

A calm investigation into Mr Ricardo's principles of international trade

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My speaking is like my writing too much compressed. – I am too apt to crowd a great deal of difficult matter into so short a space as to be incomprehensible to the generality of readers (Ricardo to Malthus, 24 December 1815, VI, p. 335).

No part of Ricardo's writings is more celebrated than his views on international trade. Of course, his theory of value and price is also well known but it has been heavily questioned from the beginning and is not included in current economic teaching. His theory of money and banking was of the utmost importance during more than a century but is no longer topical. Compared with these aspects of his work, what was called the principle of comparative advantage certainly presents an atypical profile: relatively neglected until John Stuart Mill's celebrated *Essays on Some Unsettled Questions of Political Economy* (1844), it could easily be adopted by most economists and still forms the main building block of the theory of international trade. In addition, this theory presents two other atypical features. First of all, it occupies only a few paragraphs in Ricardo's *Principles of Political Economy and Taxation* and seems to play little or no role in the rest of the book, so that some commentators even maintained that these passages were not written by Ricardo but inserted by James Mill, or asserted that the principle was simply taken from Robert Torrens.¹ Second, most interpretations of these paragraphs excerpt them from the rest of Ricardo's celebrated Chapter 7, "On foreign trade", thus neglecting 85% of the chapter and, unfortunately, the monetary aspects of the question.

Some rare appraisals (Sraffa 1930, developed by Ruffin (2002) and Maneschi (2004, 2008)) shed new light on Ricardo's text. But they remain concentrated, in a traditional way, on these few paragraphs, missing the

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¹ For recent accounts or restatements, see Maneschi (1998), Aldrich (2004), Ruffin (2002, 2005), Pullen (2006), King (2013, Chap. 4), and Faccarello (2015a).

link not only with the rest of the chapter but with the book – sometimes distorting Ricardo’s approach when they read him through a neoclassical lens. Some basic problems of interpretation thus remain and a reappraisal of Ricardo’s theory of international trade is all the more essential now. Such an attempt is presented in this paper, strictly focusing on an analysis of Ricardo’s texts. Of course, these texts present many ambiguities and obscurities – which Ricardo himself recognised – that are quite understandable in such an innovative approach as Ricardo’s. In many respects, moreover, Ricardo could not detach himself totally from the usual vocabulary of his time. In spite of these difficulties, the present enquiry aims to reconstruct the overall consistency of his approach to foreign trade.

The enquiry starts with a brief reassessment of the main features of Ricardo’s views on foreign trade (Section 1). Then some difficulties and ambiguities presented by Ricardo’s texts are dealt with (Section 2), concerning in particular the method of analysis and some questions pertaining to the (in)validity of the labour theory of value at the international level. The enquiry then goes on to investigate whether, in Ricardo’s opinion, there are significant differences between domestic and international activities (Section 3). From the basic fact that any transaction is necessarily expressed in monetary terms, a simple and general rule explaining the flows of trade is proposed. Sections 4 and 5 deal with other important points such as the determination of the so-called international prices and the nature of specialisation, the characteristics of an equilibrium, and the nature and impact of destabilising shocks – all points showing the systematic interaction, in Ricardo’s approach, of real and monetary phenomena. Section 6 provisionally concludes this enquiry.²

1. A preliminary reassessment

In sharp contrast to the usual textbook presentations that are more in line with John Stuart Mill, Ricardo’s analysis of international trade starts with a specific exchange that is supposed to take place between England and Portugal: a units of Portuguese wine are exchanged for b units of English

2 Some aspects of Ricardo’s developments dealt with in this paper have also been touched upon by different authors but in a different theoretical context – involving an interpretation of the “four magic numbers” as unit labour costs and a traditional understanding of Ricardo’s theory of money. See, for example, the contributions by Japanese authors like Kojima (1951) and Negishi (1982, 1996a, 1996b) (for linguistic reasons, I could not have access to the papers by K. Yukizawa and K. Morita quoted by Negishi; on Yukizawa, see, however, Tabuchi 2014). See also Hollander (1979). Unfortunately, a discussion of these interpretations cannot be developed here.

cloth. It is also supposed that, if each country had to produce these quantities of both commodities, Portugal would employ 80 and 90 units of labour to produce a units of wine and b units of cloth, respectively, while England would need 120 and 100 units of labour to produce them. At first sight, the difference between this interpretation and the traditional statement – where the “four magic numbers” in Ricardo’s example are interpreted as the labour values of one unit of each commodity in each country – seems of trifling importance, but it leads to widely diverging approaches.

1.1 The gains from trade

For each country, the gains from trade are immediately determined: they consist in the difference between the cost (here, the units of labour) of the domestic production of the quantity of foreign commodity it receives and the cost of the quantity of the home-produced commodity it gives in exchange. In Ricardo’s example, Portugal’s gains from trade are thus 10 units of labour. Portugal gives a units of wine, the product of 80 units of labour, for b units of cloth, the domestic production of which would have cost 90 units. England’s gains from trade are determined in a similar way: they consist in 20 units of labour. Both countries can employ the units of labour they save in the production of more wine or cloth or any other commodity, and, while the gains from trade are not equal on each side, both countries can enjoy a greater amount of use values.

Some authors, not fully understanding Ricardo’s principle, objected to this analysis. For our purpose, it is interesting to take two contemporary examples.³ In his *Principles of Political Economy*, for instance, Malthus wrote, along Smithian lines, that countries and consumers get other advantages from international trade than these savings of labour, which are, he writes, only “one half of its advantages, and ... not the larger half”:

The great mass of our imports consists of articles as to which there can be no kind of question about their comparative cheapness, as raised abroad or at home. If we could not import ... our silk, cotton and indigo ... with many other articles peculiar to foreign climates, it is quite certain that we should not have them at all. To estimate the advantage derived from their importation by their cheapness, compared with the quantity of labour and capital which they would have cost, if we had attempted to raise them at home, would be perfectly preposterous. In reality, no such attempt would have been thought of. If we could by possibility have made fine claret at ten pounds a bottle, few or none would have drunk it (in Ricardo⁴, Works II, p. 419).

³ See Maneschi (1998) for an extensive list of objections raised by subsequent authors, and King (2013) for a recent summary.

⁴ All the references to Ricardo’s writings are to the 1951–1973 Sraffa edition (see the list of references) in the following way: Works: volume: page.

In his notes to Malthus's *Principles*, Ricardo did not object. He referred to this kind of advantage in his own *Principles* when he stated that a country benefits from trade when it produces "those commodities for which by its situation, its climate, and its other natural or artificial advantages, it is adapted, and by their exchanging them for the commodities of other countries" (Works I, p. 132) or, for example, when discussing the case of Poland, he envisaged the possibility of this country being "exclusively blessed with some natural production, generally desirable, and not possessed by other countries" (Works I, p. 144). But these advantages are just a special case of his general rule.

Malthus is not the only example of a contemporary critique of the Ricardian conception of the gains from trade. As is well known, just after Ricardo's death, John Stuart Mill wrote in 1829–30 the first of his *Essays on some Unsettled Questions of Political Economy*: "Of the laws of interchange between nations, and the distribution of the gains of commerce among the countries of the commercial world". There, not directly referring to Ricardo's text but instead quoting from the third edition (1826) of his father's *Elements of Political Economy*, he accused Ricardo of incoherence. In his evaluation of the gains of each country, Ricardo is said to have depicted a situation in which each country gains the whole of the advantages they obtain together from trade.

Mr. Ricardo ... unguardedly expressed himself as if each of the two countries making the exchange separately gained the whole of the difference between the comparative costs of the two commodities in one country and in the other. ... This, which was ... a mere oversight of Mr. Ricardo, arising from his having left the question of the division of the advantage entirely unnoticed, was first corrected in the third edition of Mr. Mill's *Elements of Political Economy* (Mill [1829–30] 1967, pp. 235–6).

The primary mistake made by both father and son lies in the fact that, first implicitly and then explicitly, and basically reasoning in real terms, they interpret Ricardo's "four magic numbers" as the costs of production of one unit of each commodity in the respective countries, imagining international exchanges based in turn on the relative domestic prices of one of the two countries (below, § 2.1). This induced J.S. Mill to try to determine how the two countries could share the gains from trade. For this purpose, he started with a situation of autarky and, introducing the reciprocal demands of each country for the product of the other, he showed how each time a global gain could be shared according to different international relative prices within the interval bounded by the comparative costs in each country – the autarky prices – and how the equilibrium international prices, the quantities exchanged and the gains from trade are determined. The stage was thus set for one and a half centuries of comments and developments along these lines, and not Ricardo's.

1.2 Polemical stances

Ricardo's presentation of the beneficial character of international trade may entail an implicit polemical stance against various eighteenth-century restatements of the theory of the balance of trade in the guise of a balance of labour. However that may be, he explicitly advanced two important conclusions.

In the first place, an international exchange is possible between two countries, and profitable to both of them, notwithstanding that one of them has, in real terms, an absolute advantage in the production of the traded commodities. Portugal, for example, imports cloth from England despite the fact that it could produce it at home with less labour (Works I, p. 135). As we know, this analysis can be considered an extension of what Jacob Viner (1937) called "the 18th century rule" that "it pays to import commodities from abroad whenever they can be obtained in exchange for exports at a smaller real cost than their production at home would entail" (p. 440).⁵ Ricardo added, however, an important qualification: this includes the case in which the imported commodities could have been produced at home at a lower real cost than abroad.

In the second place comes a polemical statement against Adam Smith, stressed again and again in the *Principles* and repeated afterwards against

5 It is in fact a bit strange to call this rule "the 18th century rule". It was stated in an anonymous pamphlet, *Considerations upon the East India Trade* (1701), now attributed to Henry Martin (McLoed 1983), which, even if republished in 1720 under a slightly different title (McCulloch 1845, p. 99), remained almost unknown during the eighteenth century. McCulloch rediscovered it, alluded to it in 1828 in the introduction of his edition of the *Wealth of Nations* and republished it in *A Select Collection of Early English Tracts on Commerce*, 1856, with this comment: "That this admirable tract should have had, when published, little or no influence, is wholly to be ascribed to the author being very far in advance of his age" (1856, p. xv). The evidence given, from Viner (1937) onwards, shows in fact that very few illustrations of this rule are to be found in the writings of eighteenth-century authors. Smith, however, used it a couple of times (see Maneschi 2002, p. 244). Moreover, the rule should perhaps simply be called a "British rule". In France, from Boisguilbert to Turgot, the fundamental role of a free foreign trade is mainly apprehended on a different basis: it allows to stabilise prices at their optimal level (see, for example, Faccarello 1999, Chap. 6). It is true, however, that the "rule" can also be found in Turgot, but of course only incidentally (see Maneschi 1998, p. 35).

Note also that some authors call "the 18th century rule" the much more traditional and non-innovative "absolute advantage" perspective. See, for example, Irwin (1996, p. 89): "The notion that imported goods could be acquired more cheaply abroad because the absolute cost of production was lower than at home has come to be known as the 'eighteenth century rule', owing to its occasional use during that century".

Malthus. The benefits each country gets from trade do not directly concern the rate of profit but only (i) the amount and diversity of use values each country can dispose of: “foreign commerce modifies the quality and increases the variety of productions which compose the mass of wealth, and only adds to the natural growth of its quantity by giving a more beneficial employment to labour” (Works III, pp. 331–2); and (ii) the incentive it gives “to saving, and to the accumulation of capital” (Works I, p. 133) because it “may thereby enable us to augment the funds destined for the maintenance of labour, and the materials on which labour may be employed” (Works I, p. 132). Foreign trade only affects the rate of profits, *ceteris paribus*, through its action on nominal wages.

It is quite as important to the happiness of mankind, that our enjoyments should be increased by the better distribution of labour, ... as that they should be augmented by a rise in the rate of profits.

It has been my endeavour to shew ... that the rate of profits can never be increased but by a fall in wages, and that there can be no permanent fall of wages but in consequence of a fall of the necessaries on which wages are expended. If ... by the extension of foreign trade, or by improvements in machinery, the food and necessaries of the labourer can be brought to market at a reduced price, profits will rise. ... but if the commodities obtained at a cheaper rate ... be exclusively ... consumed by the rich, no alteration will take place in the rate of profits (Works I, p. 132)

This presentation evidently discards some traditional questions as irrelevant: the countries are not first considered in autarky, and the analysis starts precisely from an “actual” exchange. It also puts in a different perspective certain other topics that have been discussed during decades, for example, the question of the determination of the international exchange ratio.

2. Some analytical difficulties

There are two main difficulties arising from the texts that are always referred to when dealing with foreign trade. The first consists in focusing on the macroeconomic level of the analysis, neglecting or presenting in an ambiguous way the underlying microeconomic motivations of the agents. The second concerns Ricardo’s most celebrated statement that the theory of value, which determines the domestic exchange ratios between commodities, is no longer valid for exchanges between nations.

2.1 From macro to micro-analysis

From a macroeconomic point of view, the gains from trade are evident. But stressing these gains can only be an *ex post* analysis, that is, the overall

result of the actions of agents in markets. These benefits cannot be the motive of their action or explain their decisions to import or export commodities. And in a free market society, international exchanges are not the business of governments or planners who decide which international flows to favour in order to increase the welfare of the country.

And yet in the famous sentences stating the principle of comparative advantage, and in many other places, Ricardo seems to suggest that this is the case. "Under a system of perfectly free commerce, each country naturally devotes its capital and labour to such employments as are most beneficial to each" (Works I, p. 133). The countries themselves, Portugal and England, are seemingly the protagonists in the game. "England would ... find it her interest to import wine, and to purchase it by the exportation of cloth", and similarly "it would ... be advantageous" to Portugal "to export wine in exchange for cloth" (Works I, p. 135). This is also the usual textbook presentation in international trade theory. But this is misleading. Individual agents have to be involved as the prime movers and they will only engage in this kind of trade – as in any activity – if it is profitable for them to do so. In the often quoted passages from the *Principles*, it is not clear why this should be the case.

At first sight, and in real terms, it is obvious that Portuguese commodities can be sold profitably in England, but the possibility of selling an English good in Portugal is far from evident. To explain this possibility at the micro level, it is possible to imagine some traders making arbitrages on commodities – a generalisation of the financial and monetary arbitrages Ricardo was familiar with. It is profitable for a trader to sell English cloth in Portugal at the local Portuguese labour value in order to buy Portuguese wine there: even if the cloth is sold at a lower value than in England, the quantity of wine that can be obtained in Portugal for this cloth is greater than the quantity that could have been obtained in England for the same cloth. When this wine is then exported to England and sold there, the arbitrage will bring a positive profit in terms of cloth. An equivalent result can be reached if we start the story with Portuguese wine being sold in England, exchanged there for cloth, etc.

As will be seen, this kind of complicated solution conducted in real terms does not respect Ricardo's line of thought, despite the fact that Ricardo himself appears to have used it once, in one of his notes to Malthus's *Principles of Political Economy*: there he imagined a merchant exporting a bale of cotton goods and getting a pipe and a quarter of wine in exchange: "he sells the pipe in England for a bale of cotton goods, and retains the quarter pipe for his own profit, and disposes of it as he may think best" (Works II, p. 418). It is interesting to note, however, that this is precisely the kind of approach that James and John Stuart Mill employed with the example of an exchange

between English cloth and German linen – 10 units of cloth being exchanged for 15 units of linen in England and for 20 in Germany. These exchange ratios are established on the basis of the respective labour values in these countries: cloth has the same labour value in each country, but the value of linen is inferior in England. Despite this, England can export cloth to Germany, and Germany can export linen to England.

If England sends 10 yards of broad cloth to Germany, and is able to exchange them for linen *according to the German cost of production*, she will get 20 yards of linen, with a quantity of labour with which she could not have produced more than 15; and will gain, therefore, 5 yards on every 15, or $33^{1/2}$ per cent ... [I]f Germany sends 15 yards of linen to England, and finding the relative value of the two articles in that country *determined by the English costs of production*, is enabled to purchase with 15 yards of linen 10 yards of cloth; Germany now gains 5 yards, just as England did before, – for with 15 yards of linen she purchases 10 yards of cloth, when to produce these 10 yards she must have employed as much labour as would have enabled her to produce 20 yards of linen (Mill [1829–30] 1967, pp. 235–6, emphasis added).

It is this line of thought – starting with the autarky exchange ratios and stressing an arbitrage in real terms on commodities – which led J.S. Mill to accuse Ricardo of inconsistency (above, § 1.1): because, in the first case considered, “Germany would obtain only 10 yards of cloth for 20 of linen” and “derives no advantage from the trade” (*ibid.*, p. 236); and in the second case, the same is true for England: “England would gain nothing: she would only obtain, for her 10 yards of cloth, 15 yards of linen, which is exactly the comparative cost at which she could have produced them” (*ibid.*). This result – not surprising because this approach supposes that exchanges are first made at the autarky prices of one of the countries – led Mill to think that he had to introduce demand into the picture because, on the sole basis of the theory of value, it was impossible to see how prices could change and both countries benefit from trade.

The ambiguity of certain developments conducted at the macro level is also to be found in Ricardo’s monetary analysis. Here, however, he often insisted on the fact that economic phenomena have to be explained on the basis of the individual choices of agents freely acting in markets with a unique purpose: profitability. “It is self-interest which regulates all the speculations of trade”, he wrote in *The High Price of Bullion* (Works III, p. 102; see also, p. 62). For example, whenever there is an outflow of specie “a very little reflection will convince us that it is our choice, and not our necessity, that sends it abroad” (Works III, p. 55) and the same words are used in the *Principles* when speaking of international trade: “When merchants engage their capitals in foreign trade ... it is always from choice, and never from necessity” (Works I, p. 293).

In his *Reply to Bosanquet*, Ricardo clearly maintains that the motivations of agents are essential and warns against the fallacies of aggregate analysis:

Mr. Bosanquet speaks as if the nation collectively, as one body, imported corn and exported gold ... not reflecting that the importation of corn ... is the act of individuals, and governed by the same motives as all other branches of trade. What is the degree of *compulsion* which is employed to make us receive corn from our enemy? I suppose no other than the want of that commodity which makes it an advantageous article of import; but if it be a voluntary ... and not a compulsory bargain between the two nations, I ... maintain that gold would not, even if famine raged amongst us, be given to France in exchange for corn, unless the exportation of gold was attended with advantage to the exporter (Works III, pp. 207–8).

The behaviour of rational and self-interested agents in (foreign) trade has thus to be stressed, and the objection that agents might not act in such a way is off the mark, as Ricardo wrote to Malthus:

It would be no answer to me to say that men were ignorant of the best and cheapest mode of conducting their business and paying their debts, because that is a question of fact not of science, and might be urged against almost every proposition in Political Economy (22 October 1811, Works VI, p. 64).

2.2 The (in)validity of the labour theory of value

The second difficulty refers to a statement that forms one of the most celebrated sentences of Chapter 7 of the *Principles*. Ricardo stresses that, in international exchanges, the theory of labour value that determines the equilibrium exchange ratios between any two commodities is no longer valid. “The same rule which regulates the relative value of commodities in one country, does not regulate the relative value of the commodities exchanged between two or more countries” (Works I, p. 133). In the above case of the exchange between Portugal and England, “the quantity of wine which she [Portugal] shall give in exchange for the cloth of England, is not determined by the respective quantities of labour devoted to the production of each” (Works I, pp. 134–5).

This is followed by an explanation of such an unusual situation. This is due, Ricardo writes, to the relative international immobility of capital and labour, because of a “fancied or real insecurity of capital” abroad and a “natural disinclination which every man has to quit the country of his birth and connexions” (Works I, p. 136).

Thus England would give the produce of the labour of 100 men, for the produce of the labour of 80. Such an exchange could not take place between the individuals of the same country. ... The difference in this respect ... is easily accounted for, by

considering the difficulty with which capital moves from one country to another, to seek a more profitable employment, and the activity with which it invariably passes from one province to another in the same country (Works I, pp. 135–6).

It seems that Ricardo's statement has been accepted as obvious.⁶ It is instead problematic: why should the relative immobility of "capital and population" (Works I, p. 134) imply that the theory of value is no longer valid in international exchanges?

Up to this point, and especially in his famous example, Ricardo used the theory of labour value. But in order to explain his statement, he now switched to his alternative theory of natural prices based on the principle of the uniformity of the rate of profit: the so-called prices of production. In this perspective, the relative immobility of capital between countries implies that the rates of profit, which are uniform in a single country – "or differ only as the employment of capital may be more or less secure and agreeable" (Works I, p. 134) – cannot be equalised between nations. What happens between London and Yorkshire cannot take place between England and "Holland, or Spain, or Russia" (p. 134). But why should the immobility of capital explain the fact that, in international trade, commodities are not exchanged according to the respective quantities of labour necessary for their production? All the argument proves is that in different countries, the respective prices of production will not entail the same rate of profit. But even supposing an internationally uniform rate of profit, commodities would *not* have been exchanged according to their labour values because we know that, except in very special cases, these two theories of labour value and production prices imply different exchange ratios. When reading Ricardo's developments, then, we must always remember the presence of two theories of natural prices – even if Ricardo thought that the first was a good approximation of the second⁷ – and carefully distinguish the results according to which theory is supporting them.

As a consequence, the hypothesis of the international immobility of capital and labour cannot justify the invalidity of the theory of labour value in international exchanges. Nor is this hypothesis necessary to

6 For example, one of the first commentators, William Whewell, wrote: "This [the doctrine of foreign trade] is a portion of Political Economy on which the postulates which have hitherto been the basis of our reasoning have no bearing. The proportionality of the exchangeable value to the cost or labour of production no longer obtains, when the labour of different countries is concerned Nor can we assume the equality of profits in different countries. The difficulty with which labour and capital travel from one country to another, is a sufficient obstacle in the way of the establishment of such a uniformity of the value of labour [sic], and of the rate of profits" (Whewell 1831, p. 31).

7 For a recent restatement, see Faccarello (2015b).

Ricardo's approach⁸ – just as the fact that, in his example, cloth and wine could be considered as wage goods or luxuries is irrelevant to the topic.

It might be objected that the international migration of capital is not sufficient to generate a uniform rate of profit among the trading nations because the “difficulty of production” in agriculture – one of the main determinants of the profit rate – differs between them. This could be true if we consider this mobility per se, independently of the flows of foreign trade. But if free trade is brought into the picture, an international division of labour in agriculture is generated, which equalises the price of corn among the trading partners (below, § 4.1) and therefore tends to equalise their profit rates. Of course, to understand this, it is necessary to go beyond the simple two-country, two-commodity model, as Ricardo himself stresses many times (below, §§ 3.5, 5.2 and 5.4).

It is essential to note, however, that the simple possibility of a free foreign trade is sufficient to generate this tendency, *independently of any hypothesis on the international mobility of capital and labour*.⁹ In a sense, Ricardo noted this point. Just before the publication of the *Essay on Profits* – and having in mind a strong causal relationship between the state of profitability in agriculture and that in other activities – he envisaged the possibility that free foreign trade could generate a uniform rate of profit at home and abroad. If, he wrote to Malthus, the Corn Laws were repealed, England would import corn. Foreign countries would have to invest more on land to increase their production and their profits would decrease:

... and if all the earth were cultivated, *with equal skill*, up to the same standard, the rate of profits will be everywhere the same, though the superior industry and ingenuity of particular countries might secure to them a greater abundance of other commodities (13 January 1815, Works VI, p. 171. Ricardo's emphasis).

8 See below. This hypothesis seems instead to be necessary to some traditional approaches to Ricardo's texts. It has been recently reaffirmed, for example, by Negishi (1996a, 1996b), Ruffin (2002, 2005), and Morales Meoqui (2011). It is unfortunately not possible to deal with these papers here. However, on Negishi, see Gandolfo (1998, pp. 331–5), and for a critique of Ruffin's approach, see Gehrke (2015).

9 Modern trade theory would say that free trade is a substitute for the international mobility of “factors of production”. But the analogy with Ricardo's approach is superficial, and the underlying mechanisms are different – moreover, we only deal here with the rate of profits. In Ricardo, the so-called “factor prices” are not determined by supply and demand: the real wage is given, and profit is a “residue”.

2.3 Two other textual ambiguities

Finally, we must also be aware of two additional ambiguities presented by the texts. A first difficulty arises from the vocabulary extensively used in the *Principles*, especially as regards foreign trade. There, as compared with the terms and phrases employed in his former writings – those of the Bullionist controversy in particular – Ricardo appears to reason in a way he had previously sought to avoid (below, § 3.5): in terms of “favourable” or “unfavourable” balance of trade, gold being considered apart from the other commodities and used to settle the balance. But the vocabulary under question is also present in the early writings; thus, in spite of the more extensive use of this conventional way of speaking in the *Principles*, the hypothesis can be made that Ricardo’s basic approach to money and foreign trade remained unchanged.

A second difficulty lies in the vocabulary concerning money. In the context of a gold standard,¹⁰ a serious ambiguity is raised by the different meanings Ricardo gives to the word “money”, which sometimes refers to the currency and sometimes to the standard. In the following pages, whenever necessary, the specific meaning of the word is suggested in square brackets.

3. International and domestic trade: what difference, if any?

We must thus reconsider Ricardo’s ideas on international trade from a new perspective, starting with the questions raised by the previous developments. Why do agents engage in international trade, and is there any significant difference between domestic and international trade? In the following, and unless otherwise stated, the economy is considered to be free of any kind of tax, tariff, subsidy, etc. Like Ricardo, we basically argue

10 It is first based on the choice of a standard: gold, and on the definition of the currency – the gold definition of the monetary unit of account, that is, the official parity of money or mint price of gold. A rule is then given, which determines the value of the currency in terms of the standard: it depends on the quantity of circulating medium (coins, banknotes) compared to the quantity that would be necessary if the whole circulating medium were made of gold. In “the sound state of a currency” where banknotes are convertible on demand into coins, and bullion is freely bought and sold at the mint at its official price and freely imported and exported, the price of gold will always more or less correspond to the mint price – a difference always being possible whenever the law prohibits “melting gold coin into bullion and exporting it”. The two can diverge in a regime of inconvertibility. On the importance of the standard of money in Ricardo’s theory and on the need to distinguish it from the currency, I basically agree with Marcuzzo and Rosselli (1991, 1994).

in terms of labour values, and suppose that the reference, if any, to a normal and uniform rate of profit does not change the conclusions.

3.1 The case of the immobility of capital and labour

Even if it does not explain the problem of the international exchange ratios between traded commodities, the hypothesis of the immobility of capital and labour must be considered as it could form an important difference between international and domestic trades. However, this difference is not very clear-cut, and its consequence certainly not of key theoretical importance. Three remarks are in order here.

In the first place, it seems that this consequence boils down to a sub-optimal division of labour. Were “capital and population” internationally mobile, Ricardo remarks, then in the case of the exchange of cloth and wine between England and Portugal, it would be advantageous to the English cloth producers to stop producing in England and to invest in Portugal (Works I, p. 136). But why this should be so is not clear. No doubt, such a migration of capital would be advantageous to all consumers, in terms of use values, because of a better allocation of resources. But this is less obvious in what concerns the English capitalists. Their advantage cannot be in terms of the rate of profit because the international mobility of capital could logically generate a uniform rate in England and Portugal. The advantage would be a saving in capital: to produce the same amount of cloth, English capitalists must invest less capital in Portugal than in England. But can such a saving be an objective for entrepreneurs who only think in terms of profitability? And anyway we must remember what has been stated above – that the simple hypothesis of free foreign trade is sufficient to bring all these benefits, provided we go beyond the simple two-country, two-commodity example.

In the second place, it is worth noting that Ricardo also examines the problem of a possible *domestic* immobility of capital, especially in Chapter 19 of the *Principles*. There he acknowledges that the transfer of resources between sectors – necessary for the gravitation of market prices around natural prices – could sometimes be difficult to implement and takes time. Capital, for example, cannot be withdrawn quickly from a branch of production where it is invested in machinery, etc. Though the problem is transitory and (allegedly) not structural as it is between countries, it can have consequences on international trade. Suppose, for example, an extreme situation where the entire capital invested on a piece of land cannot be withdrawn (Works I, pp. 268–9). In these circumstances, the farmer could decide to continue to produce even if the price of corn is very low and will not assure the profits he would get in a normal situation:

“for it could not be his interest to produce less, and if he did not so employ his capital, he would obtain from it no return whatever” (Works I, p. 269). The farmer could even decide to sell his corn below the price at which it is usually imported – and this importation will stop (Works I, p. 270). Thus, foreign trade may exceptionally be affected by a relative domestic immobility of capital.

Finally, and more relevantly, Ricardo’s hypothesis of the immobility of capital between nations can by no means be understood as absolute. It is true that some formulations sound rather categorical. John Ramsey McCulloch discussed this point. He found that the situation of England was worrying because the Corn Laws and the high level of taxation greatly reduced the profits, thereby leading capital to look for a higher profitability abroad: “our stock will be gradually transferred to other countries” (to Ricardo, 13 March 1821, Works VIII, p. 353). He objected that Ricardo’s case for immobility, the “love for the country”, is certainly less strong than supposed, and should probably be limited to “low states of society” (2 April 1821, Works VIII, p. 364). To Ricardo’s assertion that capitalists could “be satisfied with a low rate of profits in their own country, rather than seek a more advantageous employment for their wealth in foreign nations” (Works I, p. 137), McCulloch replied: “There is no reason why the capitalists of Great Britain should be more disposed to remain satisfied with comparatively small profits than the capitalists of Holland” (2 April 1821, Works VIII, p. 364). He, nevertheless, stressed some elements of risk (troubles on the Continent, the distance to America; Works VIII, pp. 364–5) to explain some (possibly momentary) reluctance to invest abroad.

But Ricardo’s position is not very different. In many circumstances, he recognised the possibility of an emigration of capital, linked to occasions of higher profitability abroad. He simply feared its negative consequences for the home country, and reiterated this statement at different periods of his life. Already in his *Notes on Bentham*, he stressed that such an emigration lowers domestic accumulation and generates an opposition of interests between individual capitalists and the nation.

It can never be allowed that the emigration of Capital can be beneficial to a state. A loss of capital may immediately change an increasing state to a stationary or retrograde state. ... I do not mean to deny that individual capitalists will be benefited by emigration in many cases, – but England even if she received the revenues from the Capital employed in other countries would be a real sufferer (Works III, p. 274).

The international mobility of capital is also stressed in the *Essay on Profits*. “It cannot be doubted”, Ricardo writes, “that low profits ... tend to draw capital abroad” (Works IV, p. 16n): “after profits have very much fallen,

accumulation will be checked, and capital will be exported to be employed in those countries where food is cheap and profits high” (ibid.; see also *On Protection to Agriculture*, Works IV, p. 237) – this emigration being at the origin of the European colonies. Similar statements can be found later, in Ricardo’s correspondence (e.g., letter to Mill, 7 August 1817, Works VII, p. 171) and in the *Principles*. If for example the use of machinery is discouraged in a country, thus limiting the profits of capital, capital “will be carried abroad”, with damaging consequences for employment (Works I, p. 396). The same is true with heavy taxation: in this case, the temptation to export capital “overcomes the natural reluctance which every man feels to quit the place of his birth, and the scene of his early associations” (Works I, p. 248).

In all these cases, the size of the differential of profitability between the home country and the foreign countries is essential. What Ricardo intended to state is that this differential has to be substantial to induce an emigration of capital. He simply thought that McCulloch was overrating this difference and that, moreover, it was not certain that this difference was detrimental to Great Britain – “It is quite possible (tho I do not believe it is true) that profits may be higher here than abroad” (Ricardo to McCulloch, 23 March 1821, Works VIII, p. 358).

I acknowledge the tendency of capital to flow from us, but I think you very much overrate it. ... You infer too strongly I think that profits abroad exceed profits here by the whole difference in the money price of corn. My opinion is this – if we were allowed to get corn as cheap as we could get it, by importation, profits would be very considerably higher than they now are; but this is a very different thing from saying that profits are very considerably lower here than abroad (Works VIII, pp. 357–8).

It is to be noted that this kind of approach is also valid in the domestic trade when capitalists decide to quit a branch and to invest elsewhere.

3.2 Foreign trade: neither superior nor inferior to domestic trade

For different reasons, Smith and Say both thought they could establish a sort of hierarchy between international and domestic trade. Ricardo insists instead on the similarities between these two kinds of activities. He stresses the fact that “the remarks which have been made respecting foreign trade, apply equally to home trade” (Works I, p. 133). What is at stake here is the alleged influence of trade on profits: Ricardo’s position on this point has already been noted.

Foreign trade is neither superior nor inferior to domestic trade as regards the basic variables of a country’s economic activity. In Chapter 22 of the *Principles*, returning to the question of profits from a different

perspective, he criticises Jean-Baptiste Say, who claimed in his *Traité d'économie politique* that foreign trade is more interesting, from the point of view of the nation, than domestic trade. In domestic trade, Say writes, the profits made by merchants are no real addition to the nominal wealth. In Ricardo's words: "In the trade between individuals of the same country, there is no other gain but the value of an utility produced; *que la valeur d'une utilité produite*". Ricardo refutes this idea: "I cannot see the distinction here made between the profits of the home and foreign trade. The object of all trade is to increase productions" (Works I, pp. 318–9).

In the 7th Chap. of this work, I have endeavoured to shew that all trade, whether foreign or domestic, is beneficial, by increasing the quantity, and not by increasing the value of productions. We shall have no greater value, whether we carry on the most beneficial home and foreign trade, or in consequence of being fettered by prohibitory laws, we are obliged to content ourselves with the least advantageous. The rate of profits, and the value produced, will be the same. The advantage always resolves itself into that which M. Say appears to confine to the home trade; in both cases there is no other gain but that of the value of an *utilité produite* (Works I, pp. 319–20).

While foreign trade is not superior to domestic trade from this perspective, neither is it inferior as far as the level of employment is concerned. This question is addressed when, in Chapter 26 of the *Principles*, Ricardo objects to an assertion by Smith that a capital employed in foreign trade replaces two distinct domestic capitals and thus lowers the level of employment at home. "I cannot admit that there is any difference", Ricardo writes, "in the quantity of labour employed by a capital engaged in the home trade, and an equal capital engaged in the foreign trade" (Works I, p. 350). Suppose that Scotland and England each employ a capital of a thousand pounds to produce linen and silk, respectively, which they exchange with each other. The total amount of the capital employed will be two thousand pounds "and a proportional quantity of labour". What happens if Scotland and England realise that they can more advantageously trade with some foreign countries like France and Germany, importing from there more silk and linen, respectively, than before, and thus "cease trading with each other"? Nothing as regards the capital invested at home and the amount of labour employed¹¹:

... although two additional capitals will enter into this trade, the capital of Germany and that of France, will not the same amount of Scotch and of English capital continue to be employed, and will it not give motion to the same quantity of industry as when it was engaged in the home trade? (Works I, p. 351).

11 It seems that on this point Ricardo's critique of Smith is not correct. Smith is discussing the employment effects of the capital of a merchant and not of the capital invested by a producer (see Gehrke 2013, pp. 57–9).

3.3 *The principle of the division of labour*

All these remarks are but the consequences of a basic fact: the nature of trade and specialisation is the same in all activities, be they domestic or international. This is simply an aspect of the division of labour. In Chapter 7 of the *Principles*, the case of Portugal, which has an absolute advantage in the production of both wine and cloth, is compared to the domestic situation of two craftsmen, of whom one has a superior skill in producing both shoes and hats – an example found in the *Wealth of Nations*. The result is the same: specialisation in shoes or hats will benefit both of them.

... a country possessing very considerable advantages in machinery and skill, and which may therefore be enabled to manufacture commodities with much less labour than her neighbours, may, in return for such commodities, import a portion of the corn required for its consumption, even if its land were more fertile, and corn could be grown with less labour than in the country from which it was imported. Two men can both make shoes and hats, and one is superior to the other in both employments; but in making hats, he can only exceed his competitor by ... 20 per cent., and in making shoes he can excel him by ... 33 per cent.; – will it not be for the interest of both, that the superior man should employ himself exclusively in making shoes, and the inferior man in making hats? (Works I, p. 136n).

The same principle is again referred to in Chapter 25, when Ricardo considers another similarity between domestic and foreign trade. Should a colony be obliged to trade with the colonising country only, as often happens for certain goods? No, because, in most cases, this obligation will prevent a better allocation of capital. This is the same as if a consumer, in domestic trade, were obliged to buy in a particular shop (Works I, p. 343).

3.4 *A single principle for “all trade, whether foreign or domestic”*

Notwithstanding these important points, one element of material importance is still missing in the picture of the similarities between domestic and international trade: *commerce is not barter*. “Every transaction in commerce is an independent transaction” (Works I, p. 138). It is unique and as such necessarily expressed in monetary terms.

Whilst a merchant can buy cloth in England for 45£ and sell it with the usual profit in Portugal, he will continue to export it from England. His business is simply to purchase English cloth, and to pay for it by a bill of exchange, which he purchases with Portuguese money. It is to him of no importance what becomes of this money: he has discharged his debt by the remittance of the bill (Works I, p. 138).

Of course, specific trading activities, with continuous arbitrages, deal with these bills of exchange at the international level, and things are more

complex than for domestic trade. But this simply means that, in analysing the operations of commerce, we have to take into account the money prices of the commodities. Money prices, not labour values, determine the agents to engage in trade. And only a comparison between money prices (transportation costs¹² included) can determine the profitability of their activities.

... cloth cannot be imported into Portugal, unless it sell there for more gold than it cost in the country from which it was imported; and wine cannot be imported into England, unless it will sell for more there than it cost in Portugal (Works I, p. 137).

Hence the general rule for international trade: “The motive which determines us to import a commodity, is the discovery of its relative cheapness abroad: it is the comparison of its price abroad with its price at home” (Works I, p. 170). In this perspective, domestic trade and foreign trade are based on the same principle – whether the transactions, to paraphrase Ricardo, take place between England and “Holland, or Spain, or Russia”, or between London and Yorkshire. “When merchants engage their capitals in foreign trade ... it is always from choice, and never from necessity: it is because in that trade their profits will be somewhat greater than in the home trade” (Works I, p. 293) but, there as in the domestic trade, free competition will reduce profits to the normal level.

Now the so-called principle of comparative advantage can of course be established on this basis. Let p_w^* and p_w be the gold prices of wine in England and Portugal, respectively, and p_c and p_c^* the respective prices of cloth in these countries. Portugal exports wine and imports cloth – and England exports cloth and imports wine – if $p_w^* < p_w$ and $p_c^* > p_c$, hence if

$$\frac{p_w^*}{p_c^*} < \frac{p_w}{p_c}.$$

But this is only the result of independent transactions. The “principle” of comparative advantage is no principle at all, not a “rule” to follow: there is nothing prescriptive or normative in the above conclusion.

12 As Ricardo wrote to Malthus: “Your observation is just concerning the extra expences attending the exportation of bulky commodities, — but ... we must suppose these expences to make part of the price of the commodity; — our comparison is made on the prices at which the importer could afford to sell them and those prices necessarily include expences of every sort.” (18 June 1811, Works VI, pp. 27–8).

The same remark applies to the analysis of the “gains from trade”. The above rule, which tells us how economic agents behave and why they engage in foreign trade, must be distinguished from the evaluation of the benefits each country obtains from international exchange: a calculation which, as stated before, results from another kind of comparison – and is moreover also valid for domestic trade. Contrary to what Ricardo sometimes suggests (see for example Works I, p. 170), the benefits obtained by each country are not the cause but the *unintended consequence* of actions taken by economic agents on the basis of a different motive.

3.5 Is there any specific role for gold in international trade?

As regards the comparison of domestic and foreign trade, a last point must be addressed. The prices to be considered are the money prices, and the monetary regime is based on gold, both at home and abroad. But the definitions of the various currencies are different. Does this mean that gold has a specific role in international trade compared to its role in domestic trade? This does not seem to be the case. While gold is chosen as the standard of money, it is nevertheless a commodity which, like any other, is produced and exchanged according to the profitability of the activity and the general rules of competition. It has a natural value determined by its real cost of production, a market value, and a money price. In particular, the decision to import or export it is taken on the same criterion as for other commodities. It is simply a mistake to consider “coin and bullion as things essentially differing in all their operations from other commodities”, Ricardo writes in the Appendix of *The High Price of Bullion* (Works III, p. 103). Yet, “so deep-rooted is this prejudice” that the best authors “seldom fail ... to argue upon the subject of money [gold], and the laws which regulate its export and import, as quite distinct and different from those which regulate the export and import of other commodities” (Works III, p. 104).

To Malthus who objected that many authors “in their zeal to correct the absurd notions of the mercantile classes about the balance of trade” bent the stick too far and “have overlooked the real differences that exist between the precious metals and other commodities” (16 June 1811, Works VI, p. 21), Ricardo replied:

There does not appear to me to be any substantial difference between bullion and any other commodity, as far as regards the regulation of its value, and the laws which determine its exportation or importation. It is true that bullion, besides being a commodity useful in the arts, has been adopted universally as a measure of value, and a medium of exchange; but it has not on that account been taken out of the list of commodities (18 June 1811, Works VI, p. 24).

In a monetary regime based on gold, each agent is “a dealer in bullion” and “though in the language of commercial men the sellers of money are ... called purchasers, it is not on that account less true that they are sellers of one commodity and purchasers of another” (Works VI, p. 25).

As a consequence if “coin or bullion” leaves a country, this is because it is profitable to individuals to export them: they are simply brought from markets where they are cheap to those where they are dear. This is the reason why Ricardo does not like the phrase “unfavourable balance of trade” to depict this exportation.¹³ It conveys the idea that bullion is different from other commodities and is just something universally accepted and sent abroad to settle a balance. But what is called an “unfavourable balance of trade” is not the cause of the outflow of gold, but the consequence, and bullion flows out whenever it becomes “redundant” or “superabundant” in a country – because bullion is the “cheapest” commodity at home. To Malthus who states that an exportation of bullion is always necessary to pay a debt abroad, Ricardo asks: Why is there a debt, what is its origin?

... you always suppose the debt already contracted, forgetting that ... it is the relative state of the currency which is the motive to the contract itself. The corn ... will not be bought unless money be relatively redundant; you answer me by supposing it already bought and the question to be only concerning the payment (18 June 1811, Works VI, pp. 26–7).

The explanations of the flows of corn and gold are identical. In a two-commodity model, corn and gold are, respectively, imported and exported because they are the cheapest commodities abroad and at home. But if, at home, a third commodity were cheaper than gold, then this commodity would be exported instead of bullion.

A merchant will not contract a debt for corn to a foreign country unless he is fully convinced that he shall obtain for that corn more money than he contracts to pay for it, and if the commerce of the two countries were limited to these transactions it would as satisfactorily prove to me that money was redundant in one country as that corn was redundant in the other. ... If indeed sugar were exported by some other merchant the debt for corn would be paid without the exportation of money [bullion] and I should say that sugar was the redundant commodity (Works VI, p. 27).

13 Ricardo writes of “an unfavourable trade, if such be an accurate term” (Works III, p. 83). “From whatever cause an exportation of bullion, in exchange for commodities, may proceed, it is called (I think very incorrectly) an unfavourable balance of trade” (Works III, p. 64n).

4. International prices and specialisation

4.1 *There are no specific international prices*

In Chapter 7 of the *Principles*, Ricardo insists on one point: foreign trade by no means increases the value of the annual product of the country. The discovery of new markets, for example, that allow us to obtain “double the quantity of foreign goods in exchange for a given quantity of our’s” (Works I, p. 128) would not change the total value of the commodities imported. Although the vocabulary was not yet fixed, this point was already stressed in his *Notes on Bentham* where the first mention of an exchange of cloth and wine between England and Portugal can also be found.¹⁴ Ricardo notes that the new amount of foreign goods would simply sell in the home market accordingly, for the same total amount – if we discard the problem of the reference to the rate of profit and production prices.

If by the purchase of English goods to the amount of 1000£, a merchant can obtain a quantity of foreign goods, which he can sell in the English market for 1,200£, he will obtain 20 per cent profit ... but neither his gains, nor the value of the commodities imported, will be increased or diminished by the greater or smaller quantity of foreign goods obtained. Whether ... he imports twenty-five or fifty pipes of wine, his interest can be no way affected, if at one time the twenty-five pipes, and at another the fifty pipes, equally sell for 1,200£. In either case his profit will be limited to ... 20 per cent on his capital; and in either case the same value will be imported into England (Works I, p. 128).

This implies that the individual prices of commodities will not differ much at home and in the producing country. The idea is developed in Chapters 25 and 28 of the *Principles*. Here Ricardo insists on the fact that, if we disregard the transportation costs, the price of an imported good in the home market is basically the same as in the exporting country:

... no more will be paid for commodities by foreign purchasers than by home purchasers; the price which they will both pay will not differ greatly from their natural price in the country where they are produced. England, for example, will, under ordinary circumstances, always be able to buy French goods, at the natural price of those goods in France (Works I, pp. 340–1).

14 “It can make no difference to the real wealth of the country whether the commodities produced be exported or consumed at home. If 100 pieces of cloth be consumed at home or whether they are exported to Portugal in exchange for wine and the wine be consumed at home can make no other difference but the profit. ... If we imported Russias linen, and the consumers of the linen were to reproduce the value in some other commodity, it would be nearly the same as if the consumers of the cloth at home were to reproduce the value of the cloth” (Works III, pp. 330–1).

Let the price of one unit of corn be 3£ in France and 6£ in England because of a prohibition on the importation of corn to this country. If this prohibition is removed, importation from France will change the price of corn in England. To what extent? All other things being equal, until the English consumer pays the French price:

... corn would fall in the English market, *not to a price between 6l. and 3l., but ultimately and permanently to the natural price of France*, the price at which it could be furnished to the English market, and afford the usual and ordinary profits of stock in France; and it would remain at this price, whether England consumed a hundred thousand, or a million of quarters (Works I, p. 374–375, emphasis added).

Of course, if the quantity imported were so great as a million of quarters, the French producers would probably be obliged to cultivate less fertile land in order to increase their production. The price of corn would then rise in both countries but this does not change the principle of the determination of prices: “it is the natural price of commodities in the exporting country, which ultimately regulates the prices at which they shall be sold, if they are not the objects of monopoly, in the importing country” (Works I, p. 375). This qualification is of course essential. In the above example of the importation of wine, Ricardo supposes that there is no monopoly in trade. Free competition among the importers is therefore needed – but no more and no less than it is needed in any domestic market. If a merchant could sell fifty pipes for more than 1200£, “the profits of this individual merchant would exceed the general rate of profits, and capital would naturally flow into this advantageous trade, till the fall of the price of wine had brought every thing to the former level” (Works I, p. 128).

All this discussion logically implies that “exportable commodities” each has the same gold price in the different trading nations, corrected by various costs – which can be substantial, especially if duties, taxes, etc., are to be added – incurred by the merchants.¹⁵

4.2 What kind of specialisation?

The question of specialisation of countries in the production of certain commodities has also been long debated. Ricardo never considers this problem directly but the main conclusion that has been drawn from his

¹⁵ “... with respect to many commodities’ the exchange value of gold may differ 5, 10, or even 20 per cent” in different countries (Works I, p. 147). This expresses the fact that costs pertaining to international trade may be different, and more extensive than the costs of transportation, insurance, etc. usually taken into account (to Mill, 26 September 1811, Works VI, p. 55).

analysis seems to be correct, at least in the simple model usually considered. A passage from Ricardo (Works I, pp. 137–8) is significant in this respect. As will be seen below (§ 5.4), an important improvement in the production of English wine is supposed to lead to a reversal in the flows of exchanges between England and Portugal. This reversal is depicted in the following terms: “for England to make all the wine, and Portugal all the cloth consumed by them” (Works I, p. 138). If free competition prevails, countries will probably fully specialise in the production of commodities they are exporting and abandon the production of the good they import.

However, two circumstances could stop the process of specialisation in some industries: an insufficient capacity of production in the exporting country, and the existence of decreasing returns. The former refers to the situation where the quantities of a commodity a country needs to import are so great that the exporting country cannot produce them. The second refers, of course, to agriculture and mining where the natural prices of products increase with the exploitation of less fertile land or mines: but in this case, the rising prices could in fact lead to a quasi-cessation of the flows of exchange between the countries, with the paradoxical result that, as soon as exchanges ceases, the exporting country must diminish its production and abandon the less fertile land, its exports becoming then again profitable with the diminution of their natural price.

The above conclusion about complete specialisation must be qualified, however, because it depends largely on the two-commodity two-country model. If many other countries are introduced into the picture – which Ricardo does when he defines a state of equilibrium (below, § 5.2) – the case for partial specialisation becomes more likely because, with each country trading with all others, some nations would probably not satisfy their specific demands through imports alone.

4.3 Rich and poor countries

Ricardo's analysis of the comparative structures of trade between countries is also interesting because it apparently stresses the fact that the comparative abundance of factors could play a role in specialisation – and we know the success of this theme in contemporary international trade theory with the so-called Heckscher–Ohlin approach.

Ricardo deals with poor and rich countries and refers to the fact – advanced against Adam Smith, especially in Chapter 28 of the *Principles* – that in rich countries money wages are higher than in poor countries: “estimated in corn, gold may be of very different value in two countries. ... it will be low in rich countries, and high in poor countries” (Works I,

p. 377). This is because, all other things being equal, the accumulation of capital provokes an increase in population and consequently the cultivation of less and less fertile land and a rise in the prices of agricultural products.

No point in political economy can be better established, than that a rich country is prevented from increasing in population, in the same ratio as a poor country, by the progressive difficulty of providing food. That difficulty must necessarily raise the relative price of food, and give encouragement to its importation (Works I, p. 373).

This situation is most probably the result of the past path of development that is itself in part a consequence, at some stage, of the advantage enjoyed by some nations because of their “situation”, “climate, and ... other natural or artificial advantages” (Works I, p. 132).

It is only in rich countries, where corn is dear, that landholders induce the legislature to prohibit the importation of corn. Who ever heard of a law to prevent the importation of raw produce in America or Poland? – Nature has effectually precluded its importation by the comparative facility of its production in those countries (Works I, pp. 373–4).

Rich and poor countries are ultimately defined by their respective amount of accumulated fixed capital in proportion to the amount of circulating capital, including labour. Rich countries “where large capitals are invested in machinery” are contrasted with poorer countries “where there is proportionally a much smaller amount of fixed, and a much larger amount of circulating capital” (Works I, p. 266).

Wages are lower in poor countries and “more work is done by the labour of men” (Works I, p. 266). This will induce countries to invest capital in different employments entailing different techniques of production – less capitalistic in poor countries, more capitalistic in rich countries – with obvious consequences for the structure of production, prices and thus foreign trade. But anything more precise cannot be said at this point.

In the distribution of employments amongst all countries, the capital of poorer nations will be naturally employed in those pursuits, wherein a great quantity of labour is supported at home, because in such countries the food and necessaries for an increasing population can be most easily procured. In rich countries, on the contrary, where food is dear, capital will naturally flow ... into those occupations wherein the least quantity of labour is required to be maintained at home: such as the carrying trade, the distant foreign trade, and trades where expensive machinery is required (Works I, p. 349).

5. Money and foreign trade

It is now necessary to draw some additional consequences from the fact that transactions are expressed in monetary terms. As it is impossible to enter here into a discussion of Ricardo's monetary theory, we will take for granted that his approach systematically relies on two basic mechanisms. The first mechanism is a quantitative relationship between prices and the quantity of currency: all other things being equal, and especially the natural value of the standard, the money prices of commodities depend on the quantity of currency circulating in the country. The second mechanism is a Humean-like specie-flow mechanism between countries – extended to the relations between the provinces of a single country.

In this context, Ricardo's repeated assertion that the value of the standard "is never the same in any two countries" (Works I, p. 143) must be explained. To understand this, it is necessary to realise a significant shift of emphasis in Ricardo's analysis of money in relation to international trade. In monetary theory, for example, during the Bullionist controversy, Ricardo's main concern was to grasp the causes and consequences of a variation in the quantity of currency in circulation, all other things being equal – especially the value of the standard. In his views on international trade, the focus is on the fluctuations in the value of the standard, together with the induced changes in the volume of currency. This shift is also present in the *Principles*, not only between the first six chapters and the seventh (in the following quotation, "money" means "gold") but also between the seventh and the twenty-seventh (On Currency and Banks), for example.

In the former part of this work [the first six chapters of the *Principles*], we have assumed ... that money always continued of the same value; we are now endeavouring to shew that besides the ordinary variations in the value of money ... there are also partial variations to which money is subject in particular countries; and in fact, that the value of money is never the same in any two countries (Works I, pp. 142–3).

5.1 *Trade, the value of the standard and the labour theory of value*

We must distinguish carefully, Ricardo warns, between the relative value of bullion and its price. "The price of a commodity is its exchangeable value in money [currency] only", he wrote in his 1816 *Proposals for an Economical and Secure Currency*. "The [relative] value of a commodity is estimated by the quantity of other things generally for which it will exchange" (Works IV, p. 60). The mistake made by many authors – Henry Thornton for example,¹⁶ but

16 "The error of this [Thornton's] reasoning proceeds from not distinguishing between an increase in the value of gold, and an increase in its money price" (Works III, p. 60).

also James Mill – lies precisely in a “misconception of the difference between price and value” (ibid.). To James Mill, who asserted: “The value of the precious metals throughout the globe is uniform”, Ricardo replied:

I should have agreed with you if you had said “price” instead of “value”. If a bill on London for £100 will sell in Hamburgh for £98 or as much of the money of Hamburgh as is equal to the bullion in £98 of our’s then I should say that the price of bullion differed 2 pc.t in the two countries. But when we speak of the [relative] value of bullion we mean a very different thing – we mean ... to measure it by some other commodity, – corn, coffee ... or any amongst the thousands of commodities which may be exported (26 September 1811, Works VI, pp. 54–5).

In other words, the price of gold “throughout the globe is uniform” thanks to the variations of the price of the bills of exchange and the foreign exchange, but the relative value of bullion – its exchange ratio with such or such commodity – is not.

Note that, in this context, the phrase “purchasing power of gold”, sometimes used by commentators to express the value of the standard, is inadequate because it conveys the idea of a measure of the value of bullion against all other commodities taken as a whole. Not only would it be a meaningless conception in the absence of index numbers, but Ricardo explicitly rejected it.¹⁷ As he states in the *Principles* – he had already insisted on this point in his *Proposals* (Works IV, pp. 59–60) – the relative value of gold, as of any other good, always depends on the commodities chosen for the comparison and there is no way of escaping this difficulty.

When we speak of the high or low value of gold, silver, or any other commodity in different countries, we should always mention some medium in which we are estimating them, or no idea can be attached to the proposition. Thus, when gold is said to be dearer in England than in Spain, if no commodity is mentioned, what notion does the assertion convey? If corn, olives ... be at a cheaper price in Spain than in England; estimated in those commodities, gold is dearer in Spain. If, again, hardware, sugar ... be at a lower price in England than in Spain, then, estimated in those commodities, gold is dearer in England. Thus gold appears dearer or cheaper in Spain, as the fancy of the observer may fix on the medium by which he estimates its value (Works I, pp. 376–7).

17 Ricardo, however, like Smith, sometimes speaks of “money’s worth”, when referring to the real wage: “though the wages of the workman are commonly paid to him in money, his real revenue, like that of all other men, consists not in money, but in money’s worth; not in the metal pieces, but what can be got for them” (Works III, p. 89; see also ibid., p. 329). In some examples, he also reasons on quite a general level: “If in France an ounce of gold were more valuable than in England, and would therefore in France purchase more of any commodity common to both countries...” (Works III, p. 57).

Now the possible different relative values of gold between two countries depend on two factors: (i) the value of the commodity chosen for the comparison, and (ii) the value of gold, which itself depends on two factors (Works I, pp. 143–6). The first is the distance of the country from the gold mines: this is by far the more important factor when the different countries are at an early stage of development (Works I, p. 144). The second is the comparative skill of the home producers vis-à-vis their foreign competitors (Works I, p. 146), which determine the flows of international trade. This second reason is predominant at an advanced stage of development (Works I, p. 144). However, these two causes¹⁸ do not play exactly the same role. The first clearly determines the difference in the natural value of gold in nations: except in the case of some revolution in mining or in the transport industry that will in any case affect all countries, this cause is stable in the short run. But the second, through variations in the quantity of gold available in a country, acts upon its market value: depending on the flows of international trade, it affects different countries in very different ways.

These “partial variations to which money is subject in particular countries” (Works I, p. 143), that is to say, the fluctuations in the market value of gold are in turn important to international trade. The flows of foreign trade can change the market value of the standard and the money prices of commodities. Importations and exportations, depending on these prices, can in turn be modified. Ultimately, the fluctuations in the market value of gold and in money prices, Ricardo writes, are the great regulator of foreign trade. “Foreign trade ... can only be regulated by altering the natural price, *not the natural value*, at which commodities can be produced in those countries, and that is effected by altering the distribution of the precious metals” (Works I, p. 343, emphasis added).

All this explains why the gold price of the same commodities may differ in two countries, being even “subject to considerable difference” (Works I, p. 143) – commodities produced in exactly the same conditions, for example, can have different gold prices. This also explains why, even if the theory of labour value determines relative domestic prices, international

18 It is true that Ricardo specifies that the value of gold “is never the same in any two countries depending as it does on relative taxation, on manufacturing skill, on the advantages of climate, natural productions, and many other causes” (Works I, p. 143). But, two pages later, referring to the distance from the mines and the state of the balance of trade, he writes: “These I believe to be the only two causes which regulate the comparative value of money in the different countries of the world; for although taxation occasions a disturbance of the equilibrium of money, it does so by depriving the country in which it is imposed of some of the advantages attending skill, industry, and climate” (Works I, p. 145) – thus referring again to the state of the balance of trade.

exchanges are in general made at different rates. This does not mean that these exchanges are regulated by different principles. This apparent discrepancy vis-à-vis the theory of value simply happens because exchanges are necessarily monetary transactions and, at the international level, only gold prices matter. In the third edition of the *Principles* (1821), Ricardo alludes to this in the new chapter “On Machinery”. Here he specifies that the money price of commodities, and not only their value, is governed by their cost of production. The introduction of machinery allows them to be sold cheaper on foreign markets. What happens if the home country discourages the use of machines?

If ... you were to reject the use of machinery, while all other countries encouraged it, you would be obliged to export your money [gold], in exchange for foreign goods, till you sunk the natural prices of your goods to the prices of other countries. In making your exchanges with those countries, you might give a commodity which cost two days labour, here, for a commodity which cost one, abroad, and this disadvantageous exchange would be the consequence of your own act, for the commodity which you export, and which cost you two days labour, would have cost you only one if you had not rejected the use of machinery (Works I, p. 397).

In a given country, this monetary aspect is of trifling importance – though it could happen between two regions – and relative prices are determined by labour values because the currency is unique and gold has an approximately uniform value. This is generally not the case between nations.

5.2 “Equilibrium of barter” and “equilibrium of money”

Now it is time to see how Ricardo defines a state of equilibrium in foreign trade and how this equilibrium can be disrupted by destabilising shocks. A state of equilibrium is what Ricardo calls “a trade of barter” (Works I, p. 137) in Chapter 7 of the *Principles*. The use of the word “barter” is surprising here because we know that, for Ricardo, “every transaction in commerce is an independent transaction” expressed in money. Yet other occurrences of the phrase “trade of barter” can be found: one on the same page, two on page 140, one on page 142, and also in some other chapters, such as Chapter 16 where Ricardo significantly writes of “a trade of barter, which all commerce, both foreign and domestic, really is” (Works I, p. 220).

How is this to be understood? The first explanation refers to the fact already mentioned that, for Ricardo, a simple purchase or sale can be considered as a barter because each agent is “a dealer in bullion”. But this would be tautological here. The second and more fundamental explanation is to be found at the macro level. This is the situation when bullion is

neither imported nor exported, i.e., when, for all commodities except gold, the total price of exports balances the total price of imports – the circulation of the goods being carried out by means of the circulation of bills of exchange. In this state of affairs, a country acts as if, at the macroeconomic level, it were bartering bundles of goods with all the other countries taken as a whole. As stated in *The High Price of Bullion*:

While the relative situation of countries continued unaltered, they might have abundant commerce with each other, but their exports and imports would on the whole be equal. England might possibly import more goods from, than she would export to, France, but she would in consequence export more to some other country, and France would import more from that country; so that the exports and imports of all countries would balance each other; bills of exchange would make the necessary payments, but no money [gold] would pass, because it would have the same value in all countries¹⁹ (Works III, pp. 53–4; see also Ricardo's letter to Malthus, 22 October 1811, Works VI, p. 64).

This explains the phrase “equilibrium of money” used by Ricardo (Works I, pp. 141–2, 145) to depict this situation along Humean lines. In such a state of affairs, “the distribution of the precious metals” among nations is stable – an optimal distribution which depends on the degree of development of the banking system in each country.

Gold and silver having been chosen for the general medium of circulation, they are, by the competition of commerce, distributed in such proportions amongst the different countries of the world, as to accommodate themselves to the natural traffic which would take place if no such metals existed, and the trade between countries were purely a trade of barter (Works I, p. 137; see also, p. 140).

It is essential to note that this equilibrium is defined at the macro level, the country facing all its trading partners. There are not necessarily bilateral equilibria between countries: this would indeed only happen by chance, as Ricardo asserted in a rather clumsy way in 1811.²⁰ The equilibrium is reached by the compensation of deficits by surpluses, through the circulation of bills of exchange. Ricardo is convinced that such an equilibrium can always be thought of as a tendency. In *The High Price of Bullion*, adopting Thornton's vocabulary in terms of balance of trade, he writes

19 Generally speaking, in the state of equilibrium and for traded goods.

20 “Is it not then as certain that money will go to that country where the major part of goods are cheap, as that goods will go to any other country where the major part are dear. I say the major part because if the cheapness of one half of the exportable commodities be balanced by the dearness of the other half, in both countries, it is obvious that the commerce of such countries will be confined to the exchange of goods only” (to Malthus, 22 October 1811, Works VI, p. 64).

that he “entirely” agrees with Thornton when the latter asserts that “it may be laid down as a general truth, that the commercial exports and imports of a state naturally proportion themselves in some degree to each other, and that the balance of trade therefore cannot continue for a very long time to be either highly favourable or highly unfavourable to a country’ (quoted by Ricardo, Works III, p. 83).

This also means that we must put in due perspective Ricardo’s simple examples²¹ of bilateral international exchange, and in particular that between England and Portugal. They are too simple to depict a complex reality and it would not be legitimate to read too much into them: their only purpose is to stress the result of an economic mechanism, a result that should in some cases be qualified subsequently. Ricardo himself thought that a two-country two-commodity model should be supplemented to reach more realistic conclusions. This was the case (above, § 3.5) when, in his discussion with Malthus, he introduced a third commodity, sugar, into his two-commodity example of corn and gold. Another significant example will be seen below (§ 5.4).

A state of equilibrium is simply a fiction showing where the free market forces would lead all other things being equal. But these other things are never equal:

The fact however appears to be that there is no degree of permanence in the proportions between the currencies and the commodities of nations, – they are subject to constant fluctuations always approaching an absolute level but never really finding it (Ricardo to Malthus, 17 July 1811, Works VI, pp. 39–40).

Destabilising shocks constantly occur, which disturb this path towards equilibrium: they generate re-equilibrating forces which show well the interplay between money and foreign trade. Suppose the economy is in equilibrium. An event is disruptive whenever it destroys the corresponding distribution of gold among nations. This means that the amount of currency existing in a country suddenly becomes either “redundant” or scarce. This “superabundance” or scarcity generates price movements which in turn provoke changes in the flows of international trade.

The origin of the shock can be monetary if it results from an excessive or over-restrictive emission of notes, or real if it is caused, for example, by a bad harvest or by any change in the technology of the economy, including banking technology – Ricardo sometimes alludes to the improvements made by banks in handling and circulating money, thus leading to an economy in the use of the existing currency which, as a consequence,

21 For some considerations on Ricardo’s method, see Kurz (2015).

becomes too abundant. As for bad harvests or technical progress, they also provoke an excess of money in circulation, either because fewer commodities are circulated during the period (bad harvest) or because of the fall in certain prices (technical progress). The disruptions they provoke can be temporary, or persist in the longer term and lead to a new equilibrium in imports and exports. Typically, the temporary effects will be due to a bad harvest, but also to monetary shocks. The consequences due to technical progress, on the other hand, are likely to generate a new equilibrium in trade.

It is finally worth noting that the disruptive effects on trade of fiscal policy are analysed along the same lines:

Beside the improvements in arts and machinery, there are various other causes which are constantly operating on the natural course of trade, and which interfere with the equilibrium and the relative value of money. Bounties on exportation or importation, new taxes on commodities ... disturb the natural trade of barter, and produce a consequent necessity of importing or exporting money [gold], in order that prices may be accommodated to the natural course of commerce; and this effect is produced not only in the country where the disturbing cause takes place, but, in a greater or less degree, in every country of the commercial world (Works I, pp. 141–2).

5.3 Temporary destabilising shocks

Let us first deal with a monetary shock. We know that in a gold standard regime, the free circulation of gold ensures that a currency is always approximately at par. But this statement only considers equilibria and not the period of adjustment that follows a shock – for example, an excessive emission of banknotes. During this period, in the case of an over-issue, the rise in prices “being confined to this country alone ... would check exportation and encourage importation” (Ricardo to Malthus, 22 December 1811, VI, p. 74). But the phenomenon is temporary because, as a consequence, there would be “a demand for bills and a fall in the exchange” which, as Ricardo states, restores the previous flows of foreign trade. “This rise of prices and fall of the exchange, ... would not be temporary ... unless it were corrected by a reduction of the amount of the currency here” (Works VI, p. 74), which is the case in a regime of convertibility.

The story is not essentially different in a regime of inconvertible paper money. While the over-issue cannot be corrected automatically, ultimately the effects on foreign trade are the same. The exchange rate deviates from par “in the same proportion as ... money might be multiplied beyond that quantity which would have been allotted” to the country “by general commerce, if the trade in money had been free, and the precious metals had been used, either for money, or for the standard of money” (Works I,

p. 230). As before, foreign trade is only affected temporarily because “the effect on the exchange would counterbalance the effect of high prices” (Works I, p. 232). Suppose, Ricardo writes, that the circulation of gold pound sterling be replaced by paper money, and this paper money be doubled in quantity. What will happen?

... every commodity in England would be raised to double its former price, and the exchange would be 50 per cent against England; but this would occasion no disturbance in foreign commerce, nor discourage the manufacture of any one commodity. If, for example, cloth rose in England from 20£ to 40£ per piece, we should just as freely export it after as before the rise, for a compensation of 50 per cent would be made to the foreign purchaser in the exchange; so that with 20£ of his money, he could purchase a bill which would enable him to pay a debt of 40£ in England (Works I, p. 231).

Ricardo advanced the same analysis during the bullion controversy when he called for a progressive curtailment of the quantity of banknotes in circulation in order to diminish and cancel the depreciation of the currency. To those who, like Charles Bosanquet, were afraid of the negative consequences of such a policy, he answered:

... a reduction of Bank notes would lower the price of bullion and improve the exchange, without in the least disturbing the regularity of our present exports and imports. It would neither enable us to export or import gold in any way different to what is now actually taking place. Our transactions with foreigners would be precisely the same, we should possess only a more valuable money of the same name (Works III, p. 245).

5.4 Permanent destabilising shocks

The case of a technological shock considers the England–Portugal model extended to three commodities, since bullion must be added to wine and cloth. Ricardo supposes a technical innovation that modifies the advantage of one country in the commerce of one commodity: England can now produce wine in a very economical way. Before the innovation, the prices of one unit of wine or cloth were, respectively, 50£ and 45£ in England, and 45£ and 50£ in Portugal. In England, after the innovation, wine would fall to 45£ “while cloth continued at its former price, and in Portugal no alteration would take place in the price of either commodity” (Works I, p. 137). This would progressively modify the flows of exchange between the two countries. England, the innovating country, now stops importing wine from Portugal and produces it at home. Portugal continues to import cloth from England but, no longer being able to export wine in exchange for it, will send bullion, since gold will then be the cheapest commodity.

As a consequence, England experiences an inflow of gold and Portugal an outflow. Prices will change accordingly: the products of the innovating country become dearer, and those of the other country cheaper.

The price of cloth, from being 45£ in one country and 50£ in the other, would probably fall to 49£ or 48£ in Portugal, and rise to 46£ or 47£ in England, and not afford a sufficient profit after paying a premium for a bill to induce any merchant to import that commodity (Works I, p. 140).

This movement in prices in the two countries will thus continue to change the initial directions of the flows of trade: after England stops importing wine, Portugal stops importing cloth.

Cloth would continue for some time to be exported ... because its price would continue to be higher in Portugal than here; but money [gold] instead of wine would be given in exchange for it, till the accumulation of money [gold] here, and its diminution abroad, should so operate on the relative value of cloth in the two countries, that it would cease to be profitable to export it (Works I, p. 137).

But the story does not end here. In the first place, the alteration in the flows of trade could be strong enough as to reverse the initial flows of exports and imports. England could end up by exporting wine and importing cloth, and Portugal by exporting cloth and importing wine. "If the improvement in making wine were of a very important description, it might become profitable for the two countries to exchange employments; for England to make all the wine, and Portugal all the cloth consumed by them" (Works I, pp. 137–8).

In the second place, however, Ricardo, again aware of the limits of his simple model, significantly qualifies his conclusions on the importance of the international flows of gold and subsequent movements in prices. He remarks that they appear so clear-cut because only two commodities (in fact three, including bullion) are considered in this story. If, he writes, we take into account the many commodities that can be the objects of trade between the two nations – in 1811, as seen above, he was referring to "the thousands of commodities which may be exported" (Works VI, p. 55) – the price movements generated in these countries by technical innovation will be dampened simply because the inflow and outflow of gold will be less important. Portugal, for example, could export another commodity instead of gold.

By the abstraction of money [gold] from one country, and the accumulation of it in another, all commodities are affected in price, and consequently encouragement is given to the exportation of many more commodities besides money [gold], which

will therefore prevent so great an effect from taking place on the value of money [gold] in the two countries as might otherwise be expected (Works I, p. 141).

In the third place, the new situation reached after the double process of innovation and variations in price levels is not necessarily better than the initial state of affairs. If, for example, England stops importing wine and Portugal stops importing cloth, both countries will produce at home the wine and cloth they consume. This is a partial regression in the division of labour. The “singular result” (Works I, p. 140), in Ricardo’s eyes, is that, because of the innovation, and despite the rise in prices, England would in the end be in a better situation than before. Portugal, instead, despite lower prices, will lose in terms of use values. “This [the lower prices], however, is only a seeming advantage to Portugal, for the quantity of cloth and wine together produced in that country would be diminished, while the quantity produced in England would be increased” (Works I, p. 141).

6. Conclusion

The aim of this paper was to restate Ricardo’s approach to international trade. To do so, it was necessary to look beyond the few paragraphs which, in the long Chapter 7 of the *Principles*, deal with what was called the “principle of comparative advantage” and the related “gains from trade”. Despite the many difficulties and ambiguities presented by the texts, there is no doubt that Ricardo’s unity of view is remarkable. It is not legitimate to isolate some simple two-country two-commodity examples, or a few paragraphs, from the rest of his writings: each part of his theories is a piece in a jigsaw puzzle which cannot be contemplated separately, and only finds its relevance when all the pieces of the picture are put together again.

To reassemble this picture, the usual analysis at the macroeconomic level had to be discarded, the alleged differences between domestic and foreign trade erased, and the motivation of agents in competitive markets examined. They – and not the States – decide on transactions. Merchants – not countries – engage in foreign trade. They make their decisions on the basis of the usual signals given by competitive markets – money prices – following a simple and obvious rule: as in any other activity, they decide to carry out transactions whenever it is profitable for them to do so. Hence an analysis in terms of nominal variables, and the link with the theory of money, with all the consequences in terms of equilibrium, specialisation, reactions to destabilising shocks, etc. In this way, we obtain a much more comprehensive approach in which Ricardo’s real and monetary analyses are intertwined. The “principle of comparative advantage” and the “gains from trade” are also put in a more accurate perspective. They are not a rule for

action: they are simply unintended consequences of the decisions of agents in free markets.

Now the present enquiry must certainly be continued. On many points, the links between international trade and Ricardo's monetary theory have to be reconsidered, especially as regards the interaction between the value of the standard, money prices and international flows of gold. The action of the State must also be brought into the picture and the consequences on foreign trade of the various kind of taxes, tariffs, subsidies, treaties of commerce, etc. carefully established – after all, this was one of Ricardo's main concerns:

Foreign trade ... whether fettered, encouraged, or free ... can only be regulated by altering the natural price, not the natural value, at which commodities can be produced in those countries, and that is effected by altering the distribution of the precious metals. This explanation confirms the opinion which I have elsewhere given, that there is not a tax, a bounty, or a prohibition, on the importation or exportation of commodities, which does not occasion a different distribution of the precious metals, and which does not, therefore, everywhere alter both the natural and the market price of commodities (Works I, p. 343).

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Abstract

This paper deals with some difficulties presented by Ricardo's texts on international trade, taking seriously Ricardo's account of the systematic interaction of real and monetary phenomena. After a brief reassessment of the main features of Ricardo's views on foreign trade, some basic questions are examined, concerning the method of analysis and the alleged invalidity of the labour theory of value at the international level. The enquiry goes on to state that, for Ricardo, there are no significant differences between domestic and international exchanges, and on this basis, proposes a simple and general rule explaining the flows of trade. The "principle of comparative advantage" and the "gains from trade" thus appear as simple unintended consequences of the decisions of agents in free markets. Finally, the characteristics of an international equilibrium and the nature and impact of destabilising shocks are analysed.

Keywords

David Ricardo, comparative advantage, international trade, money