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# The Neo-Ricardian Theory of Trade and its Critical Evaluation

Fernando Tenjo Galarza

INSTITUTE OF SOCIAL STUDIES
The Hague — The Netherlands

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# INTRODUCTION

The fundamental aim of this essay is a comprehensive evaluation of the Neo-Ricardian theory of international trade, with a view to grasping its relevance and explanatory power for an understanding of the international exchange process in the context of the capitalist mode of production.

There are at least two major reasons for undertaking an analysis of Neo-Ricardian trade theory. In the first place, the hierarchical position of Neo-Classical economics in general, and of its theory of trade in particular, has been eroded by writers who sway between Neo-Ricardian and Marxist positions. Of these two groups, the neo-Ricardians have attacked the internal consistency of neo-classical models, while the Marxists have focussed their criticisms on the ideological and political under-pinnings - the object and method - of neo-classical analyses. The debunking of neo-classical economics, including the theory of trade, has left numerous questions unresolved. Some of these questions are related to:

(i) the determinants of patterns and terms of trade;
(ii) the role of trade in economic growth and development;
(iii) the consequences of trade for the parties involved;
(iv) policy-oriented recommendations for such parties.

Insofar as neo-Ricardianism has supplanted the neo-classical theory of trade, and insofar as it addresses itself to these same questions, it is necessary to study its position with respect to those questions and also to examine their relevance.

Secondly, analysis of the neo-Ricardian theory of trade has filled a vacuum in analyses of economic thought. Since neo-Ricardianism is to a great extent responsible for the demise of aggregate neo-classical economics, and given that the neo-Ricardian trade theory has not yet been subject to careful evaluation, the undertaking of such a task is a necessary one.

It should be emphasised that this work will not be concerned with an internal critique of the neo-Ricardian trade theory, but with an evaluation of its objectives and methods, an evaluation which will be made from a Marxist perspective.[1]

The fundamental conclusion arrived at in this paper is that neo-Ricardian trade theory, like neo-Ricardian theory in general, approaches the analysis of the capitalist mode of production from a distribution-based perspective, a perspective which leads that theory into a one-sided or partial understanding of capitalist accumulation. It is this perspective which conditions the analytical tools utilised, i.e. prices of production and physical surplus, concepts which, in themselves, do not represent social relations. In short, social relations are not explained or developed in the neo-Ricardian framework, but are only one of the 'givens' of such a framework. The relevance of this conclusion gains in strength as one moves from neo-Ricardian theory in general to the neo-Ricardian analysis of international trade.

In terms of the above, the analysis put forward in this work is structured as follows. Chapter I will outline the basic propositions which characterise neo-Ricardian economics. It will be shown how the concepts of 'prices of production' and 'surplus' elaborated by Sraffa (1960) can be said to be at the centre of the neo-Ricardian analysis of distribution. The origins of this approach will be traced back to Ricardo, and its development as a critique of neo-Classical and Marxian economics will also be expounded.

Chapter II will be devoted to an evaluation of neo-Ricardianism. The framework for such an evaluation is Marx's circuits of capital analysis (Marx 1978). In terms of this, it will be argued that neo-Ricardianism is concerned with distribution of the surplus, rather than with the production and reproduction of this surplus, and that this is due to the failure to grasp the specific character of capitalist production, thereby giving a one-sided view of capitalist accumulation. The ways in which this is reflected in the neo-Ricardian definition of social classes, for example, will also be discussed.

Chapter III will be an extension of Chapter I in that it will outline the basic propositions and characteristics of the neo-Ricardian theory of trade. It will be emphasised that despite criticising the neo-classical theory of trade, the neo-Ricardian trade theorists address themselves to the same problems as the neo-classicals, namely, determination of the terms, patterns and effects of trade. Two branches of neo-Ricardianism will be identified, the 'Sraffian wing' and the 'Dependency wing'.

Chapter IV, an extension of Chapter II, will evaluate neo-Ricardian trade theory in terms of the international capital circuits. The main conclusion is that the theory fails to take account of the specific capitalistic character of trade, and of the role of the latter in the process of accumulation on a world scale. It is further argued that the emphasis on distribution leaves its mark in each of the neo-Ricardian analyses of international relations.

Finally, Chapter V provides a brief outline of the possible developments of an alternative materialist theory of trade.

NOTE

1. Although the specific study of the Neo-Ricardian theory of trade from a Marxist perspective has not yet been carried out by other authors, Fine and Harris (1979) have undertaken the analysis of the general propositions and characteristics of the Neo-Ricardian school.

# I
# NEO-RICARDIANISM, BASIC PROPOSITIONS

## Overview

In this chapter we shall present, in a simple form, the basic propositions that characterise the neo-Ricardian school in general. The analysis will be confined to elaborating those propositions that are particularly relevant to the subsequent exposition of neo-Ricardian trade theory.

In section 1, the basic propositions of neo-Ricardianism are enunciated as they stem from Sraffa's Production of Commodities by Means of Commodities (1960), to be then summarised in section 2. Section 3 is devoted to establishing the link between Sraffa's ideas and those of the classical school in general and those of Ricardo in particular. Section 4 locates the emergence of neo-Ricardianism in the critique of neo-classical economics in its aggregate version, while section 5 illustrates the first extensions of Sraffa's ideas to areas outside their original scope, i.e. to the critique of Marxian economics and the debate to which this extension has given rise.

## 1.1 Basic Propositions

The point of departure of the neo-Ricardian school is the basic conclusion of Sraffa's work: in the capitalist system, in which a surplus is produced, the technical conditions of production and the way in which this surplus is distributed suffices to determine the set of (relative) prices of production. With this in mind, Sraffa's model is but a general framework for analysis of the effects on prices of changes in the distribution of the surplus between profits and wages.

The two concepts, surplus and prices of production, call for precise definition. Sraffa refers to a physical surplus which 'consists of the set of commodities which are left over when from the gross national product we have removed item by item the articles which go to replace the means of production used up in all the industries' (1960:11). The concept of prices of production refers to the 'set of exchange values which if adopted by the market restores the original distribution of the products and makes it possible for the process to be repeated', and which entail a uniform rate of profit for all industries (Ibidem:1-6).

These constitute the principal concepts of neo-Ricardianism and should therefore be further explained. The assumptions underlying such concepts are the following:

- abstraction from the determination of the level of output, which means that supply and demand equilibrium plays no role in the analysis. This is usually interpreted wrongly as meaning constant returns to scale; however, Sraffa makes it clear that his analysis is aimed at highlighting 'those properties of an economic system as do not depend on changes in the scale of production' (Ibidem:v);
- given technology, expressed in a matrix of inter-industry coefficients and in a vector of labour inputs;
- given physical surplus such that its distribution between profits and wages implies an inverse relationship between these two variables;
- the commodities produced undergo a process of circulation which ensures reproduction of the material conditions of production; production and circulation are assumed combined in a single timeless process;

- competition takes the form of mobility of capital so as to result in a uniform rate of profit;
- prices can be expressed in any one of the commodities produced, such that heterogeneous magnitudes - wages, means of production, surplus - and ratios of heterogeneous magnitudes - rate of profits, direct to indirect labour, net product to means of production - can be expressed by a single number;
- different distributions of the given surplus result in different sets of prices of production, so that determination of both elements has to be undertaken 'through the same mechanism and at the same time' (Ibidem:6).

## 1.2 Formal Presentation of the Basic Propositions

This paper is concerned with the substance of the basic propositions of neo-Ricardianism, and not with the mathematical intricacies and sophistication of their presentation. To situate the remainder of the work, a simple illustration of the points put forward in the first section of this chapter is given.

The neo-Ricardian model can be represented as follows:

Material conditions of production: {A}, matrix of interindustry coefficients, and $1\vec{n}$, vector of labour inputs (n industries)

reproduction of the material conditions of production {A}, $1\vec{n}$

generation of a physical surplus to be distributed between wages and profits

The determination of prices of production can be illustrated as follows:

{A}, $1\vec{n}$, pattern of distribution of the surplus → vector of prices of production ($\vec{p}$)

{A}, $1\vec{n}$, pattern of distribution of the surplus → uniform rate of profits (r) and wage rate (w) in price terms

The illustration of these and the remaining basic propositions can be undertaken with the help of simple algebra. Assuming the level of production for all activities to be equal to unity, the model can be expressed as follows:[1]

$$
\begin{array}{l}
(a_{11} + a_{21}p_2 + \dots + a_{n1}p_n)(1 + r) + l_1 w = 1 \\
(a_{12} + a_{22}p_2 + \dots + a_{n2}p_n)(1 + r) + l_2 w = p_2 \\
\dots \quad \dots \quad \dots \quad \dots \quad \dots \quad \dots \quad .. \\
(a_{1n} + a_{2n}p_2 + \dots + a_{nn}p_n)(1 + r) + l_n w = p_n
\end{array}
\qquad (i)
$$

The system of simultaneous equations, (i), represents the methods of production of n industries, according to the conditions described above. The price of commodity 1 is assumed to be unity. Other assumptions involve single product industries, no fixed capital, completely used up circulating capital, wages paid ex-post, and labour inputs expressed as proportions of the total quantity of labour employed. The system is under-specified since it contains n equations and n+1 unknowns (n-1 prices, w, and r). Once one of the unknowns is assumed as given, the rest of the unknowns are also determined. The basic idea of the formalisation of the neo-Ricardian treatment of distribution, of determining exogenously one of the non-price unknowns (w or r, the distributive variables), can thus be interpreted as 'closing the system' described above.[2]

The system of equations (i) can be also expressed as

$$pA(1 + r) + lw = p \qquad \text{(ii)}$$

from where

$$p = lw\,\{I - A(1 + r)\}^{-1} \qquad \text{(iii)}$$

$$w = p\,\{I - A(1 + r)\}\,l^{-1} \qquad \text{(iv)}$$

This is the mathematical expression of two basic propositions of neo-Ricardianism, namely, the dependence of prices on distribution, equation (iii), and the inverse relationship between wages and profits, equation (iv). This last relationship, when graphed in a plane, gives what is now known as the wage-profit frontier.[3]

## 1.3 Sraffa and the Return to the Classicals: Neo-Ricardianism

A basic feature of Sraffa's work, one from which neo-Ricardians derive their label, is the similarity between it and the main ideas of the classical economists, Ricardo in particular. This is much more clear in 'Introduction' to Works and Correspondence of David Ricardo compiled by Sraffa with the help of Dobb, and published in 1951-1955.

Sraffa's interpretation of Ricardo is considered to be the point of departure of neo-Ricardian ideas. In the words of Meek, such interpretation constitutes a 'rehabilitation of the Classical approach' in an attempt 'to build a Twentieth century model to deal with Twentieth century problems' (Meek 1961:121). This rehabilitation of the classical approach can be summarised simply by stressing the similarity of the framework and the main concerns of the classicals and Sraffa, and by emphasising the solutions that the latter provided to the problems posed by the former.

## Ricardo and Sraffa, a Common Framework

Prices of production provide for Sraffa and the Classics a basic tool for the analysis of distribution of the surplus and its effects. Neo-Ricardians have thus taken over the latter two points from Ricardo, as well as the framework for their analysis.[4] The idea of explaining distribution independently of prices is, incidentally, common to the classical economists, for whom 'wages were determined by socio-economic forces such as the historically determined level of subsistence (Quesnay, Ricardo) or, more generally, by the relationship of forces between social classes (Smith, Marx)' (Garegnani 1978:72).

With respect to the concept of prices of production, a series of underlying assumptions are common to Classics and neo-Ricardians, such as:

- Determination of prices at a given moment in time, given the prevailing technology;
- emphasis on the reproducibility of commodities (as opposed to the neo-classical emphasis on scarcity);
- competition as implying mobility of capital and the resulting tendency towards an equal rate of profit throughout the system.[5]

## Ricardo's Object of Analysis

Ricardo's ideas differed from those of his contemporaries only in that he emphasised the place that distribution should occupy in Political Economy. This led him to devote a considerable amount of time to two problems that were later taken up by Sraffa: determination of the rate of profits, and the search for an invariable measure of value.

The first of these problems was easily resolved by considering profits as a residue of the net revenue of the system after deducting the share corresponding to wages. The presence of diminishing returns in agriculture would result in a declining rate of profit. The problem is then solved in physical terms but not in price terms, due to the fact that the value of the two elements which conforms to the rate of profits - the share of profits in the surplus and the means of production - changes as the rate of profit changes.

To develop the argument along these lines, Ricardo constructed a one-commodity (corn) model (Sraffa ed. 1951-55:V, Essay). With corn as means of production and as final product, the share of the surplus that goes to profits can be compared directly with the means of production. The ratio of the two quantities of corn, that is, the rate of profits, is then independent of prices. In his Principles of 1817 (Ibidem), however, the consideration of capital and produce as heterogeneous magnitudes made it necessary for Ricardo to resort to a labour theory of value in order to measure the surplus, the capital advanced, and the rate of profits, as a ratio between two heterogeneous aggregates. With this, Ricardo laid the basis for what is now the neo-Ricardian position regarding the role of a theory of value: that of expressing absolute prices or measuring aggregates. The problem then became that, since distribution and prices were mutually inter-dependent, Ricardo was led to search for an invariable standard of value with which to bring out the real effects of changes in distribution upon the system as a whole.

The second of the two problems is then how to appraise the effects of changes in distribution upon relative prices in such a way that changes in the prices of a given commodity, being used as yardstick in the comparison, do not affect the value of the surplus being distributed. The problem is, therefore, one of relative versus absolute prices.

These two problems analysed by Ricardo were also approached by Sraffa. Firstly, Sraffa showed in his 'Introduction' to the Collected Works that Ricardo had merged two issues in his work: on the one hand, identification of the effects of changes in the distribution of the surplus between wages and profits with a given technology, from which arises the need for an invariable standard of value; and, on the other hand, the comparison of commodities with changes in technology, in which the invariable standard of value plays no role. Secondly, and aiming at solving the first of these two issues, Sraffa constructed a Standard Commodity whose value is invariable to changes in distribution, for a given technology. The Standard Commodity is a 'composite commodity which consists of the same commodities (combined in the same proportions) as does the aggregate of its means of production' (Sraffa 1960:19). With the help of this construction Sraffa not only resolved Ricardo's problem of finding an invariable measure of value, but also managed to highlight important traits of the capitalist system of production: by expressing prices and wages in terms of the Standard Commodity, the wage-profit frontier becomes a straight linear function, and brings out more clearly the dependence of prices on distribution as well as the inverse relationship between profits and wages.

## 1.4 Critique of the Marginal Productivity Theory

Sraffa's work of 1960 played a crucial role in the debunking of neo-classical economics in the course of the so-called Capital Controversy which took place between 1950 and 1970.[6] Only three aspects of Sraffa's contribution to the controversy will be dealt with here, in that they have constituted a major element in the development of neo-Ricardianism.

- Sraffa showed that it was possible to determine relative prices with given levels of output and with given inter-industry coefficients, without any reference to marginal changes. Price distribution and determination of the level of output, which are put together by the neo-Classicals, are treated separately by Sraffa.[7]
- Sraffa showed that prices depend on distribution. This means, on the one hand, that regarding distribution as an aspect of the mechanism of price determination - pricing of the services of 'factors of production' - constitutes an internal inconsistency of the neo-classical school. On the other hand, the dependency of prices on distribution implies that there cannot be such a thing as a 'notion of capital as a measurable quantity independent of distribution and prices' (Sraffa 1960:38), which could be used in determination of the profit rate.
- Given the dependence of prices on distribution, and when alternative techniques of production coexist, Sraffa showed that the same technique may be the most adequate at different ranges of the rate of profits, whereas another technique is chosen at rates of profits in between. This theoretical phenomenon, known as 're-switching of techniques', contradicts two of the pillars of the neo-classical theory of price determination, namely, the assumption of an inverse and one-to-one

correspondence between factor prices and factor intensities, and between factor prices and the capital-labour ratio.[8]

The Sraffa-based critique of neo-classical economics, it is now clear, also highlights the neo-Ricardian position with respect to value and distribution. Summarising, the joint treatment of these two issues by the neo-classicals based on their conception of capital as a 'factor of production', runs counter to the position advocated by the neo-Ricardians. Resorting to Garegnani: 'the proper object of the value theory {must be}... the study of the relations between the wage, the rate of profits and the systems of relative prices ... The distinction made by the classical economists between the study of value and that of the forces governing distribution goes together with a separation between the study of value and the levels of output' (Garegnani 1970:279).

## 1.5 Critique of Marxian Economics

The neo-Ricardian framework outlined above has also been extended by Steedman (1977) and others to provide a critique of Marxian Economics.[9]

The focus of this critique revolves around the neo-Ricardian interpretation of Marx's labour theory of value and the transformation of labour-values into prices of production. These issues are taken up by Steedman along three main lines.

1. Inasmuch as prices of production can be directly estimated from knowledge of the technical conditions of production and distribution, the estimation of value magnitudes - quantities of embodied labour - from the same technical conditions of production, to be 'transformed' then into prices of production, is

an unnecessary intermediate step.

2. The fact that Marx failed to transform inputs into prices before undertaking the transformation of the value of final products into prices, and his calculation of the rate of profits as a ratio of value magnitudes to be likened to the money rate of profits, render his transformation logically inconsistent. Sraffa's framework of price determination bypasses these problems but, as concluded above, at the same time proves such a transformation unnecessary.

3. Steedman analyses the labour process (changes in the duration of the labour day, in the intensity of work, etc.) on the basis of his Sraffa-based neo-Ricardian framework of price determination. This is put forward by Steedman as further evidence of the advantages of this neo-Ricardian framework over Marxist analysis.

On the basis of these points Steedman concludes that the whole Marxist elaboration based on value magnitudes goes against the 'attempt to build a fully articulated social, political and economic account of particular social formations' (1977:206). As a consequence of this, Marx's value reasoning must be abandoned, 'in the interest of developing a coherent materialist theory of capitalism' (p.207). To the extent that Steedman advocates the combination of Marx's philosophical and historical work with Sraffa's model of price determination, his position resembles a hybrid post-Sraffian Marxism.

With his criticisms Steedman gave rise to a debate between neo-Ricardians and Marxists. A careful and in-depth account of the arguments put forward by both sides would deviate from the thread of this section, which attempts only to present the main developments of neo-

Ricardianism. It is important, however, to mention three works by Marxist writers which can be pointed out as outstanding responses to Steedman's conclusions.

Firstly, Fine & Harris (1979) try to incorporate some of the points raised by the neo-Ricardians into a new interpretation of Marx's writings, opposed to the so-called Fundamentalist school of Marxism. The two authors question Steedman's usage of some concepts central to Marx's work such as labour, social relations, etc.

Secondly, Elson (1979) rejects Steedman's interpretation of Marx's value theory either as a proof of exploitation or as an explanation of prices. Were these the purposes served by such a theory, Elson argues, the neo-Ricardian framework would constitute a more simple and ready-made tool of analysis. Contrary to this, Elson advocates an interpretation of Marx's labour theory of value as a value theory of labour, that is, as an explanation of 'why labour takes the form it does, and what the political consequences are' (Elson 1979:123).

Finally, Shaikh (1980) addresses himself to the neo-Ricardian arguments concerning the redundancy and inconsistency of Marx's theory of value. Although Shaikh argues that Steedman's major flaw is a misunderstanding of the distinction between value and form-of-value, central to Marxist analyses, his response to Steedman uses the neo-Ricardian model itself. In essence, Shaikh analyses cross-sectional and inter-temporal correlations between changes in (relative) prices of production and relative values, and inter-temporal correlations between market and direct prices. He finds that 'for both prices of production and market prices, roughly 93% of both cross-sectional and inter-temporal variations in these prices can be explained by the corresponding variations in values' (p.49). In addition, Shaikh offers an alternative model for the transformation of values into prices which bypasses the shortcomings of Marx's original model.

It is now clear that Steedman has been questioned both theoretically and methodologically by various Marxist writers on serious grounds, and that the last word in this debate is still to be said.

NOTES

1. Strictly speaking, matrix /A/ should not represent inter-industry coefficients but given quantities of physical inputs, just as the elements of the output vector should be the quantities of the different commodities produced with the given inputs. The use of inter-industry coefficients and of a level of production for all activities equal to unity, could be interpreted as assuming constant returns to scale, which would be contrary to Sraffa's work. The presentation of the neo-Ricardian model of price determination with inter-industry coefficients and unitary level of production for all activities, responds here only to simplification purposes.

2. Assuming that reproduction of the system is secured, the closure may take several forms: the wage as an aggregate of commodities, the wages as a price, the rate of profits, one of the non-distributive variables (prices), or the value of the net product of the system. For a debate around this issue see Savran (1979) and the responses by Steedman (1979c), Eatwell (1980) and McLachan (1980).

3. The ratio of net product to means of production expressed in value terms determines whether the frontier is concave, convex, or a straight line, and correspondingly, the shape of equation (iii). The shape of these curves, however, is not important for the purpose of the present work. More details can be found in Mainwaring (1974) and Garegnani (1970).

4. Ricardo's main concern was the investigation of the laws which regulate the distribution of the net product among the classes of society (Sraffa ed. 1951-55: Vol. I, 5).

5. An in-depth analysis of prices of production as a common framework for classicals and neo-Ricardians is given by Roncaglia (1978).

6. Details of issues, actors and conclusions of the Capital Controversy can be found in Harcourt (1972).

7. It should be emphasised that, as Rowthorn (1974) points out, Sraffa did not in fact prove that income distribution is independent of supply and demand. As Rowthorn says, what Sraffa did was to determine prices holding constant production, consumption, and the supply of labour. Moreover, Roncaglia (1978) points out that Sraffa's purpose was not to prove such independence of income distribution from supply and demand, but to show the inadequacy of the neo-classical treatment of the matter. Roncaglia likens Sraffa's abstraction from the movement in levels of activity to Keynes's abstraction from movements in relative prices in his analysis of effective demand.

8. A rigorous development of the implications of Sraffa's work for the neo-classical theory can be found in Garegnani (1970). For a simple illustration of the 're-switching' phenomenon the reader can see Kregel (1973).

9. Steedman's <u>Marx After Sraffa</u> constitutes an attempt to provide a 'definite solution of certain issues which had long been debated by Marxists' (1977:14).

# II

# EVALUATION OF NEO-RICARDIANISM

## Overview

The objective of this chapter is an evaluation of neo-Ricardianism with a view to identifying its objective, scope and limitations. The idea is not a logical critique of the school in question, but an evaluation of its basic propositions from a broader and more general framework. The framework for such an evaluation is to be Marx's circuits of capital analysis. The purpose in relying on Marx in this respect is not to provide an alternative to the analysis of the same issues which the neo-Ricardianism school addresses itself to, but to provide a basis for analysis of the relevance of such issues and of their treatment within the neo-Ricardian framework. The specific relevance of circuits of capital analysis must be understood in the context of its description of the process of self-expansion of value; moreover it highlights the fact that capital takes different forms in this self-expansion.

Section 1 outlines the framework of the circuits of capital within which the basic propositions of neo-Ricardianism will be situated. The results obtained in Section 2 will be evaluated in Section 3, highlighting the limitations of neo-Ricardianism.

## 2.1 The Circuits of Capital

The point of departure of a Marxist analysis of capitalism is the notion of value and its development into capital or self-expanding value. In this development, value as objectified social labour constitutes the mediating element in the understanding of capitalism as a totality.

The 'construction' of this totality implies establishing social links between various concepts at different levels of determination: from values to exchange-value to money, from money to capital. Along this process, labour undergoes a metamorphosis central to the Marxist account of capitalism: from being a mere objectification of the activity of social reproduction, it now becomes capital, understood as power or command over (surplus) labour.

For an adequate understanding of the crucial elements of this process, it is necessary to stress the notion that the labour process, as viewed by Marx, is both a process of creation of value and one of valorisation of existing value. By virtue of this two-fold character, capitalist production is not solely - or not so much - production of commodities, but also, and primarily, production of surplus-value (See Marx 1978, Vol. I, Part 1).[1]

As production of commodities and surplus value, the movement of capital implies a series of inter-relations between its social agents: competition among capitalists as individual producers who produce for a single market of commodities; contradiction between capitalists and wage-labourers over control of the means of production and over division of the labour day into necessary and surplus labour.

The continuously reproduced need for the different capitals to meet in the market, and for capitalists and labourers to meet both in the market and in the labour process, gives a cyclical character to the movement of capital. Capitalist accumulation as such, then, is a process that goes through different stages (production and circulation) which can be considered as comprising the movement of capital in its expanded reproduction.

In this reproduction capital assumes different forms (money and commodities). Those stages and these forms, therefore, embed capitalist social relations.

(a) The Three Partial Circuits

Inasmuch as these moments and forms precede and follow one another and capital appears always as the beginning and as the result of its own movement, the whole process can be seen as a circuit. This circuit of capital can be looked at from three different but inter-related points of view.[2]

(i) Circuit of Money-Capital (I). If the analysis of the overall circuit is carried out having money (M) as its starting point, the process is as follows: the capitalist buys in the commodity and labour market (sphere of circulation) the means of production (MP) and the labour power (LP) in the quantity and quality required for production. With the possession of these elements, capital now appears as a means for the generation of a surplus: capital has assumed the form of productive capital (P), the form in which it can be valorised. Leaving the sphere of production, capital again takes on the commodity form, but now enlarged with a physical surplus (c). The result of the process of production is then a set of commodities (C') that contains the commodities used in production (C) plus the said physical surplus. The set of commodities C' has to be sold in the market (sphere of circulation) in order that capital can reassume its original money form in which the process can start all over again. This 'final' amount of money (M'), however, comprises a share (m) that corresponds to the monetary expression of the physical surplus. M', therefore, implies that capital has been valorised, that is, its value has been increased.

To sum up,

- the circuit of money-capital can be represented as follows

$$M - C < \begin{matrix} LP \\ MP \end{matrix} \ldots P \ldots C' < \begin{matrix} C \\ c \end{matrix} - M' < \begin{matrix} M \\ m \end{matrix}$$

- the purpose of the circuit appears to be the valorisation of capital; money appears then as money-capital, although preserving its function as means of circulation and measure of value;

- production and circulation have the sequence circulation-production-circulation;

- circulation develops along the movement M-C-M' in which the amount of M is a function of C. The latter, in turn, is determined by the scale and nature of the production process (Brunhoff 1976: 55).

(ii) Circuit of Productive Capital. Productive capital, as seen above, is the form in which capital leaves the sphere of circulation after assuming the material conditions for generation of a surplus. Starting from the commodities means of production (MP) and labour power (LP) in the moment of putting the former into motion by consuming the latter (sphere of production), the process is materialised again in the commodity form: in a set C' that involves not only a part that will re-enter the labour process as means of production, but also a surplus component. The destination of this surplus will lead to an increase in the physical amount of productive capital (P'), if the surplus is wholly incorporated in production - expanded reproduction - or to the maintenance of productive capital at its present level, P, if the surplus is put aside for consumption or hoarding.[3] For continuation of the circuit, however, it is necessary that the set C' be distributed among different branches of production and points of consumption. This distribution takes place through the sphere of circulation by transforming C' into M' and back into the commodity form. The result of the circuit is the renewed existence of capital in a form in which its productive function can be continued. To sum up,

- the circuit of productive capital can be represented as follows:

$$P \ldots C' < \begin{matrix} C \\ c \end{matrix} - M' < \begin{matrix} M \\ m \end{matrix} - C < \begin{matrix} MP \\ LP \end{matrix} \ldots P(P')$$

- the purpose of the circuit is the reproduction of production: capital presents itself, at the end of the circuit, in a form in which it has to function again as productive capital, with the possibility of widening the level of production (investment of the surplus);

- production and circulation present the sequence production-circulation-production;

- circulation assumes the form C-M-C, in which M appears only as means of circulation, as representing an intermediate and formal interruption of the circuit.

(iii) Circuit of Commodity Capital. This circuit commences with the entire process of circulation in which M appears as mediating a material transformation within the commodity form. C', the starting point, is exchange for M' which will be used to purchase the commodities that will constitute the material elements of the productive process. The outcome of this process is a new set of commodities C' (or C'' in expanded reproduction) with the same characteristics as the original C' set.

Summarising,

- the circuit of commodity-capital can be represented as follows:

$$C' < \begin{matrix} C \\ c \end{matrix} - M' < \begin{matrix} M \\ m \end{matrix} - C < \begin{matrix} MP \\ LP \end{matrix} \ldots P \ldots C'(C'') < \begin{matrix} C(C') \\ c \end{matrix}$$

- the purpose of the circuit is to emphasise the movement of valorised capital and the subcircuit c-m-c of the surplus;

- production and circulation present the sequence: circulation-production-circulation;

- circulation develops as C'-M-C'(C'')

(b) <u>The Circuit of Capital as a Whole</u>

The expression of the overall circuit of capital is then

$$M\text{-}C < \begin{matrix} MP \\ LP \end{matrix} \ldots P \ldots C' < \begin{matrix} C \\ c \end{matrix} - M' < \begin{matrix} M \\ m \end{matrix} \ldots C' < \begin{matrix} MP \\ LP \end{matrix} \ldots P(P') \ldots C'(C''')$$

For the sake of clarity, it is worth quoting Marx at length:

> If we take all three forms together, then all the premises of the process appear as its result, as premises produced by the process itself. Each moment appears as a point of departure, of transit, and of return. The total process presents itself as the unity of the process of production and the process of circulation (Marx 1978, II: 180).

Production and circulation appear in each of the three circuits but the form in which their interaction takes place is different in each one. This means that one of the circuits as such is only a partial and one-sided view of the overall circuit of capital (process of reproduction). Consequently, any attempt to separate production from circulation has to centre in this overall circuit.

The role of distribution is to link production and circulation in a way that ensures continuation of the process. This implies various aspects:

- distribution of the means of production among members of society, central in the distinction between capitalists and wage-labourers;

- distribution of the product as a whole among the different branches re-establishes the material conditions of expanded reproduction;

- distribution of the labour day between necessary and surplus labour reproduces the material conditions for the existence of social classes;

- distribution of surplus-value among individual capitalists in the form of profits determines the unevenness that characterises capitalist accumulation and the contradictions of competition.

## 2.2 Neo-Ricardianism in the Light of the Circuits of Capital

If the propositions that characterise neo-Ricardianism are seen from the perspective of the circuits of capital, an important conclusion may be drawn: the neo-Ricardian school can be interpreted as focussing on the circuit of productive capital.[4] It is from this that the school's main concern, i.e. distribution, can be understood and its limitations realized.

The basis for situating neo-Ricardianism in the circuit of productive-capital is the set of underlying assumptions behind the concept of prices of production. Recalling the explanation given earlier, neo-Ricardians determine prices of production from technical conditions of production and one of the distributive variables:

$$\vec{p}A(1 + r) + \vec{l}w = p\vec{b}$$

where b, the only new variable in the system, stands for a vector of output commodities such that

$$b_i \geq \Sigma a_{ji} \qquad i = 1,\ldots,n \quad j = 1,\ldots,n.$$

This means that a surplus has to be generated and distributed between wages (paid ex post) and profits (at common rates). There is first, then, a formal similarity between the extremes of the circuit of productive capital and the neo-Ricardian framework of price determination.

| | Given technical conditions of production | | Reproduction of the material conditions of production and generation of a surplus |
|---|---|---|---|
| Circuit of productive capital | $\frac{MP}{LP} \ldots P$ | ———— | $\frac{MP}{LP} \ldots P'$ |
| Neo-Ricardians | $\{A\}, \vec{l}_n$ | ———— | $\vec{b}$ |

The further elaboration of these formal similarities and of the underlying assumptions of the neo-Ricardian model of price determination will enrich the argument.

(i) Given technical conditions of production.
The assumption, which is very clearly expressed in the neo-Ricardian framework, only constitutes the point of departure of circuit of productive capital, II. The circuit of commodity-capital, in turn, commences with a set of commodities which have to be distributed (circulated) among the different branches of production before the latter can be put into motion. To go even further, circuit II, like the neo-Ricardian model, assumes a given technology: in circuit II, 'the means of production must be sufficient in mass to absorb the mass of labour which is to be turned into products through them'(Ibidem: 111).

(ii) Reproduction of the material conditions of production. This reproduction is assumed in the neo-Ricardian model, as is clear from the definition of prices of production given by Sraffa (1960: 1). Circuit II, which ends with P(P') also implies such reproduction. In this circuit, 'the concluding P...is not the production process; it is only the renewed existence of the industrial capital in its form of productive capital' (Marx 1978 II: 172).

(iii) Surplus and Growth.
The neo-Ricardian model outlined earlier is a static one. The possibility for growth, however, is implicit in the generation of a physical surplus and its location. Growth here is understood as the expansion in output.

In the circuit of capital as a whole, the emphasis is on accumulation. Accumulation, as valorisation of capital, appears as the 'driving motive' when the circuit is taken as a whole. However, whereas the form of circuit I expresses valorisation as such, and circuit III begins with capital already valorised, C', circuit II 'begins with P, the valorisation process itself' (Ibidem: 180).

The way in which valorisation appears in circuit II, moreover, emphasises the role of the generation of a physical surplus that enables the expanded reproduction of productive capital. In this sense, accumulation appears in this circuit very much like the neo-Ricardian concept of growth; 'the general form of the movement P...P'is the form of reproduction, and does not indicate, as does M...M', that valorisation is the purpose of the process' (Ibidem: 172).[5]

(iv) Money as a numeraire.

The explanation given earlier of the neo-Ricardian position regarding the role of a theory of value as a device for comparing heterogeneus aggregates, as well as Sraffa's determination of relative prices in terms of any given commodity, are sufficient illustration that, for the school in question, money is a numeraire.

In the capital circuits, money appears as a form that capital assumes in its process of valorisation. This is made explicit in circuit I of money capital and remains implicit in the circuit of commodity capital, III, in which money plays the role of means of circulation. In circuit II, however, in which emphasis is on material conditions for reproduction, the role of money is merely that of a unit of account.[6]

(v) Production of commodities by means of commodities.

It is important to emphasise that, contrary to the popular misconception, production of commodities by means of commodities does not imply that neo-Ricardians focus on the circuit of commodity capital. Rather, they see exchange as an unavoidable and evil link in the pursuit of the motive of reproducing production; that is, they focus on the circuit of productive capital. Two points can be made, however, to show that the circuit of productive capital in fact implies production of commodities by means of commodities. On the one hand, as seen in points (i) and (ii) above, the material conditions of production that constitute the opening and closing of circuit II are in fact two comparable <u>vectors of commodities</u>. On the other hand, circulation in circuit II takes the form C - M - C', and the circuit goes through a production-circulation-production sequence. These two points do not coincide in the other two circuits.

(vi) The transformation problem.

Neo-Ricardian criticisms of Marx's concept of value rest on the understanding of value as a 'quantity of embodied labour-time' (Steedman 1977: 20), and on the assumption of a functional relationship between the technical relations of production and the vector of final product. These two points might be said to hold if the analysis is focussed exclusively on the circuit of productive capital in which the only aspect of a theory of value that could be of any use would be that of transforming vectors of heterogeneous composition into homogeneous and comparable magnitudes.[7]

Outside this circuit, the neo-Ricardian interpretation of Marx's concept of value displays its short-sightedness, and the alleged expected functional relationship vanishes in a broader context of mutual determinations.[8]

(vii) The Classicals and the circuit of productive capital.

The final indication that the neo-Ricardian framework can be situated in circuit II is the similarity between the school in question and the Classical economists.

In discussing the Classicals, Marx made the important point that:

> C ...C' is the basis of Quesnay's Tableau economique, and it shows great discernment on his part that he selected this form in opposition to M...M' (the form fixed on and isolated by the Mercantile System), and not P...P (Marx 1978 II: 179).

And furthermore:

The Circuit of productive capital is the form in which the classical economists have considered the circuit of industrial capital (Ibidem: 166).

## 2.3 Evaluation of Neo-Ricardianism

The neo-Ricardians played a very important role in the development of critical economics by contributing to the debunking of Marginalist theory and by reviving the interest in Classical economics. The problem is, however, that they display the same flaws and weaknesses that were characteristic of the Classical economists. In the context, Marx's criticisms of the Classical school apply also to the neo-Ricardians: the emphasis by both schools on the circuit of productive capital renders them vulnerable to similar criticisms. According to Marx:

The general form of the movement P...P' is the form of reproduction, and does not indicate as does M...M', that valorisation is the purpose of the process. For these reasons, classical economists found it all the more easy to ignore the specifically capitalist form of the production process, and to present production as such as the purpose of the process ... In this connection,... the peculiarities of money and money-capital could be overlooked, the whole process then appeared in the same light as production (Ibidem: 172).

This indicates several lines of criticism of the neo-Ricardians, some of which have been acknowledged. Hodgson, for example, refers to some 'symptomatic silences' in Sraffa with respect to the dynamics of the production process, to the determinants of technical change, and to the analysis of money and uncertainty (Hodgson 1977:91).

One element characterises neo-Ricardianism that is worth emphasising as the central point of this section, i.e. to paraphrase Marx, that neo-Ricardians overlook the specifically capitalistic character of the production process.[9] Beyond the problem of the distribution of a fixed surplus between wages and profits, the question of how this surplus is produced and how the conditions of its production are continually reproduced is one to which neo-Ricardians cannot give an answer.[10] To refer to the surplus product in terms of surplus labour, as does Steedman (1977), does not bring us any closer to the specificity of capitalist production. As Marx points out:

> Capital has not invented surplus-labour. Wherever a part of society possesses the monopoly of the means of production, the labourer, free or not free, must add to the working time necessary for his own maintenance an extra working time in order to produce the means of subsistence for the owners of the means of production (Marx 1978, I: 344).

For Marx, then, the aim is to analyse the specific nature of the relation of capital and labour. Neo-Ricardians, however, could argue that this is precisely what they do. Bringing in the work of other writers such as that of Robinson (1962) and Kregel (1973) the Neo-Ricardian framework could be said to constitute a step forward in the understanding of capitalism, a way out of the Marxist rhetoric about value. In effect, neo-Ricardians would accept, in general, that the origin of social classes is the distribution of the means of production, and that exploitation constitutes the source of profits.[11] Now, <u>assuming as given</u> these capitalist relations of production, what the neo-Ricardians try to do is to analyse how control over the means of production derives in a control over the distribution of the surplus.

In doing this, however, the neo-Ricardians neglect important elements of the Marxist framework, elements which could clarify the basic relationships that they try to analyse. Perhaps the most important Marxist element absent from neo-Ricardian analyses is <u>competition</u>.[12] By failing to inquire into the processes that underlie the confrontation of different individual capitals in the market, the neo-Ricardians are incapable of going beyond the assumption of a uniform rate of profits. It is clear that 'calculating' prices of production does not explain how capitals in the same industry but with different levels of productivity, and capitals of industries with different value ratios of net income to means of production, converge in such a way that a uniform rate of profit becomes a meaningful concept.

Once real competition is assumed away - as is implied in the neo-Ricardian treatment of Sraffa's model - money is also emptied of any 'monetary' function, except from that of expressing absolute prices.

As such, the neo-Ricardian model resembles a static equilibrium model, perhaps of a partial character. Its scope should then be restricted to the criticisms of Aggregate neo-Classical economics, and to contributions to explanations of the relationship between prices and distribution, elements that can be incorporated into a broader and less rigid framework.

When the neo-Ricardians have tried to go beyond the limits of their framework the results have not been very promising, as the following examples illustrate:

- definition of social classes on the basis of 'income shares' and propensities to save;

- identification of the causes of crises in 'abnormal' increase of the 'share of wages' in net income;

- reduction of the role of the state to the point of considering it to be that of supporting the capitalists in their fight to survive the profit squeeze.

NOTES

1. It could be said that capitalist production is production of surplus value by means of commodities, keeping in mind that surplus value as such derives from the consumption of the commodity labour power in a process in which other commodities (dead labour) come into contact with living labour.

2. This analysis of circuits of capital implies acceptance of Marx's concept of value. This concept is subject to considerable controversy, but discussion of that controversy would sidetrack from the fundamental object of this paper and is accordingly excluded except where its incorporation seems essential.

3. In the case in which wages are paid ex-post, the destination of the surplus will have as over-riding feature its distribution between wages and profits. Allocation of the profit share of the surplus between 'investment' and consumption or hoarding is overshadowed by that between wages and profits.

4. This should not be understood as saying that neo-Ricardians focus on production. As can be concluded from section 1 above, 'production' and the circuit of productive capital are completely different concepts.

5. Taken in isolation, the motive of the individual circuits of commodity and productive capital does not appear to be that of valorisation. It is only when a consideration of the three circuits is in mind that the motive appears clearly as well as the conditions for the reproduction of the process of valorisation.

6. As was noted with regard to the circuit of productive capital, money represents there a formal interruption of the circuit; in other words it functions as means of circulation. However, if it is assumed that commodities are directly distributed so as to reproduce the material conditions of production, which is in fact a corollary derived from the definition of prices of production, such distribution is but a logical step that can be abstracted from the circuit. Once this is done, money loses all real monetary meaning and becomes a simple numeraire. This is, in fact, the case with the neo-Ricardian model.

7. This is, in fact, the proper object of value theory according to the neo-Ricardians. See Garegnani (1970: 279).

8. For a further elaboration of the subject not centered on the circuits of capital framework, see Elson (ed.; 1980).

9. This should not be interpreted as saying that neo-Ricardianism is ahistorical.

10. 'Ricardo asks, how is [the product] distributed? The question is rather how is it created?...As Quincey puts it, "the economics of Ricardo is in fact concerned only with dividends"'(Marx 1974: 553), or, 'Ricardo never concerns himself about the origin of surplus value. He treats it as a thing inherent in in the capitalist mode of production' (Marx 1978, I: 556).

11. This is explicitly acknowledged by Steedman (1977, Chapter 1).

12. This important difference between the Marxist framework and that of the neo-Ricardians is also underlined by Fine & Harris (1979) and Shaikh (1980).

# III

## NEO-RICARDIAN THEORY OF TRADE

### 3.1 Basic Propositions

#### (a) Concern and framework

The neo-Ricardian theory of trade sets out to analyse the relationship between distribution and prices of production in an international context. To the extent that the theory is formally based on the Sraffa model, its basic concern is the determination of terms and patterns of trade, and the analysis of the consequences of trade upon the parties engaged. Although neo-Ricardians manifestly express their awareness of the fact that trade is carried out by individual capitalists (Steedman 1979b: 35), their unit of analysis is the 'country'.

Noting the basic concern of neo-Ricardianism in the analysis of international trade, the significance of their underlying approach can be illustrated with two basic results.

Application of the neo-Ricardian model of price determination to the field of international trade gives rise to the following summarised propositions:

| | | |
|---|---|---|
| technical conditions of production<br>income distribution | determine | international division of labour<br>patterns and mangnitudes of trade flows<br>international and domestic prices |

Neo-Ricardians do not display a static principle of comparative advantage which can be said to intervene in determination of patterns of trade, for two reasons: on the one hand, the technical conditions of production in any one country are considered to be determined by 'the prevailing natural conditions and by the country's whole social and economic history' (Ibidem: 16); on the other hand, distribution is influential in the determination and changing of trade patterns.

The assumption of a given surplus to be distributed is also crucial: the idea is to consider the trading economies as generating a surplus that has to be distributed among various economic units, each with a different role in the process and each with a different degree of power. If the surplus is given, it is clear that, together, the distributional variables of a country stand in an inverse relationship with those of the other countries taken together. This inverse relation holds now within countries, between countries and for any pair of distributive variables, regardless of the country to which each variable corresponds.

In formal terms, the model representing the system can be expressed as follows:

$$\begin{aligned}(a_{11} + a_{21}p)(1 + r) + w_A l_1 &= 1 \\ (a_{12} + a_{22}p)(1 + r) + w_B l_2 &= p\end{aligned} \qquad \text{(i)}$$

where

$$p = p_2/p_1$$

Taking a two-country two-commodity circulating capital model with full specialisation, and assuming a common rate of profits, the system contains two equations and four unknowns; namely, three distributive variables ($r$, $w_A$, and $w_B$) and the international terms of trade ($p$). If two of the unknowns are determined exogeneously, the system can be resolved. The crucial issue is, however, that of the relationships between the distributive variables themselves and between these and prices. The point is clear in Steedman's conclusion of the analysis of a two-country two-commodity case in which no equalisation of the rate of profits exists:

> It can be concluded that each of the four distributive variables...is inversely related to each of the other three and that to each possible combinatin of those variables there corresponds a particular (set) of international prices (Ibidem: 117).

(b) Consequences of Trade: Gains from Trade

Another basic element of the neo-Ricardian approach to international trade is the analytical tool with which the effects of trade for a given country are dealt with. This basic tool is the concept of 'gains from trade'. This concept follows directly from the neo-Ricardian definition of surplus as that part of the product of the system that is divided between wages and profits. A given distribution of the surplus will corresond to given levels of consumption - wages plus the part of profits devoted to capitalist consumption - and investment - the remaining of profits. Under these conditions, a country's share in the surplus of the world system will determine the country's possibilities for consumption and accumulation.

The consequences that trade can have for a given country can then be analysed by comparing its levels of consumption and accumulation before and after the country enters the world market. This is, in a nutshell, the basis for the neo-Ricardian concept of 'gains from trade'.

A more elaborate analysis of the concept can be derived from the works of Metcalfe and Steedman (1972), Mainwaring (1974) and Steedman (1979b). The basis for this analysis is the dual relationship existing between the wage-profit frontier and the consumption-growth frontier first advanced by Pasinetti (1977). With the assumption of no saving on the part of the workers and of a given propensity to save out of profits on the part of the capitalists(s), wages will determine the level of per capita consumption while profits will determine the rate of growth of the economy. For a given surplus and a given level of 's', consumption and growth rate move in an inverse relationship, similar to that existing between wages and profits. It is then possible to define a consumption-growth frontier that will express the availability of surplus for the country and how that surplus is to be divided between consumption and investment. With this in mind, the neo-Ricardian criterion of gain rests on whether a higher consumption-growth frontier is achieved through trade (Steedman 1979b: 49).

The neo-Ricardian analysis of gains from trade is carried out in terms of comparative statics, by comparing no-trade and with-trade situations, or different pairs of alternative situations. One of the most important conclusions drawn in this respect is that, even when market imperfections are ruled out, a country may end up worse off after engaging in trade than in an autarkic position. This means that trade may result in a country enjoying a lesser surplus, independent of its distribution between wages and profits (Mainwaring 1974: 115).

Why, one could ask, would a country engage in trade if it is to lose from it? The neo-Ricardians make it clear that differences in the rate of profits of the various countries explain trade. A higher rate of profits for individual capitalists does not necessarily imply that the country in question is better off.

## 3.2 Neo-Ricardian Critique of Neo-Classical Trade Theory

The initial development of the neo-Ricardian trade theory largely took the form of criticisms of its neo-Classical counterpart, referring to the assumptions, relevance and internal consistency of the latter's theory of trade as expressed in the theory of comparative advantage and the

Heckscher-Ohlin-Samuelson (HOS) model. The neo-Classical approach to their main concern, i.e. determinants of terms, patterns and effects of trade, was thus criticised by the neo-Ricardians who address themselves to the same issues.

The most important attack has come from Emmanuel (1972), who criticises the assumption about factor immobility, especially concerning capital. Evans, however, showed that 'altering this assumption...is of no consequence to the Neo-Classical model' (1976: 149). Other criticisms related to the Neo-Classical assumptions about capital will be regarded as directed at the internal consistency of the model.

Steedman (1979a, 1979b) made the Neo-Ricardian position most clear with regard to the HOS theory, stressing two main trends which characterise current patterns of world trade: on the one hand, trade has been gaining importance in a growing world. On the other hand, 'the proportion of manufactured exports accounted for by capital goods has increased dramatically' (Steedman 1979b: 2). Faced with these new phenomena, the HOS theory is, to say the least, hopeless. Growth and the role of produced means of production constitute two crucial points that should be taken into account in any analysis of contemporary international trade, and both are missing in the HOS model.

The most far-reaching criticisms of the neo-Classical trade theory have undoubtedly been those aimed towards its internal inconsistencies. By extending the results of the Capital controversy to the Marginal theory of comparative advantage, especially those emphasising the dependence of prices on distribution, the neo-Ricardians undermined the basic conclusions of the HOS model.

More specifically, Steedman & Metcalfe (1972) successfully debunked the main propositions of these theorems with respect to expected patterns of trade, 'factor-price' equalisation, effects of trade upon factor rewards (Stopler-Samuelson theorem), etc. These criticisms were added to the already extensive series of attacks directed at the HOS theory, including: impossibility to preserve real content when generalised to many commodities, countries and factors; inadequate allowance for increasing returns to scale, and non-identical preference patterns, etc.

## 3.3 'Sraffian Wing' of Neo-Ricardian Theory of Trade

### (a) Characteristics

The main concern of this sub-division of neo-Ricardianism has been to extend the basic Sraffian framework to the field of international trade. For this reason, a good deal of the formal development of the basic propositions underlined earlier in this section has been contributed by this particular wing.

The generality of their objectives vis-à-vis other neo-Ricardians is perhaps the main characteristic of this group. In effect, having in mind the traditional issues of terms, patterns and consequences of trade, their 'objective has been only to establish an open-ended framework for the analysis of international trade amongst growing economies - a framework which different readers will choose to apply and to develop in different ways' (Steedman 1979b: 154). It is with this in mind that the Sraffian neo-Ricardians emphasise the possibilities for closing the formal model in different alternative ways, specifically with the exogenous determination of any distributive variables. The central role of distribution is maintained, as is the inverse relationship between the distributive variables, but no definite and clear-cut position is insisted upon as to which of these variables should be taken as given.

A secondary characteristic of this brand of the neo-Ricardian trade theory is its emphasis on growth in relation to trade. Given the limitations of the Sraffian framework for the study of dynamic problems, however, neo-Ricardians have to rely on contributions outside the static neo-Ricardian framework, as in the case of von Neumann's dynamic general equilibrium model. Since the von Neumann model refers to an economy in long period equilibrium which undergoes steady growth, it may in effect be regarded as the dynamic counterpart of Sraffa's static system.[1]

The third major feature of this group of neo-Ricardians is the development of the concept of 'gains from trade', a development which constitutes one of most important points of rupture with neo-Classical traditions. The practical importance of the development of this concept will be made clear later when analysing the other wing of neo-Ricardianism.

(b) <u>Development</u>

The development of the Sraffian wing of neo-Ricardian trade theory can generally be regarded as enlarging its framework and scope. There is, in the first place, Parrinello's 1973 essay concerning certain basic relationships between distribution, accumulation and international trade. Not being based either on Sraffa's model of price determination, or on von Neumann's growth model, Parrinello's work presents some important elements that characterise the neo-Ricardian approach to trade:

- abstraction from international differences in technology so as to analyse the relationship between distribution, growth and trade;

- approach to the determination of trade patterns as a problem of choice of technique and profit maximisation;

- treatment of distribution as exogenously determined.

Mainwaring (1974) advances the first explicitly neo-Ricardian analysis of international trade with a very simple framework. In addition, he has contributed considerably to the development of the concept of gains from trade, as explained above.

It is with Steedman (1979b) that the Sraffian wing of the neo-Ricardian theory of trade has reached its fullest development so far, especially with respect to formal elaboration. Steedman's contribution to the methodological framework is most important. Firstly, his application of comparative dynamics (which assumes the economies under consideration moving along a steady-growth path of long-run equilibrium) to the analysis of effects of trade, advantages of free trade, effects of tariff and non-tariff restrictions to trade. Secondly, his introduction of increasing complexity into the analysis. This is clear in the introduction of fixed capital and non-tradable commodities in a later stage of the elaboration once the situations in which only circulating capital and non-tradables had been thoroughly studied. Perhaps the most important example of how Steedman introduces greater complexity into the model in order to re-consider its basic conclusions at different levels of abstraction is his treatment of the framework of prices of production. This concept of prices of production, as determined by technical conditions of production and distribution, undergoes a series of transformations as increasing complexity is introduced into the model. The increasing complexity of prices at each stage corresponds to the different scope that the model is acquiring: starting off from the analysis of an autarkic economy, allowing then for growth and openness to trade, moving subsequently to a three-commodity-two-country case, and finally to an analysis of trade in which many commodities, countries and techniques are considered, neo-Ricardian trade theory also undergoes, in its Sraffian wing, an important transformation. From being a simple attempt to understand why trade takes place and what its consequences are (Steedman 1979b: 36), it turns into an analysis of international equilibrium (Ibidem: 128).

## 3.4 'Dependency Wing' of Neo-Ricardian Trade Theory

### (a) Characteristics

Contrary to the other Sraffian wing, this second branch of neo-Ricardianism in its analysis of international trade problems is characterised by its emphasis on the application of the general framework to the analysis of the role of trade and the 'process of underdevelopment'. Specifically, they use Sraffa's model of price determination to emphasise the relationship between prices and distribution in the analysis of the consequences of trade upon 'central' and peripheral' countries. If the Sraffian wing aimed at establishing an open-ended framework for the analysis of international trade, the Dependency wing, by applying the framework to the analysis of more specific problems provides as it were, the flesh of the neo-Ricardian theory of trade.[2]

With respect to the relationship between prices and distribution, two aspects should be underlined. First, this group of neo-Ricardians analyse the movement of the (barter) terms of trade, i.e. the trends in the relative prices of production. As we have seen, different levels of equilibrium prices imply different patterns of distribution of the surplus between countries, between distributive variables of different countries, or both. By analysing the movement of international equilibrium prices, the neo-Ricardians aim at grasping the causes and effects of the underlying tendencies in such movements. Second, neo-Ricardians analyse the distribution of the surplus on the basis of the inverse relation between wages and profits, and on that between the latter and prices.

The most important feature of the Dependency wing is the attention it pays to the consequences of trade upon the countries involved. To illustrate this two steps must be taken. First, the neo-Ricardians give prominence to the notion of 'gains from trade', relating them to the movements of the (barter) terms of trade for a given country. Worsening of the terms of trade clearly constitutes a 'loss from trade' since, as Steedman shows, the consumption-growth frontier for a given country is higher, the higher the terms at which that country trades. Second, these neo-Ricardians develop in detail the consequences for a country, in terms of consumption and growth, of a loss from trade. Trade can be said to hamper the process of accumulation when a country sees its surplus siphoned-off to its trading partners.

Another characteristic of this group of neo-Ricardians is their focus on 'countries' as the unit of study. To them, the world is a unitary system, countries constitute discontinuities within that system. These discontinuities are identified either by limits to the mobility of labour, by specific scarce natural products, by differing levels of development of the productive forces, or by peculiar combinations of production relations. These authors tend to start by analysing the world system and then to move to the country level so as to inquire into the conditions and effects which frame the country's participation in international trade.[3]

Putting together these last characteristics of the Dependency wing of the neo-Ricardians, it is easy to see how they came to divide the world into groups of countries. This division implies complementary and even mutual determination for the groups of countries. Thus, neo-Ricardians speak of poor, peripheral, dependent or exploited countries in referring to those that, suffering losses from trade, see their growth possibilities reduced and the development of their productive forces blocked. The other group, constituted by those that - supposedly at the expense of others - gain from trade, are labelled rich, central, exploiters or imperialist countries.

Finally, a secondary characteristic of this Dependency wing is the fact that by analysing concrete relations between distribution and prices, it provides different closures to the open neo-Ricardian model explained earlier. This means that the neo-Ricardians analysed here opt for a particular unknown of the model (wages, profits or prices) as being determined outside that model.

(b) <u>Dependency Theorists</u>

The characteristics of the Dependency wing of the neo-Ricardians having been explained, it is now necessary to analyse the various proponents of this approach more closely. The fact that the group is much more heterogeneous than the other wing, and more relevant for our present work, calls for a more detailed study of this second wing.

(i) Arthur Lewis: unlimited supply of labour.

Lewis (1954) analyses the terms of trade for 'tropical' countries in their exchange with 'temperate' ones. The core of the argument is the existence in the 'tropical food-producing countries' of an unlimited supply of labour which, keeping wages at a subsistence level, enables generation of a surplus that is transferred to the 'temperate' countries.

The free play of the market explains the process. On the one hand, the 'temperate' countries also produce food but with higher productivity, a fact which forces down international food prices. On the other hand, the excess supply of labour in the 'tropical' countries forces down the wages in those countries. The result is a continued worsening of the terms of trade for the 'tropical' countries, and a consequent self-reproducing situation of poverty for them. As Lewis puts it, the existence of impoverished nations

> ... boils down to the fact that the terms of trade for tropical products are unfavourable, this results from a depressed wage for unskilled tropical labour that is based on an unlimited source of low-productivity food producers. So long as over half of the tropical labour force falls into this category, the remainder of the labour force will get low prices (1980: 28)

This 'unfair' situation can be interpreted in the light of Steedman's (1979b) long-run analysis as one in which international prices and individual growth rates for particular countries are mutually dependent, to the point that the trading countries must grow at the same rate if prices are to be stable.

This mutual dependence between terms of trade and growth rates is explained by Lewis in an historical perspective. On the one hand, he shows how the present division of the world between 'tropical' and 'temperate' countries came about. Two basic elements have to be considered: (i) the dependence, in the case of the temperate countries, of 'an industrial revolution on a prior or simultaneous agricultural revolution' which explains why agriculture was there 'capable of producing the surplus food and raw materials consumed in the industrial sector' (1978: 9); and (ii) two streams of international migration in the second half of the 19th century, one from Europe to the 'temperate countries' and the other from Asia to the plantations in the tropics, which 'set the terms of trade for tropical and temperate agricultural commodities, respectively' (Ibidem: 14).

On the other hand, Lewis (1969) presents a theoretical model for explaining both the determination of terms of trade for the tropical countries and the reasons for their worsening.[4] According to Lewis, the determination of the terms of trade for an agricultural country with respect to an industrialised one should not run in terms of direct relative productivity differentials in the production of traded commodities. To grasp the real meaning of the determination in question, terms of trade should be tied to productivity differentials in the production of food (Lewis 1969: 18). In other words, what prevents agricultural countries from benefitting from increases in productivity in the industrial countries is the higher growth in productivity in food production in the latter.

Lewis's position is thus very close to that of Ricardo inasmuch as it resembles a labour (real wage) theory of value.

Finally, Lewis advocated the following policy-oriented recommendations as a possible way out of the situation of backwardness. It is necessary, first of all, to reallocate the surplus of labour to the production of domestically-produced commodities, i.e. 'a domestic market for industrialisation [has to be] developed'. This has to be accompanied by a redistribution of the surplus by means of taxation and, most importantly, by a rise in productivity in agriculture in the tropical countries (Lewis 1980: 28).

(ii) Prēbisch-Singer: technical progress

The basic concern of these authors has been with the distribution of the fruits of technical progress between countries via the terms of trade. Their analyses not only constituted a pioneer critique of the traditional neo-Classical theory of comparative advantage, but also laid the foundations for a later common classification of nations:

> historically, the spread of technical progress has been uneven, and this has contributed to the division of the World economy into industrial centers and peripherical countries ... with subsequent differences in income and growth (Prebisch 1959: 251).

The mechanisms whereby this process has come about are explained by Singer (1950) and Prebisch (1959) on the basis of <u>types of commodities</u> exported and imported by the peripheral countries. Singer first spoke explicitly of gains from trade. According to Singer (1950), specialisation by the underdeveloped countries in the production of raw materials and agricultural products has worked against such countries due to three main reasons: first, because the production of these products offers few possibilities for technical progress and internal or external economies; second, because given that production for export is carried out in the underdeveloped countries by foreign investment, most of the secondary and cumulative effects of such investment takes place outside the recipient country; third, because the worsening of the terms of trade - explained by the low income elasticity of demand for agricultural products and the corresponding high elasticity for industrial products - has transferred the benefits derivable from technical progress from the underdeveloped to the industrialised countries.

Similar ideas were developed by Prebisch in 1959, after having previously assumed a different position. In 1950, Prebisch argued that the wage differentials between the centre and the periphery were caused by the transfer of benefits of technical progress from the latter to the former on the basis of institutional differences in the wage bargaining of the two groups of countries; this resulted in higher wages in the centre.

To return to the mutual Prebisch-Singer thesis, the two authors consider that the only way by which to escape the worsening of the terms of trade is to overcome the problem of low income elasticities. Accordingly, they advocate a process of import substitution in order to bring about an international redistribution of incomes:

> it is a question of ... comparing the increment of income obtained in the expansion of industry with that which could have been obtained in export activities had the same productive resources been employed there (Prebisch 1959: 255).

In addition, the two authors called for multilateral trade agreements that would help prevent the deterioration of the terms of trade, and for programmes of economic integration of countries with similar wage levels.

It is important to mention, at least in passing, that in a recent paper Singer criticises his initial position, and revises the ideas expressed in 1950. Originally, Singer 'assumed the central-peripheral relationship to reside in the characteristics of different types of commodities' (1975: 376), which led him to put too much emphasis on industrialisation as the way out of the underdevelopment situation. The problem was not being able to foresee that industrialisation would 'become the basis of a continuing self-reinforcing relationship of dependency' (Ibidem). With this in mind, Singer now advocates an approach to the centre-periphery relationship on the basis of different types of countries. Under this new interpretation, the advantageous position of the industrialised countries will assure them benefits from trade; in fact, these countries are 'the seats of the multinational corporations, the homes of a modern autonomous appropriate technology, and are economically integrated economies' (Ibidem).

(iii) Emmanuel: unequal exchange

It is not the purpose here to undertake an in-depth evaluation of the Unequal Exchange position, nor to summarise the enormous literature regarding this issue. The aim is to see how Emmanuel's basic propositions should be located within the general neo-Ricardian framework.[5]

Emmanuel criticises the theory of comparative advantage, and considers the consequences for the analysis of international trade if the assumption of international immobility of labour were lifted. To do so, the author uses Marx's schema for the transformation of values into prices or equalisation of the profit rate.

Emmanuel stresses two sources of non-equivalent exchange, namely, differences in organic composition of capital for the branches (countries) involved, and differences of rate of exploitation as between countries. Of these, only the second gives rise to what Emmanuel calls strict non-equivalence, the first also occurring in a national context.

Strictly speaking, unequal exchange is closely linked to wage differentials that are not compensated by productivity differentials in the opposite direction. The problem is now to indicate what is, for Emmanuel, the 'just price' with respect to which a given set of terms of trade can be said to correspond to an unequal situation.

It is clear that the 'just price' is not that determined by the labour content of the commodities, since different organic compositions of capital would be enough to deviate prices from values, even with uniform rates of exploitation as between countries. The 'just price' for Emmanuel is that which would rule in a world in which labour mobility allows international equalisation of rates of exploitation to take place.[6] Putting these ideas together, the definition of unequal exchange given by Emmanuel is straight-forward:

Regardless of any alteration in prices resulting from imperfect competition on the commodity market, unequal exchange is the proportion between equilibrium prices that is established through the equalisation of profits between regions in which the rate of surplus value is 'institutionally' different - the term 'institutionally' meaning that these rates are, for whatever reason, safe-guarded from competitive equalisation of the factors markets and are independent of relative prices

(1972:61-64).

The basis for the argument is then that wage differentials between 'rich' and 'poor' countries - not compensated by productivity differentials - are the cause of unfavourable terms of trade for the latter and for their increasing impoverishment. If higher wages in the rich countries are explained by the trade union factor, made possible by the 'historically' and morally determined low wage in the 'poor' countries, the process of unequal exchange is cause and effect of the polarisation of wealth and poverty. Through unequal exchange, the poor countries transfer part of their surplus to the rich countries, depriving themselves of the means of accumulation. The resulting unemployment situation prevents wages from rising, and jeopardises trade union organisation.

The dynamics of Unequal Exchange are explained by Emmanuel in terms of the cumulative effect of the interaction between economic development and the increases in wages:

Once a country has got ahead...this country starts to make other countries pay for its high wage level through Unequal Exchange. From that point onward, the impoverishment of one country becomes an increasing function of the enrichment of another, and vice-versa (Ibidem: 130).

After attempting to explain unequal exchange on the basis of Marx's scheme of price formulation, Emmanuel illustrated unequal exchange by comparing two sets of prices of production corresponding respectively to equal and non-equal wages. In this Sraffian-based neo-Ricardian model, the wage in the 'poor' country is assumed to be the independent variable, but not necessarily equal to the subsistence level.

Also within the neo-Ricardian model, Emmanuel goes beyond the relationship 'terms of trade - gains from trade' and relates the latter directly with the level of wages in a given country. According to this, a country would obtain a positive gain from trade if it manages to increase its wages (Emmanuel 1970).

The solution envisaged by Emmanuel for the problem of unequal exchange runs along these lines: the idea is to exploit the cumulative interaction between wages and development (surplus). The 'poor' country has to start by increasing both wages and productive capacity wherever they are low, especially in those branches where production is domestically-oriented and foreign competition is weak. Otherwise, an adequate structure of protective tariffs is necessary. Internationally, 'a worldwide tax on exports can be established [and] ... collected by an international organisation. The product of this tax will be paid back to the exporting country in the form, say, of a development fund' (Emmanuel 1972: 235).

(iv) Braun: exploitation through trade

Working explicitly within the neo-Ricardian formal model, Braun has put forward his own version of unequal exchange:

> contemporary imperialism can be explained by unequal exchange, i.e. the advantage enjoyed by the imperialist countries through the fact that they can buy cheap and sell dear (Braun 1973: 15).

Braun elaborated two basic concepts which are central to his explanation of unequal exchange. These two concepts - exploitation and dependence - refer to the characteristics of international relations. In the first place, Braun distinguishes three forms of exploitation: (i) extraction-appropriation of surplus labour by the capitalist; (ii) monopolistic power that manages to impose market prices above or below prices of production; (iii) general monopolistic power that enables some countries to reduce prices of production below the natural prices (situation with international equalisation of profits and wages) of the commodities they import. It is this latter exploitation of some countries by others which gives rise to unequal exchange.

In the second place, Braun's definition of dependence applies to a country that is unable to undertake its process of expanded reproduction due to the total or partial lack of a capital goods sector. These goods are monopolised by the imperialist countries.

Dependence and exploitation complement each other in the configuration of a situation of unequal exchange:

The manipulation of prices by the imperialist countries is the direct result of the unequal development of the productive forces and the social relations of production that have been established in the dependent countries (Ibidem: 17).

The dependent country, in a position in which it has to resort to the world market for supplies of important parts of the means of production it requires for expanded reproduction, is forced to sell its exports at low prices, at the risk of serious problems of deficit in the balance of payments.

Braun reverses the direction of the causality in Emmanuel, going from the prices of exports of the dependent country to a low wage in the same country. The imperialist country determines the 'average price' of its imports by means of tariffs, subsidies, discriminatory practices, etc, forcing down the price of production of imported commodities. Once this price of production is forced down, the lower wages in the dependent country give scope for a uniform international rate of profits.

With respect to policy recommendations, Braun asserts that a 'radical change' in the existing level of wages and prices is necessary in order to put an end to unequal exchange (Ibidem: 72). He also argues, however, that the possibilities for carrying out this change are seriously hampered by the contradictions at the world level over distribution of the surplus.

(v) Amin: primitive accumulation

Amin (1974) defines the relation between centre and periphery as a process through which the centre - a socio-economic formation in which capitalism is dominant and exclusive - carries out its process of expanded reproduction at the expense of the process of 'primitive accumulation' of the periphery - where capitalism is dominant but not exclusive.

Within this context, the role of unequal exchange is clear, as well as the mechanism whereby it operates:

This is the framework for the essential theory of unequal exchange. The products exported by the periphery are imported to the extent that...the return to labour will be less than what it is at the centre. And it can be less to the extent that society will, by every means - economic and non-economic - be made subject to this new function: provide cheap labour to the export sector (Amin 1975: 5).

The model of accumulation in the periphery is characterised by an unbalanced development of the productive forces, with a leading export sector which relies on the rest of the economy for the provision of cheap labour power. When an internal market develops, it grows distorted and biased towards luxury goods production. The corresponding maintenance of most of the periphery in a situation of backwardness gives rise to the social phenomenon of marginalisation.

At the same time, the central countries import from the periphery and at low prices, important elements of constant and variable capital. Simultaneously, the flow of capital from the centre to the periphery serves as an additional vehicle for the transfer of surplus from the latter to the former.

Amin opts for the wage in the periphery as the independent variable of the system. This wage is determined by a complicated process of class struggle of indeterminate outcome: the wage rate in the export sector of the periphery 'will be as low as the economic, social, and political conditions allow it to be' (Ibidem: 5).

The solution envisaged by Amin for the problems of the periphery is based on a distribution of income which, breaking the sequence of development from exports of primary products to production of luxury goods, establishes a new process of accumulation on the basis of mass production and capital goods production (movement from 'extrovertive' to 'autocentric' accumulation). At the international level Amin advocates a

liberation of the nations of the Third world... which must break with the World Market and a 'gradual transition from the situation of a periphery motivated from outside to that of a new centre which provides its own centre and its own periphery' (Amin 1974: 36).

NOTES

1. The incorporation of dynamics into the analysis of trade led neo-Ricardians to modify Sraffa's original model by adding the proposition of constant returns to scale. Apart from this, the introduction of growth in the analysis of trade is not very successful. The assumption of an economy undergoing steady growth in which 'all positively priced physical quantities grow at a constant common rate of growth' (Steedman 1979b: 10), cannot easily be reconciled with the treatment of, capital endowment' as a given value whose physical composition is to be determined in the long run.

2. The two wings have had, to a certain extent, an independent development. The fact that they converge to the point where they can be analysed under a common framework illustrates how the evolution of economic thought shapes itself with the increased encounter with reality. Evans (1976) and Bettelheim (1972) have also emphasised the neo-Ricardian character of the wings analysed here.

3. This treatment of the relationship of the country with the World system by the neo-Ricardians has been analysed in detail and criticised by Palloix (1970).

4. It is this worsening of the terms of trade which, according to Lewis, has perpetuated the division of the World into agricultural and industrialised countries.

5. Evans (1976) and (1980) makes a thorough analysis of Emmanuel's theory of Unequal Exchange from a Sraffian neo-Ricardian perspective, and summarises the contributions of other authors.

6. Emmanuel (1970) stressed that unequal exchange is applicable to countries as such and not to particular commodities or branches of production (agriculture-industry, for example).

# IV

# EVALUATION OF THE NEO-RICARDIAN THEORY OF TRADE

## Overview

The objective of this section is to evaluate neo-Ricardianism in its position with respect to international trade, with a view to grasping its scope and limitations. The aim is to situate the school in terms of a broader framework rather than to undertake a thorough critique of the school. Here again, the broader framework will be based on Marx's circuits of capital analysis, but now as interpreted and expanded by Palloix (1973) in terms of internationalisation of the circuits of capital.

## Internationalisation of the Circuits of Capital

Marx has stated, 'the tendency to create a world market is directly given in the concept of capital itself (Marx 1974: 408). Capital, then, implies self-expansion. As the parts of the world economy are linked by movements of money and commodities, and the capitalist relations of production are expanded, integration of the world economy appears as a complex network of interconnected points.

There are some basic moments within the overall circuit of capital when it transcends, without destroying, national boundaries. These moments, according to Palloix (1973) can each be said to relate to a different circuit:

- internationalisation of capital in the process of its self-expansion, for which emphasis is placed upon the circuit of money capital, M...M' (foreign investment);

- internationalisation of self-expanded (or self-valorised) capital, which is centred in the circuit of commodity capital, $C' \ldots C'$ $(C'')$ (internationalisation of the process of circulation);

- internationalisation of the labour process, focussing on the circuit of productive capital, $P \ldots P$ $(P')$ (international division of labour).

<u>The three partial circuits</u>

(i) Internationalisation of the circuit of money-capital (I), or internationalisation of capital in its process of valorisation.

$$M\text{-}C < \begin{matrix} MP \\ LP \end{matrix} \ldots P \ldots C' < \begin{matrix} C \\ c \end{matrix} -M' < \begin{matrix} M \\ m \end{matrix}$$

This process has as two central moments: (a) the financing of production by means of the acquisition of command over an amount of resources expressed by M. This financing may involve the international transfer of money-capital or borrowing; (b) the purchase of labour power and means of production $(M\text{-}C < \begin{matrix} MP \\ LP \end{matrix})$ ih the labour and commodity markets of another country with a view to putting them to produce a surplus in the commodity form $(C' < \begin{matrix} C \\ c \end{matrix})$. The vector of commodities can be sold in the domestic commodity market or in foreign markets. The initial purchase of means of production may also have taken place in foreign markets. The important point is that valorisation of capital $M \ldots M'$ implies the tendency to expansion of capitalist relations of production at a world level. This in turn implies, at the end, internationalisation of the three circuits of capital.

(ii) Internationalisation of the circuit of commodity-capital, III, or valorised (self-expanded) capital.

$$C' < \begin{matrix} C \\ c \end{matrix} -M' < \begin{matrix} M \\ m \end{matrix} -C < \begin{matrix} MP \\ LP \end{matrix} \ldots P \ldots C' \; (C'') < \begin{matrix} C \\ c \end{matrix} (C')$$

This process leads to internationalisation of the process of circulation. Capital crosses national boundaries in the commodity form, which means that it does not necessarily presume, nor necessarily lead to, the internalisation of the capitalist relations of production. Internationalisation of the C'... C' (C'') circuit, however, implies an international division of labour, and international movements of means of payment.

(iii) Internationalisation of the circuit of productive-capital, II, or internationalisation of the labour process.

$$P. \; . \; . \; C' \quad \begin{matrix} C \\ c \end{matrix} - M' \quad \begin{matrix} M \\ m \end{matrix} - C \quad \begin{matrix} MP \\ LP \end{matrix} \ldots P \; (P')$$

Strictly speaking, internationalisation of the P...P (P') circuit assumes internationalisation of the C'...C' circuit, but not necessarily that of the M...M' circuit. Internationalisation of the sphere of circulation is crucial for distribution of the commodities (means of production and wage goods) which are necessary for the process to be renewed.

Internationalisation of the P... P (P') circuit takes the form of an international division of labour[1] in the sense that the different points in which capital undertakes its productive function (P) are geographically dispersed in various countries.[2]

Section II holds equally valid at this stage. It is useful, however, to recall part of a quotation from Marx cited earlier but also relevant here:

> If we take all three forms together... each moment appears as a point of departure, of transit and of return. The total process presents itself as the unity of the process of production and the process of circulation (Marx 1978 V.II: 180).

With respect to the specific connection of the three circuits, some important points may be made:

- the simple fact that a C' - M' act is at the same time an M'-C' act from another perspective, and that this holds for as many C' - M' acts as there are commodities in the C' vector, implies that the overall circuit of capital is the synthesis of the individual circuits of particular capitals of different nations which move, at the same time, at different paces, in differerent directions, and through different stages;

- an individual capital may make its circuit in a way that allows it to rely on different subcircuits of the internationalised process of circulation for the acquisition of finance, means of production, labour power, and realisation of commodities. This means: first, that, in its circuit an individual capital may cross - and more than once - different national boundaries; and second, that a country may be crossed by the circuits of different capitals and in different phases of these circuits.

Consequently, although in history 'countries' have emerged hand-in-hand with the development of the world market, the tendency of capitalist relations of production to become worldwide, as expressed in the internationalisation of the circuits of capital, has caused the traditional concept of 'country' to become ambiguous. A country is not the point of departure of the international circuit of capital but a discontinuity of such circuit, it is not a given but a determined concept.[3]

## Neo-Ricardian Trade Theory in the Context of the International Circuit of Capital

If the analysis of section II is to be valuable for an evaluation of Neo-Ricardian Trade Theory, it is necessary to understand the ways in which Neo-Ricardians introduce trade into their framework. The 'countries' engaged in trade come to constitute a single system of various 'activities' of production.[4] Once this 'international system' is put together, the trading countries can be identified in three ways:

- different countries may have different technologies, which express themselves in different ratios of direct labour to means of production. This variety of ratios for different activities has also been presented in the original Neo-Ricardian model for non-trade situations, as seen in section I;

- different countries may have different wage rates, i.e. a basic element of neo-Ricardian trade theory. These different wage rates, once they have been translated into the same standard of measure, do not necessarily make the 'international system' formally different from the neo-Ricardian no-trade model, since one can concieve of different kinds of labour in a closed economy as giving rise to wage differentials;

- countries may be grouped according to the level of development of their productive forces, the composition of their productive structure, the combination and hierarchy of production relations in their social structure, their degree of internal integration, etc. In fact, this is done by the Dependency wing analysed above. The problem is that these internal specificities of different groups of countries remain in the background providing, as it were, the missing link in the explanation of one or another international phenomenon, but without modifying the general neo-Ricardian model as such.

The conclusion to be drawn is very simple: neo-Ricardians introduce the issue of international trade into the original Sraffa-based model of price determination of section I in such a way that the model remains formally the same. The only modifications introduced refer to:

$I_n \quad \vec{p} A (1 + r) + \vec{1}\vec{w}' = \vec{p}$

$\vec{p}$, corresponds now to the vector of international equilibrium prices;

A, represents now the international matrix of inter-industry coefficients, constructed so that each row corresponds to a different activity and to a different country;

r, stands for the international rate of profits assumed to be uniform throughout the world system;

$\vec{1}$, is the column vector of direct labour inputs, each element corresponding to a different country;

$\vec{w}'$, is the row vector of wage rates, one for each country.

The result of the introduction of international trade into the neo-Ricardian framework is then clear[5] (that each of the two wings reaches this result along different paths in fact makes no difference): the neo-Ricardians of the Sraffian wing analyse first the case of an autarkic economy and then, on the basis of the technical conditions of production and distribution, determine for that economy the 'patterns of specialisation' that different sets of international prices would bring about. A profit-maximising choice of technique then decides the activity or activities in which each economy will specialise, the result being the 'international system' described above. The Dependency wing, in turn, starts directly from this system without analysing the case of a closed economy, and giving either historical or de facto explanations of existing patterns of trade.

At this point, our argument converges with that given in section II, in the sense that the same formal neo-Ricardian model is the basis for both aspects of neo-Ricardianism, its general framework and its approach to international trade. The same characteristics of the neo-Ricardian model which justified its location in the P...P(P') circuit of capital, now account for the location of neo-Ricardian trade theory in the internationalised P...P(P') circuit of capital. The following points are specific to international trade.

(i) Given technical conditions of production

Once the 'international system of production' is either arrived at (Sraffian wing) or assumed (Dependency wing), the technical conditions of production are given by $[A]$ by $\vec{l}$, as indicated above. This does not mean that neo-Ricardians take as given the international division of labour-distribution of 'activities' as between countries. At a different level of abstraction, the neo-Ricardians, specifically those of the Dependency wing, discuss how peripheral countries are forced into a certain and changing pattern of international division of labour by the central countries, for the benefit of the latter.

(ii) Reproduction of the material conditions of production. For this condition to be fulfilled, the internationalised circuit of commodity capital has to result in a distribution of commodities set C' in such a way that equilibrium in the international system is restored. The neo-Ricardians assume that this distribution of C' takes place without any problem of interruption (tariffs, blockades, balance of trade, deficits, etc.).

(iii) Neo-Ricardians assume that trading economies generate a 'joint surplus', to be divided as between countries and, at the same time, between wages and profits in each country, thus determining the possibilities for growth and consumption in each nation. The fact that such possibilities may be either 'negative' or less than in an autarky is another hypothetical situation which falls outside both the normal Sraffian model and the P...P(P') circuit.

(iv) Money as a Numeraire.
It can be said that, to the extent that the neo-Ricardians assume the internationalisation of the C'...C'(C'') circuit, money is for them both a numeraire and a means of exchange. The fact that they do not consider international movements of money capital implies that the neo-Ricardian internationalisation of capital is conceived as the sub-process connecting the P...P (P') and C'...C' (C'') circuits.[6]

The rest of the points considered earlier as justifying the location of the neo-Ricardian framework as focussing on the P...P(P') circuit, can be applied here without modification as pertaining also to neo-Ricardian trade theory.

## Evaluation of the Neo-Ricardian Theory of Trade

### Problems

A basic question is why is it important to analyse international relations on the basis of distribution, and to have the notion of countries as the unit of analysis. If the neo-Ricardian framework rests on a partial view of these international relations, would a broader view imply a completely different framework? Would the problems and patterns of trade be equally important as they are in the neo-Ricardian framework? Would the latter be of any use in that broader framework?

That 'broader framework', however, is still what should be the basis of an approach to capitalist accumulation on a world scale. All that can be done here is to show the partial character and limitations of the neo-Ricardian theory of trade.

### Limits of the neo-Ricardian framework

Along the line of thought in which we earlier argued that neo-Ricardians overlook the specifically capitalist character of production, it can now be said that they also overlook the capitalist character of trade. The problem is then not only, as Bettelheim says, that the neo-Ricardians 'obscure the fact that what is described by them is necessarily rooted in production relations' (1972: 276), but also that their framework is not suited for the analysis of these relations.

Two simple and not too far-fetched examples will illustrate the points emphasised here:

- if country A (a rich, central or imperialist country), instead of importing commodity X from country B (counterpart of A) as it has been doing, decides to permit the flow of cheap labour from B into its territory and employs this cheap labour in the production of the same commodity X, does unequal exchange disappear? And if unequal exchange disappears, does it imply that capital in country A is not internationalised?

- if country A decides to invest capital in B so as to benefit from low wages in B, and produces commodity X which is exported to A, what does it matter to B if the price of X, its export, moves up or down?[7]

These two examples illustrate the vagueness that surrounds the definition of gains from trade given by the neo-Ricardians. Other characteristics of the theories of trade analysed here help to illustrate the limitations of the neo-Ricardian framework for the study of international economics:

- trade as such is only one of the elements accounting for international inequalities and one aspect of the overall process of internationalisation of capital;

- without a theory of money and international finance, any attempt to explain distribution between nations will get no further than providing a mere reference in an understanding of what really happens and how it happens;

- any explanation of international and intra-national differences in levels of accumulation and development of the productive forces which lacks a thorough analysis of competition between individual capitals and its relation with national frontiers, is bound to remain at a very general level of abstraction;

- to talk of nation-states as a unit of study in an analysis of the world economy will lead to only a partial understanding of the latter which in turn, appears only as a summation of countries or groups of countries.

Emphasis on how surplus is produced and how the conditions for its production are reproduced - which involves the analysis of distribution - would change the concern of, and questions formulated by, the neo-Ricardians, but would provide more insight into what are the overriding aspects of international economics.

Evaluation of the limitations of the neo-Ricardian Analysis

In this last subsection, we shall illustrate how the limitations of the neo-Ricardian framework manifest themselves in some of the conclusions drawn by its advocates.

(i) Treatment of Class Relations.

The definition of classes on the basis of distributional variables implies that there are as many classes as parts in which the surplus is to be divided. In the neo-Ricardian model, the struggle over the distribution of the 'international' surplus is independent of the struggle over the extraction of such surplus.

The treatment of class relations as relations between countries, and its definition in terms of distribution of the international surplus, obscures a connection between production of surplus, control over means of production, and share in the surplus. It follows that the neo-Ricardian claim for a redistribution of the surplus can only be made on the basis of 'justice' and 'equity'.

(ii) Exploitation of Countries by Countries.
The treatment of class relations as relations between countries reaches its extreme point when some countries are said to exploit others. This implies a new definition of exploitation: it does not refer to real appropriation by one class of the surplus labour exerted by another class, but to the difference between the hypothetical surplus and the actual surplus that a given country (or capital, see below) has available.

To talk about 'indirect exploitation' (cf Braun 1977), is of little help when the link between distribution and production of the surplus is lost, or is itself 'indirect'.

(iii) Capital assimilated to countries.
The awareness of the neo-Ricardians that capitalists and not countries trade with each other does not reflect in any significant manner in their analyses. On the contrary, their framework imposes an assimilation of capital to countries. The neo-Ricardian world economy is an ungoverned system of capital-countries.

(iv) Money-less analysis

The inadequacy of the neo-Ricardian model for studies of a monetary economy is of even greater significance when dealing with relations between countries with different currencies and monetary policies and institutions, balance of payments disequilibria, etc.

(v) Policy formulations

If the cause of all the problems is distribution of the surplus, the logical solution will be its redistribution. However, since the neo-Ricardians suspect that ultimately some mechanism is capable of redressing any change in patterns of distribution - in which case the latter would not really be exogenously determined - a supranational authority would seem to be required. The role of this authority would be, in the neo-Ricardian sense, to help poor countries to survive the 'surplus squeeze'.[8]

NOTES

1. 'Fragmentation of the Labour Process on a World Scale', as Palloix puts it (1973: 86).

2. Crucial here are the locational strategies of multinational corporations and the changes in such strategies.

3. This does not imply that countries can be dispensed with in the analysis of international economics.

4. If there is full specialisation of every country this single international system will have equal numbers of equations, activities and countries. This situation will be assumed to hold for the rest of the analysis.

5. The problem of the number of equations and unknowns is irrelevant for present purposes.

6. In the internationalisation of the overall circuits -accumulation on a world scale- it is logically possible to conceive of two sub-processes of internationalisation of capital, one based on the connection of circuits M...M' and P...P', the other based on the connection of circuits P...P' and C'...C''.

7. This point is stressed by Sau (1976), who blames these shortcomings of Unequal Exchange theories on their Sraffian-based framework.

8. The so-called North-South dialogue and the series of talks and meetings, and even the spirit of attempts to establish a New International Economic Order, could be interpreted as stemming from a neo-Ricardian perspective.

# V

## SOME ELEMENTS OF AN ALTERNATIVE APPROACH

It is clear that, within the context of its narrow framework, the neo-Ricardian theory of trade provides logical and simple answers to the traditional questions of the neo-Classical theory (patterns and terms of trade). Also, in terms of the analysis of effects of trade on the 'countries' involved, the neo-Ricardian framework surpasses its neo-Classical counterpart by highlighting important aspects of the consequences and conditions of different patterns of distribution of the 'surplus' produced in the context of the international economy.

It is also clear, however, that the narrowness of the neo-Ricardian framework and the methodological procedures of its approach to international trade display their partial and one-sided character when confronting the complexity of the reality analysed. This is most evident when contrasting the point of departure of the neo-Ricardian analysis of trade with the outcome of such analysis. In effect, although neo-Ricardians assert that the object of analysis is the capitalist mode of production, that it is capitalists that trade and not countries, and that 'exploitation of labour' is the source of profits, their theory of international trade displays a biased view of the specific capitalist character of capitalist production, the expansion of capitalist accumulation at a world level, and the role of trade in this process.

These three basic elements should constitute the point of departure of an alternative approach to the problems of international trade. The way in which this alternative approach is to be developed is as yet not clear. It is possible at this stage, however, to advance some basic elements and methodological aspects of such an approach.

First, and with respect to some basic elements that would distinguish this approach from those of the neo-Ricardians and the neo-Classicals, the following points can be made:

- the traditional problems of terms and patterns of trade, and the 'prices of production' with which they are determined, central both to the neo-Ricardian and to the neo-Classical theories of trade, would be of secondary importance in the analysis and should be treated as expressions of social relations;

- the adequate unit of analysis for the study of international trade would be derived from a thorough study of the world economy. Whether this 'derived unit of analysis' be the 'country', the 'nation-state', the 'economic and social formation' or the 'multinational corporation', it should not be taken as given as is the case of 'countries' in the neo-Ricardian and neo-Classical analyses;

- the in-depth analysis of Marx's concept of value and of the process of formation of international values would have to be a central element of investigation;

- the important role of money as a form of capital in the process of capitalist accumulation would be brought out and analysed in detail.[1] It is to be expected that the joint study of money, foreign trade and accumulation will give rise to a type of analysis and to conclusions of crucial importance for the understanding of capitalism. This would be in sharp contrast with the secondary role played by money in the neo-Ricardian framework and with the neo-Classical approach to international trade divided into a 'pure theory' and a 'monetary theory' ('international finance');

- the analysis of trade would be incorporated into the context of the contradictory character of capitalist accumulation, as manifested in its cyclical fluctuations and its worldwide crises.

Second, and with respect to some methodological aspects of an alternative approach, the circuits of capital framework could provide a useful basis for the organisation of the analytical steps involved. Capital analysis, although it does not explain what it describes, brings out clearly the universality of inter-relations underlying the process of capitalist accumulation. On this basis, the alternative approach would have to be developed in two stages.

(i) Analysis of the movement of capital in the world economy. This first stage would analyse the circuit of capital in the process of its self-expansion (M...M'), as a synthesis of numerous circuits of individual capital with varying degrees of concentration and centralisation. It would be analysed how such capital moves throughout the different 'markets' for, or 'sources' of elements of, constant capital (MP), labour power (LP) and realisation of final commodities ($C' < {}^{C}_{c}$). The main objective of this analysis would be to derive an adequate unit for analysis of contemporary problems of international political economy.

(ii) The 'derived unit of analysis' in the context of the international circuit of capital. Contrary to neo-Ricardian and neo-Classical approaches which start by analysing the 'closed economy' and then move on to the world economy and international trade, the alternative approach would 'descend' from analysis of the international circuit of capital to that of the unit of analysis derived from it ('country', 'nation-state', or whatever). This would then be a determined - as opposed to a determining - entity with a specific and changing role in the worldwide process of capital accumulation but with certain peculiarities that are historically determined. These peculiarities refer to the development of productive forces and to the specific character of contradictions between capital and labour.

Finally, from the analysis of the role of the 'derived unit of analysis' in the process of capital accumulation and of the peculiarities of this process in the context of such a unit, an adequate framework should be developed for the approach to such over-riding issues as:

- the effects of the position of a 'unit of analysis' in the context of international movements of capital (growth, employment, balance of payments, patterns of accumulation, etc.);

- inter-relations among different entities (units of analysis) in the context of international movements of capital (patterns of trade, international division of labour, international values, etc.);

- inter-relations between the international movement of commodities and the process of capital accumulation on a world scale;

- development of a theoretical framework for analysis of the so-called 'foreign sector' and its role in the process of capitalist accumulation of a given social formation.

NOTES

1. This is illustrated by Brunhoff (1976) and Shaikh (1979). The first work shows the link between money and capital accumulation; the other outlines the basic points for an analysis of international trade from the perspective of the labour theory of value. Shaikh also shows how the validity of the principle of comparative advantage - common both to neo-Classicals and neo-Ricardians - rests on acceptance of the Quantitative Theory of Money.

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