiii) words, "....rendered distribution independent of value", and this feature generalises to Pasinetti's model, which represents the mature thought of Ricardo in the *Principles*. Accordingly, we can classify the interpretations of Dmitriev, Sraffa and Pasinetti together as being reconstructions of Ricardo's thought which are both logically coherent (and, in particular, free of the error attributed to it by Walras) and entail the separation of pricing and distribution.

The second approach to exonerating Ricardo from Walras' charge can be traced back to Marshall (1959; Porta, 1985, 219-20), who emphasised the role of demand in Ricardo's value theory. His denial that Ricardo could adequately be represented as holding a cost of production theory renders

Walras' critique inapplicable. Hollander (1979) has recently revived this interpretation, claiming

.....that Ricardo is better defended against Walras's charge that his system is underdetermined along Marshallian lines than those suggested by Dmitriev (*ibid*, 271).

This defence is based on the argument that Ricardo did not in fact separate pricing from distribution (*ibid*, 10) and that, consequently, his economic theory is best viewed as a general equilibrium system, analogous to that of Walras, in which prices are determined simultaneously with wages and profits. This 'general equilibrium' reading of Ricardo has been endorsed by Morishima (1989), using a mathematical approach.

As we have seen, commentators on Ricardo can be classified into two schools, with the relationship between pricing and distribution being their most fundamental point of disagreement. In the chapters to follow, we shall examine these two views in greater depth by focussing on specific aspects of Ricardo's economics which are crucial to an understanding of this relationship. In Chapter 2, we review the debate surrounding his early theory of profits. Chapter 3 examines his theory of wages, and Chapter 4 concentrates on the role of demand. Finally, in Chapter 5, we draw the conclusions that emerge from these debates and explore their general implications for the history of economic thought.

CHAPTER 2

RICARDO'S EARLY THEORY OF PROFITS

In this chapter, we focus on the theory of profits developed by Ricardo in the 1813-14 correspondence with Malthus and in his *Essay on Profits*. In particular, we shall compare Sraffa's (1951) 'corn-model' interpretation with the alternative reconstruction, in terms of money variables, offered by Hollander (1973; 1975; 1979; 1983a; 1985). This issue is of central importance for our wider inquiry into the relationship between pricing and distribution in Ricardian theory, not only because the 'corn-model' in itself separates the two, but also due to the light the debate can shed on Ricardo's mature theory of profits. As Eatwell (1975, 182) suggests, "....it is the interpretation of Ricardo's whole theory of value and distribution that is at issue...." in this debate.

Sraffa's formulation of the 'corn-model' interpretation (introduced in Chapter 1) implies that the general rate of profit, given the margin of cultivation⁽¹⁾, is determined by the conditions of production in agriculture. Sraffa marshalled considerable evidence for this view, expressed in Ricardo's (VI, 104) statement that "....it is the profits of the farmer which regulate the profits of all other trades". Malthus seems to be refuting a 'corn-model' argument when he suggests that

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....(*ibid*, 117).

(1) It is sometimes suggested (eg O'Brien, 1981, 364) that demand enters into the determination of profit through its influence on the margin of cultivation. However, within the framework of a 'corn-model', the labour force and the real wage are exogenous, and hence so is the demand for corn.

Further corroboration is provided by Ricardo's statement that "the rate of profitsmust depend on the proportion of production to the consumption necessary to such production" (*ibid*, 108), and by his use of a numerical example in the *Essay* (IV, 17) which relies on the expression of both capital and output in terms of corn. Thus, while conceding that this argument is never stated by Ricardo in any of his extant letters and papers (Sraffa, 1951, xxxi), Sraffa felt justified in regarding the 'corn-model' as "a rational foundation" (*loc.cit.*) for Ricardo's early theory of profits. Later, in the *Principles*, the determining role of agriculture is abandoned for a more general theory in which the wage-goods sector performs this function, and labour, rather than corn, appears as both input and output.

Hollander's critique of the 'corn-model' interpretation is based largely on his view of Ricardo's theory of wages⁽¹⁾: not only does he argue that the wage basket includes manufactured goods (1979, 134), but maintains that, in general, Ricardo took it to be variable rather than fixed (*ibid*, 11). On these grounds, he rejects the determining role of the profit rate in agriculture within the early theory of profits (*ibid*, 132). In the absence of such a role, the 'corn-model' becomes redundant. In its place, Hollander (1973; 1979, 113ff) presents an alternative reconstruction of Ricardo's thought in this period, stressing ".....a consistent emphasis upon the role of the money-wage rate in determining the general rate of profit" (*ibid*, 129, *italics in original*). In this reconstruction, Ricardo initially appears as an adherent of Adam Smith's theory that the rate of profit is determined by the "competition of capitals" (ie by the interaction of the supply of and demand for capital). It was on this basis that he rejected the concept of diminishing returns put forward by Trotter (*ibid*, 113). Subsequently, however, Ricardo

(1) This is dealt with in more detail in Chapter 3.

abandoned the Smithian doctrine because of its incompatibility with the quantity theory of money⁽¹⁾. He then incorporated the principle of diminishing returns into his own analysis, combining this with the constancy of price derived from the quantity theory (*ibid*, 118). As cultivation is extended, the cost of producing corn rises, causing its price to rise. Consequently, money wages must rise⁽²⁾. Assuming a constant volume of money, this increase in costs cannot be passed on in the form of higher prices, and thus the general rate of profit falls. This, in essence, is Hollander's (1973, 268; 1979, 132) rationalisation for Ricardo's assertions about the regulatory role of the agricultural sector. Whether agricultural productivity will *determine*, rather than merely influence, the general profit rate then depends on the composition of the wage basket (*loc. cit.*; 1973, 264-5).

Hollander's thesis has been subjected to intense criticism by defenders of the 'corn-model' approach. The distinction between money wages and real wages drawn by Hollander has been questioned by Eatwell (1975, 182-3) and Roncaglia (1985, 184) on the grounds that, for Ricardo, 'money' refers to commodity-money (such as gold), the value of which depends on its cost of production. The logic of Hollander's reconstruction has also been challenged, most notably by Garegnani (1982; 1983a) and Bharadwaj (1983). For instance, they dispute the role of the quantity theory of money in Ricardo's rejection of Smith's belief in a general price rise following an increase in the price of corn. Hollander (1979, 111) refers to the statement by Ricardo that an increased money supply is unnecessary when taxation of bread causes higher prices, and derives the implication that, in all other

(1) For the general price level to increase following a rise in the price of corn, the volume of money would have to increase proportionately.
 (2) The real wage, in the long run, must remain constant through the operation of the Malthusian population mechanism (Hollander, 1973, 265).

cases, a rise in the money supply would be required for an increase in the price level. This derivation⁽¹⁾, it is argued (Garegnani, 1982, 75-6; Bharadwaj, 1983, 16-17), is dubious, especially as Ricardo seems to leave other possibilities open (*loc.cit.*). Ricardo's rejection of a general price rise, according to Garegnani (1982, 76), was based not on the quantity theory, but rather on the difficulty of production of gold remaining unchanged. Bharadwaj (1983, 17, 26-7) makes the cogent point that Ricardo lacked a theory of value during the period under consideration, and thus could not have formulated an analysis in terms of prices and money wages, as Hollander alleges. The 'corn-model', on the other hand, determines the rate of profit independently of valuation.

It is clear from the preceding account that Hollander's rejection of the 'corn-model' interpretation has been highly controversial (as is the case with his account of Ricardo as a whole). As with much recent debate on Ricardo, the nature of the disagreement can be illuminated by examining the wider implications of each position. In Sraffa's interpretation profits are initially determined as a physical residual. While the 'corn-model' disappears after the *Essay* (Sraffa, 1951, xxxi), the separation between pricing and distribution is retained on different grounds. On the other hand, Hollander's interpretation introduces prices into the analysis *ab initio*, thereby imbuing it with a 'general equilibrium' character.

Moreover, Ricardo insists in the *Principles* that the profit rate depends only on the conditions of production in the wage-goods industry:

(1) Hollander's implication takes the general form:
 If A (ie taxation), then not B (ie increased money supply)
 implies
 If not A, then B.
 In general, of course, this is invalid.

It has been my endeavour to shew throughout this work, that the rate of profits can never be increased but by a fall in wages, and that there can be no permanent fall of wages but in consequence of a fall in the necessaries on which wages are expended (I, 132).

This has suggested to many commentators that Ricardo generalised the results of the 'corn-model' to the economy as a whole. Hollander (1979, 255f) firmly rejects this view on the grounds that Ricardo never subscribed to a 'corn-model' theory in the first place. Nevertheless, this aspect of the debate highlights its relevance for the interpretation of Ricardo's entire oeuvre.

Before evaluating the 'corn-model' controversy, we shall briefly consider two recent attempts to develop interpretations which espouse neither Sraffa's nor Hollander's view. Particularly interesting is the contribution of Faccarello (1982), who rejects the 'corn-model' interpretation on the basis of the textual evidence that wages do not consist entirely of corn, and suggests viewing the 1813-14 correspondence within the context of the clash between the natural price and supply and demand theories of Ricardo and Malthus respectively. He explains Malthus' remarks implying that Ricardo had used 'corn-model' reasoning as a misattribution to Ricardo on the part of Malthus, due to the latter's inability to grasp the former's natural price approach (*ibid*, 134-5). Regardless of the validity of his interpretation, Faccarello's emphasis on the historical context of the debate is noteworthy.

Another original contribution has been made by Peach (1984; 1986), who argues that Ricardo continued to hold to Smith's proposition regarding a general rise in prices following a rise in the price of corn throughout the 1813-14 correspondence. He denies that Ricardo's notion of "regulation"

(of the profit rate by agricultural profits) is equivalent to "unique determination" (1984, 735) and hence rejects the 'corn-model' interpretation as "....a figment of Sraffa's imagination" (*ibid*, 750). Peach's interpretation has been criticised (Hollander, 1986; Prendergast, 1986) on the grounds of a lack of textual support. In particular, Hollander (1986, 1093) points out that less-than-proportional price rises are assumed by Ricardo in the 1814 correspondence. This is inconsistent with the Smithian view, which requires that increases in the price of corn be passed on in full: otherwise, the price of corn cannot determine the general price level, as Smith believed. Prendergast (1986) claims that Peach's interpretation cannot explain the fall in manufacturing profits, which is clearly one of Ricardo's major conclusions. In addition to these weaknesses, Peach's interpretation abandons the search for logical consistency in Ricardo's thought and thereby violates the principle of charity in textual interpretation.

Although many commentators have abandoned the view that Ricardo ever adhered to a 'corn-model' theory of profits, recent studies (Langer, 1982; De Vivo, 1985) show that such a concept was in widespread use among his contemporaries. Indeed, Skourtos (1991, 226) concludes that

.....the idea of determining the rate of profit in agriculture on the ground of the assumed homogeneity of input and output was deeply rooted in the classical tradition.

In view of this, it may be argued that the 'corn-model' remains an helpful conceptual tool in understanding Ricardo, especially as even Hollander (1975, 201) does not question the model's usefulness.

To conclude, then, we find Bharadwaj's (1983) objection to Hollander's reconstruction - namely, that Ricardo formulated his theory of profits before developing a theory of prices which would have enabled him to reason in terms of money variables - to be decisive. That Ricardo's thought followed such a sequence is clear from his preoccupation with the determination of the profit rate in the 1813-14 correspondence and the 1815 *Essay*, and from his statement (in a letter written at the end of 1815) that "I know I shall be soon stopped by the word price" (VI, 348). It follows that the fundamental problem addressed by Ricardo was the determination of the profit rate, rather than the relative price structure (as Young (1991, 167) asserts). Price determination became a major concern for Ricardo because of the need for valuation *in order* to determine the profit rate in a multi-commodity economy. The *Entstehungsgeschichte* of Ricardo's thought thus reveals a temporal priority of distribution over pricing, which parallels what many commentators perceive to be the analytical separation of the two in Ricardo's economics.

CHAPTER 3 RICARDO'S THEORY OF WAGES

In our discussion of the debate over the 'corn-model' interpretation, the composition of the wage basket and the variability of the wage were major points of contention. In this chapter, we shall examine the issue of whether Ricardo held a subsistence theory of wages, or one in which the demand for and supply of labour play a major role. The relevance of this question for our wider concerns is obvious; a wage rate fixed at the subsistence level, combined with the determination of profit as a residual, leaves no scope for any influence of the demand for final products on income distribution. On the other hand, if the wage is flexible, then it (together with the level of profits) will be determined simultaneously with the prices of final products, as in neoclassical economics.

Ricardo defines the natural wage rate as that

.....which is necessary to enable the labourers, one with another, to subsist and perpetuate their race, without either increase or diminution (I, 93).

He proceeds to clarify this by explaining (*loc.cit.*) that the natural wage is not a biological subsistence level, but is historically and socially determined (*ibid*, 96-7). Although Ricardo conceded that the market wage (determined by supply and demand) could diverge from this "natural" level, he stressed the tendency of the former to converge towards the latter (*ibid*, 91-2; 94). This has led most commentators to espouse what Peach (1988, 110) terms the "traditional" account of Ricardo's theory, in which the wage rate adjusts very rapidly to the natural level (via the Malthusian population

mechanism) and hence can be regarded being fixed at this level⁽¹⁾. A rigorous formulation of this view is provided by Pasinetti⁽²⁾ (1974), who claims that

.....he [Ricardo] always speaks of a process which will operate 'ultimately' but the emphasis on it is so strong that his analysis is always carried on as if the response were almost immediate (*ibid*, 5, italics in original).

This subsistence-wage interpretation of Ricardo has also been endorsed by a wide range of other commentators, including Stigler (1965a; 1981; 1990), Blaug (1985a, 117) and O'Brien (1981).

The preceding account of Ricardo's theory of wages can be contrasted with that embodied in the 'New View' of Ricardo. This term refers to a number of recent interpretations (eg Hicks and Hollander, 1977; Casarosa, 1978; 1982; Hollander, 1984; 1990a) which seek to develop models of Ricardo's theory of growth incorporating wage flexibility. In such formulations, the importance of the market wage is stressed, and its adjustment to the natural level takes place slowly, being completed only when the economy reaches its long-run stationary-state equilibrium. In essence, the real wage falls during the process of economic growth. The 'New View' was anticipated by Levy (1976), who suggested that the natural wage is endogenously determined. It includes two types of models (Rosselli, 1985, 250-1) - one (eg Casarosa, 1978) involving a dynamic equilibrium wage which equates the supply of and demand for labour, and the Hicks-Hollander (1977)

(1) Samuelson (1978) calls this the "polar" Ricardian case. It is equivalent to the assumption made by Bhaduri and Harris, 1987) that labour supply is infinitely elastic at the natural wage.

(2) Morishima's (1989, 51-2) criticism that Pasinetti's model requires labour mobility appears to be based on a misunderstanding, as it ignores the role of the Malthusian population mechanism.

version, which concentrates on the market wage rate to the virtual exclusion (prior to the stationary state) of the natural wage.

The flexible-wage interpretation has been defended (eg by Casarosa, 1982, 22-7) with reference to Ricardo's statement that

Notwithstanding the tendency of wages to conform to their natural rate, their market rate may, in an improving society, for an indefinite period, be constantly above it (I, 94-5).

Hollander presents further evidence suggesting (1979, 128) that, in his 1814 correspondence with Malthus, Ricardo conceded the possibility of a declining average corn wage. He (1983b, 315) also points to Ricardo's (I, 101) reference to a falling real wage over the course of "....the natural advance of society" (*loc. cit.*), and concludes (1979, 309, italics in original) that "....it was precisely the *variation of real wages* that is the focus of attention" in Ricardo's analysis of growth.

In response to the emergence of the 'New View', Rosselli (1985) has attempted to identify the origins of Ricardo's natural-wage concept, carefully specifying the properties it requires in order to play the role that he envisaged (*ibid*, 244). In her view (*loc. cit.*), Ricardo's theory requires an exogenous natural wage that is constant over time. She argues (*ibid*, 250) that dynamic models based on the 'New View' lack this *desideratum*, and concludes that, hence, they are inconsistent with Ricardo's premises (*ibid*, 252).

Caravale (1985) also emphasises the central importance of the natural wage in Ricardo's thought (*ibid*, 133-4), but distinguishes between two different versions of the concept to be found in Ricardo's writings (*ibid*,

135-7) - that found in the *Principles* and that in the *Essay* (Ricardo, IV, 12), which defines the natural wage as that real wage which equates the rates of growth of population and capital. He claims that the latter version is compatible with Ricardo's analysis of growth, while the former is not (1985, 141). Thus, using the dynamic definition implies that Ricardo's "natural equilibrium" analysis can be applied generally, rather than being restricted to the stationary state. Caravale (*ibid*, 178) differentiates his approach sharply from the 'New View', which he criticises for its neglect of the natural wage. A similar criticism is made by Pasinetti (1982, 241) in defending his original (1974) formulation.

A variety of other objections have also been made to the 'New View'. Stigler (1981) defends the subsistence-wage interpretation on the basis that it is required for the Fundamental Theorem on distribution and for Ricardo's proposition that only net revenue can be taxed or saved to hold strictly. By an extension of his (1965b) principle of textual exegesis, he also appeals to the interpretation of Ricardo's contemporaries, who understood Ricardian theory as one in which wages were fixed (*ibid*, 768). In reply, Hollander (1983b, 316) reiterates what he regards as a fundamental feature of Ricardo's method - his tendency to make simplifying assumptions for analytical convenience. In Hollander's view, this procedure is responsible for the apparent inconsistency between the assumption of fixed wages and the more general models which involve flexible wages. He also claims that the Fundamental Theorem and the taxation theorems were intended to apply in the general case, and thus do not require the fixed-wage assumption (*loc. cit.*; 1979, 254-5, 386).

In his attempt to evaluate the debate between the supporters and opponents of the 'New View', Peach (1988, 111f) decides firmly in favour

of the latter. While conceding that many passages in Ricardo appear to lend themselves to a 'New View' interpretation (*ibid*, 112), he notes that, equally, many other passages support the traditional view (by, for instance, invoking the Malthusian population mechanism). Thus, in deciding between them, he finds it necessary to consider the compatibility of each view with Ricardo's general conclusions, and suggests that

....if the natural wage is *not* a potent center of gravity at *all times* - Ricardo's position according to the new view - his general thesis, that permanent movements in profitability are given *exclusively* by changed conditions of producing wage-goods, loses the significance it was evidently thought to possessThis is a compelling reason for being chary of the new view.....(*ibid*, 113, italics in original).

This verdict has given rise to a continuing debate, with Hollander (1990a; 1990b) vigorously defending his position. He claims that Peach's judgement involves a confusion between the secular trend of falling real wages and fluctuations about that trend (*ibid*, 733). The trend is caused by diminishing returns, which also causes the secular decline in the profit rate, and is logically distinct from the fluctuations, which may temporarily raise the profit rate (*ibid*, 737). Thus, Ricardo often suppresses the latter for analytical convenience, without thereby subscribing to a fixed-wage hypothesis (*ibid*, 733). Drawing on this distinction, Hollander asserts that there is no incompatibility between Ricardo's result regarding permanent changes in profitability and the 'New View' - diminishing returns in agriculture act both on the wage level and the profit rate and constitute the only cause of changes in the latter when we abstract from wage fluctuations. Peach (1990), in response develops a distinction between 'discrete' and 'continuous' analysis (*ibid*, 752), where the former method involves a given real wage, in relation to which permanent changes in

profitability are defined. Peach maintains that 'discrete' reasoning predominates in Ricardo's early writings, and continues to be significant in the *Principles*. Thus, Hollander's 'continuous' model, it is argued, fails to explain much of Ricardo's thought pertaining to the natural wage.

In reaching a conclusion on this issue, we must acknowledge that, firstly, there is textual evidence for both the 'New View' and the more traditional one, and, secondly, that the debate is still in progress. On balance, however, it seems more reasonable to attribute an assumption of exogenous wages (such as that which, according to Garegnani (1972, 279; 1984), characterises the 'surplus' approach) to Ricardo. Such an interpretation enables us to derive Ricardo's main conclusions in a more straightforward manner than the 'New View' would permit. It also accounts for Ricardo's emphasis (I, 96-7) on the historical and cultural element in wage determination.

CHAPTER 4

THE ROLE OF DEMAND AND ALLOCATION MECHANISMS IN RICARDO'S THEORY

In this chapter, we shall examine the role of demand and what Hollander (1979, 270) terms "allocation mechanisms" in Ricardo's theory of value and distribution. The attempt to demonstrate the existence of a significant role for demand in the determination of natural prices and distributive shares is crucial to Hollander's general thesis of the interdependence of pricing and distribution in Ricardo. As such, it deserves close scrutiny. We shall also examine other issues that impinge directly on this question, such as Ricardo's assumptions about factor proportions in different industries, and his explicit comments on the relationship between pricing and distribution.

The 'traditional' interpretation of the role of demand in Ricardo's theory emphasises the notion of the rapid adjustment of market prices (determined by supply and demand) to natural prices (determined only by the cost of production), which we encountered in Chapter 3 above. A representative statement of this view is Pasinetti's (1974, 12) claim that Ricardo "....does not find it useful to enter into complicated details....." about this adjustment process because he "....did not possess a demand theory".

Hollander (1979, 270), however, regards such a view as a "grave misunderstanding", and stresses the respects in which Ricardo allegedly anticipated later neoclassical demand theory⁽¹⁾. He claims (*loc. cit.*) that his interpretation of Ricardo's theory "....demonstrates the interdependence between distribution and pricing, above all the fallacy of the idea that the

(1) Rankin (1980; 1984) independently develops a similar interpretation of Ricardo along supply-and-demand lines.

profit rate is determined prior to the pricing process.....". This demonstration forms the core of his general thesis regarding Ricardo.

Hollander (*ibid*, 271) regards the principle of profit rate equalisation as the basis of Ricardo's theory of resource allocation. This principle is used to distinguish between two types of disturbance - one restricted to a single industry (causing a change in supply to restore the rate of profit to the general level) and one affecting all industries (which leaves relative prices unchanged, but leads to a new general profit rate). Moreover, Hollander (*ibid*, 273) maintains that the operation of this mechanism relies on a supply and demand theory, going so far as to claim that "Ricardo's treatment of demand turns out to be particularly sophisticated". This treatment included, in Hollander's view, an appreciation of the concepts of price elasticity of demand (*ibid*, 274) and income elasticity (*ibid*, 276), most notably in the assumption of a low (or zero) income elasticity for corn.

Detracting from this "sophistication", however, are Hollander's concessions that Ricardo did not have any conception of a "substitution effect" (*loc. cit.*) or of marginal utility (*ibid*, 277-8). Nevertheless, he seeks to reconcile Chapter XXX of the *Principles* with a supply and demand framework, arguing that Ricardo, while "formally" (*ibid*, 281; italics in original) objecting to such a theory, actually utilised it in the determination of 'natural' as well as market prices. In particular, Hollander emphasises the role of supply variations in the adjustment of short-run market prices to their long-run ('natural') levels. Thus, he rejects (*ibid*, 280) the view, espoused, for instance, by Schumpeter (1954), that Ricardo drew an analytical distinction between the determination of market and natural prices. Hollander (*ibid*, 285f) illustrates his interpretation of Ricardo's theory of resource allocation by examining the effects of various supply and demand

disturbances. After a demand shock, resources are re-allocated through variations in the prices and wage and profit levels in the affected industries. The general profit and wage rates are unchanged. This procedure, which Hollander (*ibid*, 288) concedes ".....amounts to the divorce of price formation from the determination of the factor returns", relies in his view on the implicit assumption of an uniform capital-labour ratio across all industries⁽¹⁾. The question of whether pricing and distribution are independent in Ricardo is thus regarded as depending on the generality of this assumption in his theory. Hollander (*loc. cit.*) argues that the assumption is "....merely a simplifying device", and utilises it again in analysing disturbances which release resources. In this case, capital and labour are released in proportion, and the operation of Say's Law ensures their automatic reabsorption⁽²⁾. As before, the general rate of profit is unaffected.

The invariance of the profit rate to a wide variety of disturbances stems, as we noted above, from the assumption of an uniform capital-labour ratio. Hollander (*ibid*, 299-300) proceeds to relax this assumption, on the basis that it did not represent a matter of principle for Ricardo, in order to consider the effects of a change in the pattern of demand ("tastes") under conditions of varying ratios of capital to labour in different industries. He demonstrates that, in these circumstances, the wage and profit rates would change, their new values being determined simultaneously with the new structure of relative prices. This constitutes the basis for his argument that pricing and distribution are interdependent in Ricardo's theory.

(1) In Marxian terminology, this is equivalent to the assumption of an uniform organic composition of capital.

(2) The chapter "On Machinery" in the third edition of the *Principles* constitutes a major exception, as it envisages the release of labour alone in the wake of technical change.

Closely related to this demonstration is his rejection of the idea that Ricardo regarded the profit rate in agriculture as the unique determinant of the general rate of profit. He argues that Ricardo implies on several occasions that changes in the conditions of production in agriculture leave the profit rate unchanged (*ibid*, 301). This procedure, however, involves a logical fallacy insofar as Ricardo (eg I, 132-3) can be interpreted as claiming that changes in the conditions of production in the wage-goods industry are a necessary, but not sufficient, condition for changes in the rate of profit.

To conclude his account, Hollander (1979, 302f) generalises the 'Fundamental Theorem'. Assuming uniform factor proportions, a change in the wage rate leads to an inverse movement in the profit rate, with relative prices unaltered. In the general case of different factor proportions, such a change leads to a new structure of relative prices as well as a new equilibrium profit rate. These emerge simultaneously through the reallocation of resources which occurs as firms respond to the profit rate differentials caused by the impact of the wage change on industries with different degrees of labour-intensity (*ibid*, 302-4). This process is crucial to Hollander's portrayal of the Ricardian theory of value and distribution as a 'general equilibrium' system.

In evaluating Hollander's interpretation, it should be remembered that it is based on a series of extensions to Ricardo's analysis, rather than on that analysis alone, and consequently involves a substantial element of speculation (Peach, 1988, 125)⁽¹⁾. As Porta (1985, 226) suggests, the

(1) Hollander (1979, 299) concedes that "...Ricardo himself did not formally make" the crucial extension involving a change in the pattern of demand.

compatibility of an analytical extension with the Ricardian system does not necessarily imply that it forms a part of that system. In this sense, Hollander's interpretation may be criticised as being ahistorical. This is compounded by his extensive resort to what Groenewegen (1986) terms "Hollander's Vice": the use of modern terminology in the discussion of classical concepts, thereby suggesting a greater continuity over time than in fact exists. Moreover, many of the concessions he makes tend to undermine the thrust of his general thesis. For example, his concession regarding the lack of a concept of marginal utility in Ricardo appears to contradict his argument about the determination of natural prices; in the absence of such a concept, there is no analytically valid way of determining exchange-values (prices) with reference to use-values (utilities)⁽¹⁾. Ricardo clearly appreciated this, as his comment on Say's theory of value in a letter to Malthus indicates:

In Say's works, generally, there is a great mixture of profound thinking, and of egregious blundering. What can induce him to persevere in representing utility and value as the same thing? (Ricardo, VIII, 302).

Thus, Ricardo's analysis of value is based on the cost of production (at least in the case of the long-run natural prices of freely reproducible commodities). This necessarily involves a much less significant role for demand than in neoclassical theory. As Ricardo explains,

I do not dispute either the influence of demand on the price of corn and on the price of all other things, but supply follows close at its heels, and soon takes the power of regulating price in his own hands, and in regulating it he is determined by cost of production (*loc. cit.*).

(1) This is due to the "paradox of value", which Ricardo, following Smith, points out at the beginning of the *Principles*, concluding that "[u]tilityis not the measure of exchangeable value" (Ricardo, I, 12; italics added).

This line of argument is most forcefully expressed by Ricardo in Chapter XXX of the *Principles*, wherein he concludes that

....the price of commodities, which are subject to competition, and whose quantity may be increased in any moderate degree, will ultimately depend, not on the state of demand and supply, but on the increased or diminished cost of their production (*ibid.*, I, 385).

Such an unequivocal position appears to leave little scope for argument. Indeed, Hollander (1979, 282-3) concedes that this chapter represents a critique of supply and demand theories. Nevertheless, he maintains that the supply variations through which the adjustment of prices to their natural levels occurs constitute a process based on supply and demand. This view is endorsed by Peach (1988, 124), who agrees "....that Ricardo *did* give a supply-and-demand rationalisation for the concept of natural price" (*loc. cit.*; italics in original).

Given such a rationalisation, we are faced with the problem of reconciling it with Ricardo's repeated insistence on the explanation of natural price by the cost of production, and with his rejection of the adequacy of supply-and-demand theories. One approach to such a reconciliation involves drawing a distinction between Ricardo's notion of demand and that of neoclassical economists. In his discussions of demand, Ricardo frequently appears to identify it with the quantity of a good consumed. Such an identification is evident both in an 1814 letter to Malthus:

I sometimes suspect that we do not attach the same meaning to the word demand....The demand cannot I think be said to increase if the *quantity* consumed be diminished.... (Ricardo, IV, 129; italics added),

and in the *Principles*:

The demand for a commodity cannot be said to increase, if no additional *quantity* of it be purchased or consumed... (*ibid.*, I, 383; italics added).

This tends to support Garegnani's (1983b) argument that the classical economists, including Ricardo, conceived of demand in a fundamentally different way from neoclassical economists. In particular, they regarded "demand" as a single point in price-output space, rather than as a schedule relating quantity demanded to a range of possible price levels (*ibid.*, 312). Such a concept can be used to explain the adjustment of market prices towards their natural level in the manner outlined below.

If we assume, with Ricardo⁽¹⁾, that demand temporally precedes supply, then, if the quantity supplied happens not to coincide with the (pre-determined) level of demand, the market price will diverge from the natural level, inducing supply variations which tend to move the former towards the latter. However, Ricardo regarded any explanation of the level of the natural price itself (as distinct from the process of adjustment towards it) as inadequate (Meek, 1977, 158-9) and even vacuous, as his comments to Malthus clearly indicate:

You say demand and supply regulates value - *this, I think, is saying nothing* it is supply which regulates value - and supply is itself controlled by comparative cost of production (Ricardo, VIII, 279, italics added).

Thus, we may conclude that, while demand played a role in Ricardo's theory, Ricardo himself did not regard that role as being an *explanatory* one with regard to natural prices. This view was based on his adherence to

(1) A point he made in correspondence with Trower (Ricardo, VIII, 273-4) and in the *Principles* (I, 385), where he states that "....a commodity is not supplied merely because it can be produced, but because there is a demand for it".

a concept of demand differing significantly from that developed later by neoclassical economists; one which did not enable him to derive long-run prices from the intersection of independently specified demand and supply schedules. Moreover, he rejected an exclusive concentration on market prices in favour of an explanation of long-run price levels in terms of costs of production in order to obtain the 'strong' results required for his analysis (Meek, 1977, 159). In this sense, there exists an analytical dichotomy between his analysis of natural and market prices, even though, as Hollander claims, he invoked the operation of supply and demand mechanisms to explain the process of adjustment to the natural level. This is because the attribution to Ricardo of a "classical" conception of demand along the lines suggested by Garegnani (1983b) resolves the apparent contradiction between Ricardo's implicit use of supply-and-demand mechanisms (pointed out by Hollander (1979)) and his simultaneous rejection of the adequacy of such a framework. Hollander's interpretation (and his conclusion that demand plays a central role in Ricardo's analysis) is seen to rest on the conflation of Ricardo's notion of demand with that developed subsequently by neoclassical economists.

This point has important consequences for the central issue we are examining: the relationship between distribution and pricing. Garegnani (1983b) argues that, within the neoclassical framework, demand functions affect the determination of prices through their influence on distribution. Thus, the absence of demand functions in Ricardo's analysis casts further doubt on the 'New View'⁽¹⁾ of his theory of distribution: to the extent that

(1) Discussed in Chapter 3 above.

the analytical tools embodied in Ricardo's conception of demand are inappropriate for the determination of the natural prices of commodities, they are equally inappropriate for the determination of the natural price of labour. Clearly, this conclusion undermines Hollander's (1979) basic thesis regarding the interdependence of pricing and distribution.

The final step in Hollander's attempt to demonstrate this interdependence is his extension to Ricardo's analysis, showing that, in general, a change in the pattern of tastes leads to a change in the wage and profit levels as well as relative prices (*ibid*, 299-300). The legitimacy of such an 'extension' as an exegetical tool has been questioned by many of Hollander's critics (O'Brien, 1981; Peach, 1988, 125). In addition, many commentators (notably Bharadwaj, 1983) have argued that Hollander's (1979, 6) attribution of an assumption of an uniform capital-labour ratio as a 'special case' to Ricardo suffers from a complete lack of textual support. Nowhere does Ricardo state this assumption (or an analytically equivalent one)⁽¹⁾. In view of this, it appears reasonable to suppose that, despite the analytical problems which arose due to the possibility of different capital-labour ratios, Ricardo believed in the generality of his results, hoping to resolve those difficulties by means of the 'invariable' standard. Although he never succeeded in finding such a solution, it would be misleading to regard the separation of pricing and distribution in Ricardo as being restricted to a

(1) This may involve, for instance, the absence of fixed capital combined with equal periods of production across all industries. Indeed, Hicks and Hollander (1977, 368) suggest that most of the analysis of the *Principles* was developed with circulating capital only. Even if this is correct, it does not affect our argument, and even supports it by implying that Ricardo saw no contradiction in combining analyses based on circulating capital with others (such as Chapters I and XXXI) which explicitly consider fixed capital within the same treatise.

special case, when he himself did not do so. In particular, Ricardo's assumption of unchanged wage and profit rates following a change in the pattern of demand must have been intended in a more general context than Hollander (1979, 300) allows. For example, although this assumption is prominent in the chapter 'On Foreign Trade' (in accordance with Hollander's (*loc. cit.*) suggestion), it is combined with repeated references to machinery (Ricardo, I, 131-2), without any restriction on capital structure. In short, then, Hollander's crucial extension, quite apart from being an extrapolation, is based analytically on the relaxation of a restriction which Ricardo himself never seems to have imposed in the first place. Consequently, it cannot be regarded as decisive in determining Ricardo's own views on the question of the relationship between pricing and distribution.

We have seen above that Ricardo encountered analytical difficulties arising from divergences in the capital-labour ratio between industries which forced him to search for an 'invariable standard' of value in order to determine unambiguously the effect of a change in wages on the rate of profit in the context of a multi-commodity economy (Sraffa, 1951, xl f; Peach, 1988, 117). However, notwithstanding these difficulties, he claims, in a letter to McCulloch, that his theory of distribution remains valid even in the absence of such a standard because

.....the great questions of Rent, Wages and Profits must be explained by the proportions in which the whole produce is divided between landlords, capitalists, and labourers, andare *not essentially connected with the doctrine of value* (Ricardo, VIII, 194; italics added).

This appears to be an explicit formulation by Ricardo of the separation of pricing and distribution⁽¹⁾. However, Hollander (1979, 252) argues that this actually constituted an attempt at "...escaping from the problems created by the 'interdependence' which he only too well appreciated characterises input and output markets" (*loc. cit.*; italics in original). He argues that Ricardo extrapolated from a one-commodity world to a multi-commodity one through an 'act of faith', providing no justification for his assertions regarding the effects of wage rises on the rate of profit.

While this last point is indisputable, the general tenor of Hollander's interpretation ignores Ricardo's own confidence in the general validity of his analysis. In particular, as we have argued above, Ricardo implicitly divorced pricing and distribution by assuming unchanged general wage and profit rates in the face of a changed pattern of demand, without imposing any restrictions on the capital structure of the economy. On this interpretation, he would not have felt any need to "escape" from the problems of interdependence. Moreover, he appears to have been convinced that his argument in the one-product case could be generalised to a world of many products, despite his failure to demonstrate this formally⁽²⁾. Such a failure, however, does not permit us to infer that his true position involved the interdependence of pricing and distribution; the opposite inference would in fact be more justified. The separation of distribution and pricing, based on an assumption of wage exogeneity, thus appears to have been a central feature of Ricardo's analytical framework.

(1) There is a statement by Ricardo in the *Notes on Malthus* (Ricardo, II, 306) which seems to be another such assertion. However, Hollander (1979, 253-4) argues convincingly that this comment was actually made in a context relating not to the theory of value and distribution, but to the justification of Say's Law.

(2) Sraffa (1960) may be regarded as having vindicated Ricardo's belief.

CHAPTER 5

THE WIDER IMPLICATIONS OF THE DEBATE

In this chapter, we shall gather the various threads of our discussion together, and summarise our major findings regarding the issues that have been raised. We shall also, by way of a conclusion, attempt to explore the wider implications of this debate for the history of economic thought; our purpose in studying this debate has not been merely to clarify Ricardo's own views on the relationship between pricing and distribution (important as this task is), but also to explore the consequences of the varying interpretations of these views put forward by different commentators. Thus, we shall not only attempt to assess Ricardo's place in the history of economic thought, but, in addition, seek to account for the extent of these disagreements, and to derive their implications for the methodology of the history of economic thought.

To summarise the conclusions that flow from our earlier chapters, we have seen that Sraffa's (1951) 'corn-model' interpretation remains an important concept for understanding Ricardo's early theory of profits. In particular, it does not require a theory of value (unlike Hollander's (1973; 1979) interpretation), which Ricardo had not developed at that stage (Bharadwaj, 1983). Despite having some textual support, the 'New View' of Ricardo's theory of wages fails to account rigorously for the theoretical results he obtained, suggesting that the attribution to him of a theory of exogenous wages (determined by institutional factors) may be a more fruitful interpretive strategy, as well as being more consonant with the general tenor of classical thought. Finally, we have seen that the central role played by demand and allocation mechanisms in Hollander's (1979) interpretation lacks strong textual support, and Ricardo's theoretical

formulations can be better accommodated by the assumption of wage exogeneity than by the postulate of uniform factor proportions. Thus, our conclusions tend to endorse those interpretations of Ricardo which suggest that he analytically divorced pricing from distribution.

These conclusions can all be related to the general character of Ricardo's methodology. Some commentators⁽¹⁾ have perceived a Ricardian "revolution" in the history of economic thought, and Hutchison (1978, 26) emphasises Ricardo's role in imparting a nomothetic character to economics. Davis (1989, 459) traces the origins of this feature of Ricardo's thought to a "philosophical naturalism", which holds that economic laws are akin to the laws of nature. What is most salient for our purpose is the precise manner in which Ricardo sought to establish such laws. It is evident from the style of reasoning he adopts throughout his oeuvre that his method is characterised by an emphasis on long-run equilibrium (Hutchison, 1978, 26f; Davis, 1989, 459-60; Vickers, 1991, 14-15)⁽²⁾. This provides the foundation for the importance of such concepts as the natural wage and the natural price in his analysis. Moreover, he explicitly eschews short-run analysis when he states that

Having fully acknowledged the temporary effects which.....may be produced....by accidental causes....we will leave them entirely out of our consideration..... (Ricardo, I, 91-2),

and, in a letter to Malthus,

.....I put these immediate and temporary effects quite aside, and fix my whole attention on the permanent state of things.... (VII, 120).

(1) An example is Hicks (1976, 211). The term "revolution" is used in the Kuhnian (1970) sense.
 (2) This emphasis also helps to account for Ricardo's adherence to Say's Law in the 'macroeconomic' aspects of his thought (Vickers, 1991, 13f).

Thus, the common thread unifying our conclusions on the specific topics we have examined is this long-run methodology; interpretations such as Hollander's ignore this feature of Ricardo's thought and concentrate on the short-run behaviour of the models attributed to him. Such behaviour would have been of limited importance to Ricardo, given his methodological inclinations, and, consequently, these interpretations are vulnerable to the criticism that they seem to attach greater weight to Ricardo's qualifications to a theory than to the theory itself.

Furthermore, Hollander repeatedly (eg 1979, II; 1982a) makes the contention that Ricardo held a general model but used 'strong cases' for analytical convenience. However, according to our interpretation of Ricardo's method, it appears more likely that these 'strong cases' actually represent his theoretical models (formulated in such a way as to yield the long-run laws he desired), with the more general 'models' resulting from the relaxation of these assumptions in an *ad hoc* way in dealing with the real world. Such a process may explain the contradictions in Ricardo's writings, especially the co-existence of several 'models' of the same phenomenon, noted by Blaug (1985b; 1988, 134).

Our conclusions would thus appear to suggest that, in terms of the fundamental division within Ricardian scholarship which we explored in Chapter 1, the relationship between pricing and distribution in Ricardo's thought is sufficiently distinct from that which characterises neoclassical economics to warrant his classification within a 'surplus' stream of economic thought. This is in conformity with the judgement of such commentators as Dobb (1973), Meek (1977) and Garegnani (1984) and has more recently been endorsed by Blaug (1988, 133). We have scrutinised in some depth Hollander's attempt to place Ricardo within the neoclassical stream.

Despite the impressive thoroughness and scope of Hollander's scholarly efforts, his case appears untenable due to difficulties at several levels. Firstly, there are shortcomings in the interpretation of specific points of Ricardian doctrine, which we have detailed in earlier chapters. Secondly, his approach to the history of economic thought suffers from an anachronistic and ahistorical orientation, a theme on which we shall elaborate below. Thirdly, his argument that Ricardo shares a 'common core' of economic analysis with the neoclassicists appears, at best, unhelpful. The analytical features which Hollander (1979, 684) identifies as constituting this 'common core' may simply reflect the institutional characteristics of a competitive market economy, which every theoretical framework purporting to study it must incorporate. If so, the differences between such frameworks may be more significant, and worthy of historical enquiry, than the similarities, which may be regarded as trivial.

Furthermore, Hollander (1979, 271) claims that "[t]he principle of profit rate equalisation provides the key to Ricardo's analysis of resource allocation". Ironically, however, it is precisely this feature of Ricardo's economics which has been highlighted as a point of contrast with neoclassical economics, on the basis of its incompatibility with Walras' general equilibrium theory (Robinson, 1972, 202). Hollander (1979, 683; 1982b, 591) replies that Walras (1954) did in fact incorporate an uniform rate of profit into his theory. However, this appears to have been a peripheral aspect of his general equilibrium system. Moreover, any attempt to do so would have required him to resort to a notion of capital as being either homogeneous or infinitely malleable, thus contradicting his own assumptions (Blaug, 1985a, 580-3) and encountering the logical difficulties which have come to light in the course of the 'Cambridge controversies' in capital theory (Harcourt, 1972). Hollander fails to adequately address

these problems, which seriously undermine his attempt to establish a kinship between Ricardo and Walras. Finally, the following *Gedankenexperiment* may prove to be helpful in testing our assessment of Ricardo's place in the history of economic thought: assume, counter-factually, that the 'surplus' approach (as described by Garegnani, 1984) became dominant within economics after Ricardo's time. It would be extremely difficult to maintain that, from the standpoint of such an orthodoxy, Ricardo's thought would appear to be as much of an 'outlier' as it does from the perspective of the dominant neoclassical school of today.

As we have seen, arguments regarding the relationship between Ricardian and neoclassical economics play a central role in these controversies. Consequently, they have obvious implications for the continuing debates surrounding the issues of the significance of the 'marginal revolution' of the 1870's and the nature of the transition from classical to neoclassical economics. The pioneers of neoclassical thought, most notably Jevons (1970) and Walras (1954), sharply contrasted their own theories with those of their classical predecessors, although Marshall (1959) constituted an important exception. Since then, the notion of a discontinuity or 'paradigm shift' around 1870 has become standard among historians of economic thought (Schumpeter, 1954; Bharadwaj, 1978; Hutchison, 1978, Ch. 3; Blaug, 1985a, Ch. 8; Dasgupta, 1985). Hollander's interpretation of Ricardo constitutes part of a more general thesis, involving the rehabilitation of the Marshallian view stressing the continuity of economic thought. Thus, for Hollander (1982b, 586-7), the rise of neoclassicism represents a change of emphasis, rather than a 'revolution'. This interpretation, of course, follows directly from his (1979) neoclassical reading of Ricardo. To the extent that our conclusions regarding Ricardo

cast doubt on Hollander's interpretation, they also undermine his thesis of continuity, and tend to confirm the standard view.

One of the most conspicuous features of the debates surrounding Ricardo is the extent of the disagreement that exists between the competing schools of Ricardian exegesis. To conclude this survey, we shall attempt to account for this gulf, and to draw out some of its implications for the way in which we approach the history of economic thought. One possible explanation lies in Ricardo's own lack of philosophical depth and awareness. Essentially an autodidact, he concentrated on technical analysis alone, without reflecting on the ultimate purposes of his theorising. This has left him open to divergent interpretations, not merely on technical details, but on such fundamental issues as his place in the history of economic thought. Another contributing factor is the existence of contradictions and inconsistencies in his writings. To resolve these, commentators require a principle of textual exegesis to which they can appeal. Stigler (1965b) proposes a principle of scientific exegesis which identifies an author's main conclusions and chooses that interpretation from which the maximum number of these conclusions can be derived (a procedure analogous to maximum likelihood estimation in econometrics). A recent modification (Stigler, 1990) involves establishing these conclusions on the basis of the views of the author's own contemporaries. Hollander (1990a, 730-2) has challenged this principle, arguing instead that 'scientific' and 'personal' exegesis must play complementary roles. This lack of agreement on the criteria for resolving textual inconsistencies clearly contributes to the differences between Ricardo's interpreters.

Another possible reason for these differences lies in the absolutist approach adopted by many commentators, most notably by Hollander⁽¹⁾. This involves the attempt to read Ricardo in the light of neoclassical orthodoxy, and to assimilate his thought to this tradition. Peach (1984, 733) has suggested that such attempts to establish 'lineages' are "nugatory". In particular, they may place a misleading emphasis on the continuity of economic thought; in the words of Tribe (1981, 463),

[o]ne of the most general reasons for the study of the history of economics is to establish the unevenness and incommensurability of diverse theoretical systems....Hollander's approach on the other hand results in the steady obliteration of difference, and promotes the view that neo-classicism is a truth to which all other theoretical systems merely tend.

The 'Sraffian' approach⁽²⁾, while it may involve an ahistorical element, allows some scope for diversity and pluralism. Nevertheless, this problem suggests a need to transcend the terms of this debate in order to view Ricardo within historical context. More generally, this debate can be seen to highlight the desirability of a relativist approach to the history of economic thought, in contrast to the absolutist approach which has become standard through such works as Schumpeter (1954) and Blaug (1985a). In defence of this position, we shall sketch some weaknesses of absolutism and critically evaluate some recent debates on this issue.

The absolutist approach, which adopts current economic theory as the standard by which to judge the past, ignores possibilities of future paradigm

(1) We are not suggesting, however, that Hollander's position necessarily entails an absolutist approach.

(2) It should be emphasised that the critique of Hollander's interpretation of Ricardo has also been undertaken by many economists who are critical of the 'Sraffian' school, such as Blaug, O'Brien (1981;1982) and Stigler (1981; 1990).

shifts⁽¹⁾. It should be borne in mind that Mill, writing in 1848, made the following claim:

Happily, there is nothing in the laws of Value which remains for the present or any future writer to clear up; the theory of the subject is complete (Mill, 1900, 265).

The proponents of absolutism have relied on the argument that the adoption of relativism involves insuperable logical difficulties. Thus, for example, Blaug (1985a, 2) equates relativism with the belief that all theories are equally true. Such a position would, of course, lead to self-contradiction. Alternatively, the view that all theories are equally false has also been attributed to relativists: this is clearly a self-refuting argument. In response to such criticisms, Barnes and Bloor (1982) defend a version of relativism which makes neither of these claims, but asserts instead that all beliefs are equally subject to sociological explanation, independently of their validity. In so doing, they reject the traditional dichotomy between 'true' beliefs (adherence to which need not be explained other than by their 'truth') and 'false' ones (which require sociological explanation), and conclude that

.....relativism is essential to all those disciplines....which account for the diversity of systems of knowledge, their distribution and the manner of their change (*ibid*, 22).

As the version of relativism which they propose does not suffer from the logical difficulties that beset more extreme forms of the doctrine, it deserves serious consideration on the part of historians of economic thought as a possible philosophical basis for reconsidering their traditional adherence to absolutism.

(1) Heilbroner (1979) presents further arguments against absolutism.

In defending his absolutist approach Hollander (1987,8), appears to reduce all versions of relativism to the Marxian theory of ideology. As well as being inaccurate, this characterisation of relativism is profoundly ironic in that Marx's (1965) own studies in the history of economic thought rest on the premise of the validity of his own theory⁽¹⁾. They are primarily devoted to exposing the "errors [*Irrtümer*]" (*ibid*, 6) of his predecessors, rather than to placing them in historical context. Indeed, the concept of ideology itself presumes the very dichotomy repudiated by Barnes and Bloor (1982), as Marx employed a notion of objective truth (Parekh, 1982, 198f) as its foundation⁽²⁾. Thus, a relativist approach to the history of economic thought, far from entailing the adoption of the Marxian theory of ideology, is actually incompatible with it. Instead of Marx, however, economists are able to select possible paradigmatic exemplars for a relativist research programme from a rich profusion of more recent approaches to intellectual history, such as Foucault's (1970; 1972) 'archaeological' perspective⁽³⁾. The adoption of such a research programme would have the advantage of enabling us to account for, and not merely to evaluate, economic theories of the past, to relate the development of economic thought to that of other branches of knowledge⁽⁴⁾, and to avoid the manifestations of ahistoricism which have been much in evidence in recent debates on Ricardo.

To summarise our broader conclusions, we have argued that the discord among commentators revealed in the debate we have examined is largely due to a lack of historical perspective, and the consequent over-emphasis on the continuities in economic thought. We have also advocated a

relativist approach which does not rely on drawing a distinction between 'false' theories and current orthodoxy for purposes of historical explanation. Such an approach is more likely to encourage diversity and pluralism within economics than is absolutism. In this context, the task we have undertaken of reaffirming Ricardo's distinctiveness in relation to the neoclassical tradition is not only important in the interests of historical veracity, but is also crucial for the preservation of Ricardo's legacy as an inspiration for critics of received doctrine. It should not be forgotten that such criticism plays a vital role in any vibrant intellectual discourse.

(1) This is pointed out by Blaug (1980, 63).

(2) King (1979) emphasises Marx's use of logical criteria in assessing other economists.

(3) Foucault (1972, 169-70) emphasises discontinuities in the history of ideas, providing a strong contrast to Hollander.

(4) This objective differs to some degree from Dasgupta's (1985) aim of relating the history of economic thought to economic history. His periodisation of economics from this perspective has given rise to a debate (Morishima, 1989, 234-6; Chakravarty, 1990), illustrating the continuing relevance of the issue of relativism.

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