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“WRITINGS ON MONEY FULL OF INSTRUCTION”:

STEUART AND RICARDO AS TWO SQUABBLING BEDFELLOWS

Ghislain Deleplace

Emeritus Professor of economics, University Paris 8 at Saint-Denis, France

Abstract

Half-a-century after the publication of Steuart’s *Principles of Political Oeconomy*, David Ricardo’s judgment on the monetary theory contained in this book was ambivalent: “The writings of Sir James Steuart on the subject of coin and money are full of instruction, and it appears surprising that he could have adopted the above opinion, which is so directly at variance with the general principles he endeavoured to establish.” This “opinion” was the “idea of a currency without a specific standard.” The present paper analyses the reasons of such ambivalence.

On the positive side, Steuart established that a metallic currency could not be stable in value, and that the debasement of the coin was reflected in a high price of bullion. This was a lesson which Ricardo developed by advocating the complete substitution of banknotes for coins. Steuart also showed that monetary conditions at home and abroad could produce an unfavourable exchange, even when the foreign balance was in favour of England. This was echoed by Ricardo’s contention that an unfavourable exchange reflected the depreciation or appreciation of the domestic currency.

On the negative side, Steuart extended the critique of variability to any currency linked to a standard, whether coin or paper money. In contrast, Ricardo advocated that to be a “nearly perfect” currency paper money should be “regulated by a standard.” Steuart also suggested that an unfavourable exchange could be corrected by borrowing abroad at interest paid by the State, while for Ricardo the State should not interfere with the exchange, which could only be corrected through the domestic management of the note issue by an independent central bank.

Steuart and Ricardo thus appear as squabbling bedfellows, sharing an approach to money at variance with the quantity theory inherited from Hume, but opposing each other on the question of the standard of money and on the relation between money and capital.

Half-a-century after the publication of Steuart’s *Principles*, David Ricardo’s judgment on the monetary theory contained in this book was ambivalent:

The writings of Sir James Steuart on the subject of coin and money are full of instruction, and it appears surprising that he could have adopted the above opinion, which is so directly at variance with the general principles he endeavoured to establish. (Ricardo 1816: 59)

This “surprising opinion” was the “idea of a currency without a specific standard” (*ibid*) which Ricardo decidedly opposed. The celebration of the 250th anniversary of the publication of Steuart’s *An Inquiry into the Principles of Political Oeconomy* (1767) and of the 200th anniversary of Ricardo’s *On the Principles of Political Economy, and Taxation* (1817) offers an opportunity to inquire into the reasons of such ambivalence.

Each of the first two sections of the paper studies one side of this ambivalence, Steuart “instructing” Ricardo (Section 1) but also “surprising” him negatively (Section 2). I suggest in conclusion that Steuart and Ricardo were both at odds with monetary orthodoxy, but in a different way (Section 3).¹

1. STEUART “INSTRUCTING” RICARDO

The “instruction” which Ricardo may have derived from Steuart on money was twofold. It dealt at the domestic level with the effect of the debasement of the coin on the market price of gold bullion and at the international level with the notion of real par of exchange and the effect of money on the exchange rate.

1.1. The effect of the debasement of the coin on the market price of gold bullion

At the domestic level, Steuart distinguished between two causes of “imperfection” of a metallic currency, that is, of variation in its value. The first cause was that the *value* of the metal itself (gold or silver bullion) was variable:

There is another circumstance which incapacitates the metals from performing the office of money; the substance of which the coin is made, is a commodity, which rises and sinks in its value with respect to other commodities, according to the wants, competition, and caprices of mankind. The advantage, therefore, found in putting an intrinsic value into that substance which performs the function of money of account, is compensated by the instability of that intrinsic value. (I: 540)

The second cause was that the *quantity* of the metal in the coin might be lower than the legal one (because of wear and tear or clipping) and this debasement of the coin was reflected in a high price of bullion:

{*Why silver bullion is dearer than coin*} When you sell standard silver bullion at the mint, you are paid in weighty money; that is, you receive for your bullion the very same weight in standard coin; the coinage costs nothing; but when you sell bullion in the market, you are paid in worn out silver, in gold, in bank notes, in short, in every species of lawful current money. Now all these payments have some defect: the silver you are paid with is worn and light; the gold you are paid with is over-rated, and perhaps also light; and the bank notes must have the same value with the specie with which the bank pays them; that is, with light silver or over-rated gold. It is for these reasons, that silver bullion, which is bought by the mint at 5*s.* 2*d.* [62 pence] *per* ounce of heavy silver money, may be bought at market at 65 pence the ounce in light silver, over-rated gold, or bank notes, which is the same thing. (I: 562-3)

¹ The present paper is based on my contribution (Deleplace 2015) to the new edition by Gino Longhitano of the 1767 edition of Steuart’s *An Inquiry into the Principles of Political Oeconomy* (Steuart 1767 [2015]), and on my interpretation of Ricardo’s theory of money in my book *Ricardo on Money. A Reappraisal* (Deleplace 2017). After each quotation from Steuart (1767 [2015]) the roman figure indicates the volume and the pagination is the original one, given in the text of this edition between vertical bars. All quotations from Ricardo refer to the Sraffa edition of *The Works and Correspondence of David Ricardo* (Ricardo 1951-1973). The emphasis in the quotations is always Steuart’s or Ricardo’s.

With the first statement Ricardo agreed, but he derived opposite conclusions from it: changes in the value of the standard of money were not a reason to advocate the “idea of a currency without a specific standard,” as Ricardo blamed Steuart for holding it (see Section 2 below), but were consistent with the adoption of a currency which would only vary in value with the variations in the value of the standard. To do so, according to Ricardo, one should prevent the *price* of the standard (as distinct from its *value*) from varying. One of the causes which raised the market price of gold bullion above the legal price of gold in money (hence depreciating the currency) was the debasement of the coin, and it is on this question that Steuart’s second statement was “full of instruction.” This was a lesson which Ricardo developed by advocating the complete substitution of banknotes for coins.

One of the few quotations from Steuart to be found in Ricardo’s writings immediately follows the latter’s statement that “the exchange will, therefore, be a tolerably accurate criterion by which we may judge of the debasement of the currency, proceeding either from a clipped coinage, or a depreciated paper-money.” (Ricardo 1810-1811: 72) Ricardo’s quotation reads as follows:

It is observed by Sir James Stuart², “That if the foot measure was altered at once over all England, by adding to it, or taking from it, any proportional part of its standard length, the alteration would be best discovered, by comparing the new foot with that of Paris, or of any other country, which had suffered no alteration. Just so, if the pound sterling, which is the English unit, shall be found any how changed; and if the variation it has met with be difficult to ascertain, because of a complication of circumstances; the best way to discover it will be to compare the former and the present value of it, with the money of other nations which has suffered no variation. This the exchange will perform with the greatest exactness.” (Ricardo 1810-1811: 72-3)

According to Ricardo, there was, however, a better index of the debasement of the metallic currency at home than the exchange rate, which also reflected the state of the currency in the other country. In accordance with Steuart’s second statement above, this index was a rise in the market price of the standard metal in bullion over and above its legal price in full-bodied coin. At the time of Ricardo, this causal relationship was disputed by nobody, whether the Bullionists – those (including Ricardo) who explained the depreciation of the pound by the overissue of Bank of England notes – or the Anti-Bullionists – those who denied the Bank of England any responsibility in the high price of bullion and explained it by other factors. Among these factors some Anti-Bullionists mentioned the debasement of the coins. Ricardo opposed them not on the general effect of debasement on the market price of bullion but on its relevance in the circumstances of the time, the divergence being about “that coin which is the principal measure of value” (Ricardo 1951-1973, VI: 2) – the gold or the silver one – Ricardo arguing that it was the gold one and that it was not debased.

The reason why the causal relationship between the debasement of the coin and a high market price of bullion was common knowledge at the time of Ricardo is that it had been established by Steuart more than forty years before. The relation illustrated by Steuart’s quotation above may be formalised as follows. Supposing gold is the standard, let $\overline{q_{GC}}$ be the intrinsic weight of the standard coin “fresh from the mint” (undebased), that is, the quantity of gold (measured in ounces) legally contained in it, and q_{GC} the quantity of gold contained in

² The reference in Steuart (1767 [2015]) is I: 534.

the average circulating coin of the same denomination, with $q_{GC} \leq \overline{q_{GC}}$. One may define the rate of debasement D as the percentage difference between the legal gold weight of the undebased coin and the actual average gold weight of the debased one:

$$(1) \quad D = (\overline{q_{GC}} - q_{GC}) / \overline{q_{GC}}$$

Neglecting for the moment the coining and melting costs, let me suppose that the average circulating coin is debased by $D = 10$ per cent, but the law is such that it passes indifferently with an undebased one. If the seller of an ounce of gold bullion is paid £3. 17s. 10^{1/2}d. in such debased coins – that is, at a market price equal to the legal price of an ounce of gold in undebased coin – he really exchanges one ounce of gold bullion for 0.9 ounce of gold in coin. He may alternatively bring his bullion to the mint to have it coined in £3. 17s. 10^{1/2}d. in undebased coins. The diminished supply of bullion in the market raises its price, until one ounce of gold bullion exchanges at this higher price for one ounce of gold in debased coins. This occurs when the market price of gold bullion is 10 per cent above the legal price of gold in coin. If this premium overtakes 10 per cent, the owner of debased coins, rather than buying bullion at that price, prefers to melt them to sell the bullion thus obtained. The increased supply of bullion in the market sinks its price, until the premium falls back to 10 per cent. Arbitrage thus sustains the market price of gold bullion above the legal price of gold in undebased coin, by a margin determined by the rate of debasement. In other words, £3. 17s. 10^{1/2}d. in debased coin buy in the market 10 per cent less in gold bullion than it should according to the legal definition of the pound: measured in gold bullion, the debased currency is depreciated by 10 per cent and this depreciation continues as long as the average circulating coin remains debased by 10 per cent.

The relation between the rate of debasement and the rate of depreciation is as follows. By definition one ounce of gold contains $1 / \overline{q_{GC}}$ undebased coins, each one declared to be legal tender for £1, so that the legal price $\overline{P_{GC}}$ in pounds of one ounce of gold in undebased coins is given by:

$$(2) \quad \overline{P_{GC}} = 1 / \overline{q_{GC}}$$

In circulation, one ounce of gold contains $1 / q_{GC}$ debased coins, each one being also legal tender for £1. The no-arbitrage condition in the market for gold bullion states that one ounce of gold bullion exchanges for one ounce of gold in debased coins, so that, with P_G the market price in pounds of one ounce of gold bullion:

$$(3) \quad P_G = 1 / q_{GC}$$

By definition, the rate of depreciation d of money is equal to:

$$(4) \quad d = (P_G - \overline{P_{GC}}) / P_G$$

Combining (1) to (4) gives:

$$(5) \quad d = D$$

The higher the rate of debasement of the coin, the higher was the rate of depreciation of money. It should be noticed that the level of depreciation of the currency entirely results from the no-arbitrage condition in the market for gold bullion. It does *not* depend on any relation between the quantity of money, its value, and the aggregate money price of all circulated commodities (the so-called Quantity Theory of Money).

In practice convertibility of bullion into coin (minting) and of coin into bullion (melting) was costly: in England the delay to obtain the coin at the mint exposed the owner of bullion to a loss of interest; the legal prohibition of melting and exporting the coin exposed its owner to a melting cost that included the compensation paid to the intermediary for the risk of fraud. The market price of gold bullion P_G could thus vary around the legal price $\overline{P_{GC}}$ of gold in undebased coin between narrow limits corresponding to s_G the minting cost and m_G the melting cost (both in percentage of the price):

$$(6) \quad \overline{P_{GC}} (1 + m_G) \geq P_G \geq \overline{P_{GC}} (1 - s_G)$$

When the circulating coins were debased, the upper limit of the market price of gold bullion was augmented by the rate of debasement D :

$$(7) \quad \overline{P_{GC}} (1 + D)(1 + m_G) \geq P_G \geq \overline{P_{GC}} (1 - s_G)$$

The rate of depreciation could now be greater than the rate of debasement, by a margin equal to the melting cost. When the circulation was composed of debased coins, they were all the more depreciated since their melting cost was increased by the prohibition of melting and exporting the coin. This is why Ricardo advised to make them free:

The most perfect liberty should be given, at the same time, to export or import every description of bullion. (Ricardo 1816: 67)

On this point he was in agreement with Stuart who had discussed at length the pros and cons of the prohibition of melting and exporting the coin (see II: 324-33) and concluded:

On the whole, we may determine, that a flourishing commercial state, which has, on the average of its trade, a balance coming in from other countries, should lay it down as a general rule, to facilitate the exportation of its coin, as well as of bullion. (II: 331)

There were other points linked with international relations on which Ricardo could find Stuart's writings "full of instruction".

1.2. The real par of exchange and the effect of money on the exchange rate

At the international level, there were two important points contended by Stuart. The first was that the state of the foreign balance should be ascertained by comparing the exchange rate with the *real* par of exchange and not the *legal* par. The second point was that

monetary conditions at home and abroad could produce an unfavourable exchange of the pound, even when the foreign balance was in favour of England. These two points paved the way to Ricardo's contention that the deviations of the exchange rate from the real par reflected the depreciation or appreciation of the domestic currency.

At the time of Steuart, the legal par of exchange (the ratio of the weight of metal legally contained in the main coin of each respective country) was used to infer whether the balance of payments with a given foreign country was favourable or adverse and to calculate the import and export bullion points by which the variations in the exchange rate were constrained. This use was convenient because the legal price of gold in coin in each country was a given magnitude which was left unchanged by the State, except in extraordinary circumstances. The knowledge of this price in England and in each foreign country thus allowed calculating the legal par of exchange between the pound and each foreign currency. Supposing as above that $\overline{q}_{GC}^{\pounds}$ and $\overline{q}_{GC}^{\text{L}}$ were the respective quantities of gold defining the English pound and the French *livre* at the mint, the legal par of exchange $\overline{R}^{\text{L}/\pounds}$ of the livre in pounds was by definition equal to $\overline{q}_{GC}^{\text{L}} / \overline{q}_{GC}^{\pounds}$, that is, according to (2) above, $\overline{P}_{GC}^{\pounds} / \overline{P}_{GC}^{\text{L}}$.

The use of the legal par of exchange nevertheless opened a margin of error, both for the diagnosis of the balance of payments and the calculation of the bullion points. The reason for this error was to be found in the inaccuracy of the circulating coins for calculating the par of exchange that equalised the quantities of gold contained in them. This was obvious when circulating coins were debased, that is, when wear and tear or clipping made them contain less pure gold than they legally should. The real par of exchange, as it was called – that is, the par that equalised the *actual* quantities of gold contained in the domestic and foreign coins – then differed from the legal par of exchange – calculated on the basis of the *legal* quantities. Since, as seen above, the debasement of the coin raised the market price of gold bullion P_G above the legal price of gold in coin \overline{P}_{GC} , one should now consider the real par of exchange $R^{\text{L}/\pounds} = P_G^{\pounds} / P_G^{\text{L}}$ rather than the legal par $\overline{R}^{\text{L}/\pounds} = \overline{P}_{GC}^{\pounds} / \overline{P}_{GC}^{\text{L}}$. As Steuart emphasised:

The general rule, therefore, I think, is, to settle the real par of different coins, not according to the *bullion* they contain, but according to the bullion they are worth in their own market at the time. (II: 23)

One should thus determine the par by calculating, not the ratio $\overline{R}^{\text{L}/\pounds}$ of the respective quantities of gold legally contained in the full-bodied coins in Paris and London, but the ratio $R^{\text{L}/\pounds}$ of the respective market prices of the same quantity of gold bullion in London and Paris. The diagnosis of the balance of payments and the understanding of the limits between which the exchange rate could vary then required the analysis of the factors which could make the market price of gold bullion diverge from the legal price of gold in coin – hence the real par of exchange diverge from the legal par. However, this was not common knowledge at the time of Steuart, even among specialists, as illustrated by his critique of a recent pamphlet:³

³ Published by Philip Cantillon under the title *The analysis of trade, commerce, coin, bullion, banks, and foreign exchanges. Wherein the true principles of this useful knowledge are fully but briefly laid down and explained... Taken chiefly from a manuscript of a very ingenious gentleman deceas'd and adapted to the present situation of our trade and commerce*, London, 1759. See Longhitano (2015: XIXn).

Mr. Cantillon, in his *Analysis of Trade*, which I suppose he understood by practice as well as by theory, has the following passage in his 99th page: “The course of exchange between Paris and London since the year 1726, has been at a medium price of 32 pence sterling for the crown of three livres; that is to say, we pay for this French crown of three livres, 32 pence sterling, *when calculated on gold*, when in fact it is worth but thirty-pence and three farthings, which is giving four pounds in the hundred for this French money; and consequently, upon gold, the balance of trade is 4 *per cent.* against England in favour of France.” In this place, Mr. Cantillon calculates the par of exchange according to the common rule, to wit, gold bullion against gold bullion in the coins of both nations, where both are supposed to be of legal weight; and he finds that there has been, these thirty-four years past, a balance of 4 *per cent.* against England. Now, according to my theory, it is exactly what the coinage in France ought to produce, supposing on an average that the trade had been at par. (II: 17)

An exchange rate of 32 pence sterling per French crown⁴ was above the legal par (then 30^{3/4}) and this was interpreted as signalling an unfavourable balance of England with France. Steuart objected that this conclusion was in no way warranted since the par with which the exchange rate was compared was not accurate:

To calculate, as every body does, the par of the French crown, either by the gold or the silver in the English *standard* coin, when no such *standard* coin exists; and to state all that is given for the crown above 29½*d.*, if you reckon by the silver, or 30¾*d.* if you reckon by the gold, for the price of a wrong balance, is an error which may lead to the most fatal consequences. (II: 320)

Things changed when the exchange rate was compared with the real par, which could depart from the legal par in a still greater proportion according to the respective deviations of the market price of gold bullion from the legal price of gold in coin in each country:

But suppose two cases which may happen, viz. 1. That gold bullion at Paris should be at the price of coin, while at London it may be at mint price; or, 2. That at Paris it may be at mint price, when at London it is at 4*l.* 0*s.* 8*d.* what will then the real par of exchange be? I answer, that on the first supposition, it will be [...] the crown of 3 livres equal to 30.076 pence sterling. In the other, [it will be] for the crown of 3 livres 33.728. A difference of no less than 8.9 *per cent.* Is it not evident that these variations *must* occur in the exchange between London and Paris? And is it not also plain, that they proceed from the fluctuation of the price of bullion, not from exchange? (II: 319)

In the first case, the market price of gold bullion was at its maximum in Paris (equal to “the price of coin”) and at its minimum in London (equal to “mint price”); the real par $R^{L/E} = P_G^E / P_G^L$ was at its minimum, viz. 30.076 pence sterling per crown. In the second case, the market price of gold bullion was at its minimum in Paris (equal to “mint price”) and at its maximum in London (equal to £4. 0*s.* 8*d.*, giving a melting cost of 3.6 per cent)⁵; the real par of exchange was at its maximum, viz. 33.728 pence sterling per crown. An observed

⁴ At the time of Steuart, Paris quoted the exchange rate certain for uncertain in London, meaning that it was defined in both centres as 1 *écu* (or crown of 3 *livres tournois*) = *e* pence sterling (one penny being 1/240 of a pound sterling), with *e* the exchange rate. For example in 1767, the short exchange in London on Paris fluctuated between 31^{1/8} and 32 pence per *écu* (Boyer-Xambeu, Deleplace and Gillard 1995: 187). When the exchange was “high”, the French crown thus purchased more of the English sterling than when it was “low”. This convention was reversed in 1796, London henceforth quoting the exchange certain for uncertain in Paris. Leaving aside changes in the monetary units, the par of exchange was consequently at the time of Ricardo the reciprocal of that at the time of Steuart.

⁵ “How high the price of gold bullion may rise at London no man can say; but the highest it rose to, during the last war, was, I believe, 4*l.* 0*s.* 8*d.* per ounce standard.” (II: 319)

exchange rate of 32 pence per crown, which, compared to the legal par of 30.75, seemed to indicate a balance with France of 4 per cent against England, really revealed a favourable balance for England when compared to a real par of 33.728.

Steuart's conclusion was that the monetary factors which, in each of the two countries, made the market price of gold bullion deviate from the legal price of gold in coin also made the real par of exchange deviate from the legal par and consequently affected the exchange rate, even if the balance of trade between the two countries was even. These monetary factors were those described in inequalities (6) and (7) above. In England, the debasement of the coin and the prohibition of its melting and exporting pushed the market price of bullion upwards, and in France the existence of seignorage pulled it downwards, both aspects raising the real par above the legal par. In particular, as mentioned above by Steuart when he criticised "the common rule" of calculation of the par, "according to my theory" the seignorage in France accounted for the rise of the real par (with which the exchange rate actually agreed), contrary to the wrong inference of an adverse balance of trade from the fall of the exchange rate below the legal par.

From this analysis Ricardo could derive two "instructing" lessons. The first was that one should use the real par when evaluating the exchange rate. According to Ricardo, when the domestic currency was neither depreciated nor appreciated, the market price of gold bullion was equal to the legal price of gold in coin and, supposing the same in the foreign country, the real par of exchange was consequently equal to the legal par. The exchange rate could then only diverge from the par in the limit set by the cost of transferring bullion from one country to the other:

If the trade in the precious metals were perfectly free, and money could be exported without any expense whatever, the exchanges could be no otherwise in every country than at par. If the trade in the precious metals were perfectly free, if they were generally used in circulation, even with the expenses of transporting them, the exchange could never in any of them deviate more from par, than by these expenses. These principles, I believe, are now no where disputed. (Ricardo 1817-1821: 230)

When the domestic currency was depreciated, the discount on the banknotes paying for the bills of exchange opened an additional margin of variation in the exchange rate. This meant that to determine the actual limits set to the variations of the exchange rate by the transfer costs one had to substitute the market price of gold bullion in each of the two countries for the legal price of gold in coin. Instead of calculating the bullion points by adding to (subtracting from) the legal par the cost of importation (exportation) of bullion, one should calculate them on the basis of the real par of exchange, that is, the ratio of the market prices of gold bullion.⁶ This is what Ricardo explained to McCulloch in a letter dated 2 October 1819:

⁶ As shown by equation (6) above, the market price of gold bullion in each country may vary around the legal price of gold in coin in a range determined by the respective minting and melting costs. Consequently, the real par of exchange may itself vary around the legal par between a minimum and a maximum determined by Steuart's method mentioned above. One can then calculate the bullion points which constrain the variations of the *nominal* exchange rate and show that, as Ricardo emphasised, the cost of transporting bullion either way determines the range of variation of the *real* exchange rate (see Deleplace 2017: 298-301). This analysis led Ricardo to the conclusion (highly controversial in the literature) that a fall in the exchange rate could only be explained by a redundancy of money (*ibid*: 310-15).

Instead of ascertaining the par by a consideration of what the pound sterling was formerly worth, it should be computed with reference to its present value, which is to be known by the value of the bullion which a pound can command. [...] The real par is justly estimated by the current value of the pound sterling – that current value is depreciated, hence a new real par is, or ought to be, established. (Ricardo 1951-1973, VIII: 87-8, 91)

Already in a practical example discussed in *Reply to Bosanquet* Ricardo had mentioned:

the par of exchange being calculated not on the value which the coin actually passed for in currency, but on its intrinsic value as bullion (Ricardo 1811: 180).

The second lesson which Ricardo could derive from Steuart was that, to understand the movements of the exchange rate, one should concentrate on the monetary factors (such as the depreciation of the domestic currency), not on the state of the foreign balance. As early as *High Price*, Ricardo stated an opinion which he would maintain in all his subsequent monetary writings:

While the circulating medium consists, therefore, of coin undebased, or of paper-money immediately exchangeable for undebased coin, the exchange can never be more above, or more below, par, than the expences attending the transportation of the precious metals. But when it consists of a depreciated paper money, it necessarily will fall according to the degree of the depreciation. (Ricardo 1810-1811: 72)

This statement was based on a conception of money which should now be contrasted with Steuart's one, because the latter conception, in Ricardo's words, "appears surprising" – negatively.

2. STEUART "SURPRISING" RICARDO (NEGATIVELY)

The basic point on which Ricardo disagreed with Steuart was on the relationship between money and the standard. This had two consequences for the design of the monetary system, on the question of seignorage at the domestic level and on the question of the exchange rate at the international one. Ricardo may have found Steuart's positions on these points "surprising" and, in his view, contradictory to sound principles.

2.1. The relationship between money and the standard

Steuart extended the critique of variability of metallic money to any currency linked to a standard, whether coin or paper money. In contrast, Ricardo advocated that, in order to be a "nearly perfect" currency, the paper money should be "regulated by a standard." In his *Proposals for an Economical and Secure Currency*, Ricardo's opposition to Steuart on this point was explicit, although, as noted above, he mixed a critique in the main text with a laudatory appreciation in a footnote. The full quotation is as follows:

This idea of a currency without a specific standard was, I believe, first advanced by Sir James Steuart,* but no one has yet been able to offer any test by which we could ascertain the uniformity in the value of a money so constituted. Those who supported this opinion did not see, that such a currency, instead of being invariable, was subject to the greatest variations, – that the only use of a standard is to regulate the quantity, and by the quantity the value of the currency – and that without a standard it would be exposed to all the fluctuations to which the ignorance or the interests of the issuers might subject it.

*The writings of Sir James Steuart on the subject of coin and money are full of instruction, and it appears surprising that he could have adopted the above opinion, which is so directly at variance with the general principles he endeavoured to establish. (Ricardo 1816: 59)

By the “idea of a currency without a specific standard” Ricardo had in mind what Steuart called “money of account” and defined as follows:

Money, which I call of account, is no more than *an arbitrary scale of equal parts, invented for measuring the respective value of things vendible*. Money of account, therefore, is quite a different thing from *money-coin*, which is *price*, and might exist, although there was no such thing in the world as any substance which could become an adequate and proportional equivalent, for every commodity. [...] The degree [with regard to angles] has no determinate length, so neither has that part of the scale upon plans which marks the unit: the usefulness of all those inventions being solely confined to the marking of proportion. Just so the unit in money can have no invariable determinate proportion to any part of value, that is to say, it cannot be fixed to any particular quantity of gold, silver, or any other commodity whatsoever. (I: 526-7)

As illustration of such “money of account” Steuart gave the *florin banco* of Amsterdam:

That money, therefore, which constantly preserves an equal value, which poises itself, as it were, in a just equilibrium between the fluctuating proportion of the value of things, is the only permanent and equal scale, by which value can be measured. Of this kind of money, and of the possibility of establishing it, we have two examples: the first, among one of the most knowing; the second, among the most ignorant nations of the world. The bank of Amsterdam presents us with the one, the coast of Angola with the other.

A florin banco has a more determinate value than a pound of fine gold, or silver; it is an unit which the invention of men, instructed in the arts of commerce, have found out.

This bank money stands invariable like a rock in the sea. According to this ideal standard are the prices of all things regulated; and very few people can tell exactly what it depends upon. The precious metals with their intrinsic value, vary with regard to this common measure, like every other thing. [...]

No adulterations in the weight, fineness, or denominations of coin have any effect upon bank money. These currencies which the bank looks upon as merchandize, like every other thing, are either worth more or less bank money, according to the actual value of the metals they are made of. All is merchandize with respect to this standard; consequently, it stands unrivalled in the exercise of its function of a common measure. (I: 530-1)

Since the *florin banco* of Amsterdam was defined as a given quantity of bullion (see Gillard 2004, Chapter 3), it may be surprising that Steuart rejected a definite quantity of metal as monetary unit while he illustrated his conception of a “money of account” with the bank money of Amsterdam. What Steuart praised in the *florin banco* was its invariable definition, in contrast with the variable quantity of metal which circulating coins actually contained. However, this did not prevent it from varying in value with respect to every commodity. The monetary unit “cannot be fixed to any particular quantity of gold, silver, or any other commodity whatsoever” because any such chosen “substance” varies in value with all other commodities whose respective values are measured by money. The monetary unit could indeed be defined as an invariable *quantity* of metal but its *value* was always changing:

Money of account, therefore, cannot be fixed to any material substance, the value of which may vary with respect to other things. The operations of trade, and the effects of an universal circulation of value, over the commercial world, can alone adjust the fluctuating value of all kinds of merchandize, to this invariable standard. This is a representation of the bank money of Amsterdam, which may at all times be most accurately specified in a determinate weight of silver and gold; but which can never be tied down to that precise weight for twenty-four hours, any more than to a barrel of herrings. (I: 532)

It is noteworthy that the *florin banco* of Amsterdam was also chosen by Ricardo as example of the “nearly perfect” currency he was looking for. Already in his “Notes on Bentham” written around Christmas 1810, Ricardo had mentioned the Bank of Amsterdam:

In Holland and Hamburg the advantages of the Banks is 1° in the use of paper instead of metals which has been admirably described by this author [Bentham], and 2° in having a uniform measure of value subject to no debasement or deterioration. (Ricardo 1951-1973, III: 288)

In the Appendix to the 4th edition of *High Price*, published in 1811, Ricardo outlined his Ingot Plan and again referred to the Bank of Amsterdam:

The plan here proposed appears to me to unite all the advantages of every system of banking which has been hitherto adopted in Europe. It is in some of its features similar to the banks of deposit of Amsterdam and Hamburg. In those establishments bullion is always to be purchased from the Bank at a fixed invariable price. The same thing is proposed for the Bank of England. [...] The currency could neither be clipped nor deteriorated, and would possess a value as invariable as gold itself, the great object which the Dutch had in view, and which they most successfully accomplished by a system very like that which is here recommended. (Ricardo 1810-1811: 126-7)

How was this convergence between Stuart and Ricardo on the *florin banco* possible?⁷ The answer appears when one reformulates Stuart’s above statements in Ricardo’s terms. Fixing a given quantity of metal to define the *florin banco* amounted to fixing the *legal price* in *florin banco* of one unit of weight of bullion. But this was not enough to prevent the *market price* of this weight unit from varying, hence also the relative value of bullion in terms of all other commodities, hence the value of the monetary unit in terms of these commodities. One then discovers that Stuart and Ricardo had a common object: how to build a monetary system so that the market price of the standard was kept at its legal level? However, there were two important differences.

First, for Stuart the metal could not be the standard because of its “imperfection in performing the functions of money of account” (II: 7), namely its varying value in terms of all other commodities. For Ricardo, changes in the money *price* of the standard could be avoided thanks to the adoption of an appropriate monetary system (his Ingot Plan) which guaranteed that the value of money remained always equal to the value of the standard (both values in terms of all other commodities). Such conformity of the currency to the standard meant that it

⁷ According to Gillard (2004: 155-7), Stuart and Ricardo were both wrong in their understanding of the Bank of Amsterdam, but for different reasons: Stuart because he wrongly believed that the Bank regulated the market for bullion, and Ricardo because he neglected the market quoting the agio of the *florin banco* against the *florin current*. This is a complex matter which cannot enter into the limits of the present paper. I restrict here myself to considering the definition of the *florin banco*, not the conditions under which bullion and coins could be deposited at and obtained from the Bank at a fixed price.

varied in *value* with changes in the *value* of the standard, but this was necessary to prevent the market *price* of the standard from varying. In other words, linking money to a standard prevented its value from varying for monetary reasons (such as “the ignorance or the interests of the issuers” of notes), but this implied accepting that it varied for real ones (such as changes in the cost of production of gold):⁸

In a sound state of the currency the value of gold may vary, but its price cannot. (Ricardo 1951-1973, V: 392)

The second important difference between the two authors on the relationship between money and the standard concerned the design of the monetary system. This difference may be illustrated at two levels, domestic and international.

2.2. The attitude towards seignorage

An example of the difference on the design of the monetary system was the attitude as regards seignorage. The two authors were in favour of a seignorage, but for different reasons.

Steuart viewed seignorage as a way of sustaining the exchange of the pound against the French currency, and he advised to introduce it at a level as high as in France (around 8 per cent).⁹ The reason was that when the French *aggregate* foreign balance was favourable, the inflow of gold bullion lowered its market price in Paris (in the limit set by the seignorage in France) and this raised the real par of exchange of the French currency against the pound. This depressed the exchange rate of the pound with the French currency, even if the *bilateral* balance between the two countries was in favour of England. The imposition of a seignorage in England would correct this bias each time the English aggregate foreign balance was favourable (see Deleplace 2015). Being advantageous in relations with abroad, this imposition would nevertheless have inconveniences at the domestic level, as a consequence of the coin “being a metal as well as a money of account.” (II: 5) The argument was the following.

When the aggregate foreign balance was in favour of England, the inflow of gold bullion lowered its market price in London below the legal price of gold in coin, in the limit set by the minting cost (now the suggested seignorage). If, for any reason, the aggregate foreign balance turned against England, the demand for gold to discharge it raised the market price of gold bullion, which equalised with the legal price of gold in coin. The money prices of all commodities rose with the price of bullion, since they were attached to a given quantity of grains of the standard:

Here then is a case, where the coin is made to lose all its advanced price as a manufacture [as compared with bullion]; and this is owing entirely to its being a metal as well as a money of account. Now as the coin has lost this additional value, by a circumstance purely relative to itself as a metal, there is no reason why other merchandize should sink in value along with it. The consequence, therefore, of this revolution ought to be, that as the merchandize, *bullion*, has got up 8 *per cent.* with regard to the coin, and as the price of all merchandize ought to be in proportion to the grains of bullion to which that price amounts, the revolution having annihilated

⁸ Ricardo persevered in looking for the conditions which would make the value of a standard invariable (in terms of other commodities), but he was ultimately forced to recognise that they were out of reach.

⁹ There was at that time no seignorage on the coining of the guinea. The minting cost was only the loss of interest (around one per cent) during the two-month interval between the moment when the mint received the bullion and the moment it delivered the guineas.

the 8 *per cent.* advance upon the coin, ought to have the same effect with respect to prices as if coinage were given gratis. (II: 5)

One would expect that, when the aggregate foreign balance turned again in favour of England, this disturbing effect would disappear. But, when the unfavourable balance persisted for long, this would not occur:

We now proceed to another chain of causes, which tend greatly to destroy the due proportion of value between coin and merchandize. This with justice may be put also to the account of the imperfection of the metals in performing the functions of money of account. Universal experience shews that the prices of merchandize are so attached to the denominations of coin, that they do not fluctuate as principles point out, any more than projectiles describe parabolas, or that machines operate the effects, which by calculation they ought to do. The resistance of the air in one case, the frictions of the part in the other, tend to render theory incorrect. Just so here; our theory represents prices as rising and sinking in the most harmonious proportion together with the metals; but in practice it is not so. They have their frictions and political resistances, which render the theory delusive only when every circumstance is not combined. A good gunner must calculate the resistance of the air upon his bomb, or he never will hit the mark. (II: 7-8)

Monetary illusion would play its role: during the time of a persisting unfavourable foreign balance, and coin having become equal in price with bullion, all prices of commodities became “attached to the denominations of coin”:

The imposition of coinage must, on many occasions, have the effect of attaching the price of commodities to the denominations of the coin, instead of preserving them attached to the grains of the metals which compose them, as in theory they ought to be. (II: 9)

Consequently, when the aggregate foreign balance turned again in favour of England and the market price of gold bullion fell down to its initial level, the prices of commodities did *not* fall with it but remained at the higher level reached when the balance was unfavourable. The coin “being a metal as well as a money of account,” the seignorage created an asymmetry: as long as the (market) price of coin as metal was below the (legal) price of coin as money of account (by the amount of the seignorage), the prices of commodities moved with the market price of the metal. But when the latter equalised with the legal price of the coin, as a consequence of the unfavourable foreign balance, the confusion between the two deprived the metal of its regulating role, and the prices of commodities became insensitive to the fall in the price of bullion when it eventually occurred. There was, however, one exception: the exported commodities were subject to foreign competition and hence regulated by their gold-prices. Their money-prices had to fall with the price of bullion. As a result, the “just equality of profit and loss among all the merchants, relatively to the real state of the balance” (II: 314) was broken: the profits of the exporters were squeezed between the falling price of the exportable commodities they sold and the persistently high price of the domestic commodities they purchased:

When coin begins to rise above the price of bullion, the manufacturers stick to the denominations of the coin, instead of descending in value (as they ought to do in theory) along with the bullion. What is the consequence of this? It is that the prices of manufactures *for home-consumption*, and of *commodities peculiar to the country*, stand their ground; that is, prices do not descend, and cannot be brought down by merchants. But as to

manufactures for exportation, which are not peculiar, but which are produced by different countries, the prices of these are violently pulled down by the force of foreign competition; and the workmen are obliged to diminish them. This hurts them effectually, not because of the diminution of the prices; because, properly speaking, this diminution is relative only to the denominations of the coin; their grains will purchase as many grains of bullion in the market as before, but not so much coin, and consequently not so much of any commodity which, by the principles just laid down, have attached themselves to the denominations of the coin, and have risen in their price along with it. (II: 9-10)

This was all the more to be regretted since the exporters were responsible for a favourable foreign balance, which enriched the nation as a whole. The imposition of seignorage had thus a pernicious effect on the profits of exporters, as compared with those of domestic traders. It reinforced the effect of foreign competition, which already explained

why those who work for foreign exportation, are the poorest class of all the industrious of a state, although the most useful to it, at the same time. (II: 10)

The remedy suggested by Steuart was an intervention of the State, which should use the benefit of the seignorage to compensate the loss incurred by exporters because of its imposition:

I shall here by the bye observe, that as the state is made to profit by the diminution of the gains of this most useful class; as she receives the coinage which strangers pay, and which is really deducted from the manufacturers who support exportation, she ought to indemnify this class (as may be done in a thousand ways, by premiums, for example, upon exportation) out of the profits arising upon coinage, instead of giving coinage free, to the evident loss of the nation, and benefit to strangers. (II: 10-11)

Ricardo was also in favour of a seignorage, provided it was small. As he wrote in *Principles*: “To a moderate seignorage on the coinage of money there cannot be much objection.” (Ricardo 1817-1821: 371) But his reasons were different from Steuart’s ones. Being examined by the Secret Committee on Resumption on 19 March 1819, he stressed an inconvenience linked to the absence of seignorage: “a great inducement offered to all exporters of gold, to exchange their bullion for coin previously to its exportation” (Ricardo 1951-1973, V: 401), since the advantages of the coins (certified fineness, divisibility) were not compensated by the cost of obtaining them. The imposition of a seignorage would thus induce exporters of gold to alter their behaviour and to export bullion rather than coin. However, even “moderate”, a seignorage on a coin “has also its inconveniences” (ibid: 402): it opened a margin of fall in the market price of bullion – hence also in all other prices – when the Bank of England contracted its issues. It thus gave the Bank of England the opportunity of changing the value of the currency, a recurrent complaint by Ricardo.

Ricardo’s ambivalent position on seignorage was entirely determined by his analysis of the requirements of a good monetary system. Preventing the actual exportation of the coin was in line with his wish to separate the domestic currency from the international means of settlement (what would be called a century later the gold-exchange standard). But this advantage of seignorage was counterbalanced by the possibility it gave to the Bank of England of changing at will the value of the currency. Hence this was a second best; a better solution was to eliminate the domestic circulation of coins altogether:

I am still of opinion, that we should have all its advantages [of a seignorage], with the additional one of economy, by adopting the plan, which I had the honour of laying before the Committee when I was last before them. (ibid: 403)

Ricardo then referred to his Ingot Plan, in which the currency (composed exclusively of banknotes convertible into bullion) was to be obtained from the Bank against standard bullion at £3. 17s. 6d. per ounce, 0.5 per cent below the price at which it was legal tender (£3. 17s. 10½d.) – a difference sufficient to cover the cost of management of the currency by the Bank of England while maintaining at a trifling level the margin of fall in the market price of bullion. Nowhere did Ricardo envisage like Steuart to use seignorage as a way of improving the exchange. This topic was another point of disagreement he had with his predecessor.

2. 3. Correcting the exchange

As seen above, Steuart contended that the market price of gold could diverge from its legal price according to the monetary factors influencing the price at which bullion was transformed into coin and coin transformed into bullion. This aspect might be directly modified by decisions of the national and foreign States concerning money. The purpose of Steuart's inquiry was thus, not only to warn against a wrong evaluation of the state of the foreign balance but also to suggest remedies against an undue loss of precious metals:

Since the loss upon high exchange against a country, affects principally the cumulative interest of the whole, relatively to other trading nations; it is the business of the statesman, not of the merchants, to provide a remedy against it. (II: 334)

Steuart's analysis of the real par of exchange thus did not only allow dispelling the confusion created by the use of the legal par and avoiding inappropriate and dangerous decisions about how to handle an adverse balance of trade. It also suggested means of practically influencing the exchange, so as to facilitate "the business of the statesman." One "remedy" was as follows:

If government should think fit to impose, in their own mint, a coinage, equal to that of France, and make all their coin of equal weight, and at the due proportion, it will take off all the loss we suffer by paying coinage to France (which we at present impute to the exchange) while she pays none to us. (II: 320-1)

Two measures were thus envisaged by Steuart: first, as seen above, the imposition in England of a seignorage "equal to that of France;" second, the recoinage of English coins at their legal weight, and the suspension of the prohibition of melting and exporting them. On seignorage (although for different reasons) and on liberty of exporting gold in whatever form Ricardo agreed. The disagreement was at a deeper level, that is, about the international adjustment of an adverse foreign balance.

For both authors the reference on this point was Hume who praised the metallic basis of money because international flows of metal automatically eliminated any positive or negative foreign balance (the so-called price-specie flow mechanism). On the contrary Steuart

explained the absence of self-adjustment by the inconveniences attached to metallic money. International transfers of precious metals, which according to Hume adjusted the balance of trade, depended on the market prices of bullion in the various trading nations. These prices were affected by monetary factors such as the debasement of the coins by wear and tear and the existence of a seignorage on coining. A country could thus experience an outflow of bullion while the balance of trade was not against her. Even worse, such outflow had a negative impact on the domestic market for credit: in a country like England where gold to be exported was obtained at the Bank of England against convertible notes, the fall in its metallic reserve led the Bank to reduce its discounts, and this resulted in a shrinkage of overall credit that hurt the economy. Rather than relying on a self-adjusting mechanism that did not work because of the malfunctions of metallic money, it was the task of the State to intervene actively so as to prevent outflows of bullion, by adapting the domestic monetary system (recoinage, imposition of a seignorage when there existed one in the other trading nations) and by providing assistance when, in case of a temporary adverse shock on the foreign balance, “banks ought to borrow abroad, and give credit at home” (II: 178):

Were the bank of England to keep a subscription open, at all times, in Amsterdam, for money to be borrowed there, on the payment of the interest in that city, who doubts but loans might be procured at much less expence than at present, when we are beating about for credit every where, until by the return of a favourable balance upon the trade of England, she shall be enabled to fill up the void. (II: 346-7)

The interest on the money borrowed by the Bank of England in Amsterdam should be paid by the State, whose assistance was required to avoid the shrinkage of credit in case of an adverse foreign balance:

We have abundantly explained the fatal effects of a wrong balance to banks which circulate paper; and we have shewn how necessary it is that they should perform what we here recommend. There is therefore nothing new in this proposal: it is merely carrying the consequences of the same principle one step farther, and making it a branch of policy, for government to be assisting to trade in the payment of balances, where credit abroad is required; and we have proposed that this assistance should be given out of the public money. (II: 346)

Again, the object was for the State to contribute to establishing “a just equality of profit and loss” rather than having the burden of the consequences of the adverse foreign balance “fall upon that part of the body politic from which the whole draws its vigour and prosperity [the exporters]” (II: 345):

If this be a fair state of the case, I think we may determine that such balances ought to be paid by the assistance and intervention of a statesman’s administration. The object is not so great as at first sight it may appear. We do not propose that the value of this balance should be advanced by the state: by no means. They who owe the balance must then, as at present, find a value for the bills they demand. Neither would I propose such a plan for any nation who had, upon the average of their trade, a balance against them; but if, on the whole, the balance be favourable, I would not, for the sake of saving a little trouble and expence, suffer the alternate vibrations of exchange to disturb the uniformity of profits, which uniformity tends so much to encourage every branch of commerce. (II: 345-6)

Steuart suggested thus that an unfavourable exchange could be corrected by borrowing abroad at interest paid by the State.

This was not Ricardo's view: according to him, the State should not interfere with the exchange, which could only be corrected through the domestic management of the note issue by an independent central bank. To arrive to this conclusion, Ricardo also departed from Hume. Contrary to what is commonly believed in the literature Ricardo did not subscribe to the price-specie flow mechanism: his analysis of the international adjustment to a monetary shock made no room for the response of the balance of trade to price changes triggered by variations in the quantity of money. Ricardo nevertheless took another route than Steuart's. For him, in a mixed monetary system of coins and convertible notes, international bullion flows did play a role in the adjustment, but only inasmuch they led to corrective changes in the quantity of money, at the import through minting and at the export through forced contraction of the note issue (for details see Deleplace 2017, Chapter 8). Such adjustment process was slow and harmful to the economy and "the judicious management of the quantity" (Ricardo 1816: 57) of notes convertible into bullion (hence eliminating coins) was thus preferable. If this quantity was increased when the market price of bullion fell below its legal level and contracted when it rose above, the currency was prevented from being appreciated or depreciated. Consequently inflows or outflows of bullion for monetary reasons would cease:

The most perfect liberty should be given, at the same time, to export or import every description of bullion. These transactions in bullion would be very few in number, if the Bank regulated their loans and issues of paper by the criterion which I have so often mentioned, namely, the price of standard bullion, without attending to the absolute quantity of paper in circulation. (Ricardo 1816: 67)

This profound difference between Steuart and Ricardo as to their disagreement with Hume's price-specie flow mechanism raises the question of their respective attitude towards monetary orthodoxy.

3. CONCLUSION: TWO FORMS OF MONETARY UNORTHODOXY

The "instruction" which Ricardo could derive from Steuart was common knowledge at his time and it testifies to the influence of the Scottish author on the understanding of some technical aspects of the currency (such as the causal relationship between the debasement of the coin and the high market price of gold bullion) and foreign exchange (such as the use of the real par of exchange to evaluate the state of the foreign balance). This was the kind of influence Steuart was looking for when he wrote:

I write not to instruct merchants, but to extract from their complicated operations, the principles upon which they are founded. (I: 333)

Fifty years after they were published, Steuart's *Principles* were thus "full of instruction" for all authors writing on money (including Ricardo), whatever their particular monetary theory. However, at the same time, these authors could disagree with Steuart's theory of money and with the political consequences which he derived from it. This was the case with Ricardo, who rejected Steuart's "idea of a currency without a specific standard" and was certainly at odds with Steuart's suggestion to correct the exchange through borrowing

abroad at interest paid by the State. Ricardo's observation that Steuart's above idea was "so directly at variance with the general principles he endeavoured to establish" did not point to an internal inconsistency in Steuart's theory of money but to the coexistence between, on the one hand, "general principles" (on currency and exchange) put forward by Steuart and denied by nobody fifty years later, and on the other hand an "idea" of the currency which was rejected by the majority of writers on money.

Ricardo's judgment on Steuart thus reveals the latter's relationship with monetary orthodoxy but also the former's one. At the time of Steuart as of Ricardo, monetary orthodoxy was represented by David Hume who, fifteen years before Steuart's *Principles*, had advocated a quantity theory of money at the domestic level and the price-specie flow mechanism at the international one (Hume 1752). Steuart's and Ricardo's respective attitude towards monetary orthodoxy can thus be evaluated through their positions towards the quantity theory of money and the price-specie flow mechanism.

Against Hume's argument according to which rising domestic prices consequent upon an inflow of precious metals would prevent a favourable balance from lasting, Steuart contended that domestic prices would *not* be affected, since they were not regulated by the quantity of circulating money – as advocated by Hume – but ultimately by the supply of and the demand for labour:

The price of articles of the first necessity regulates, in a great measure, the price of everything else. [...] The price of necessaries depends on the occupations of a people, and not on the quantity of their specie. The standard price of *subsistence* is in the compound proportion of the number of those who are obliged to buy, and of the demand found for their labour. [...] The price of subsistence must rise and fall according to the number of workmen; that is to say, the price of subsistence must be in the compound proportion above mentioned. [...] Nothing can determine the value of a vendible commodity, any where, *but the complicated operations of demand and competition*, which however frequently *influenced* by wealth, yet never can be *regulated* by it. (I: 514-5)

Steuart thus rejected "the opinion of Messrs. De Montesquieu and Hume, who think that the price of every thing depends upon the *quantity of specie* in the country." (I: 515) As for international adjustment, Steuart initiated a tradition which would later be illustrated by Thornton, Tooke and the Keynes of the 1920s (see Deleplace, 2014). This tradition relies on short-term international capital flows as a stabilising factor in case of an asymmetrical exogenous shock. For Steuart the cause of an unfavourable foreign balance was *not* a domestic monetary malfunction generating an excess quantity of money *but* an unusual circumstance affecting the country (this contrasted with the orthodox view which emphasised adjustment in case of a foreign deficit endogenous to the monetary system). The unfavourable balance was viewed by Steuart as *temporary*: the role of the international short-term capital market was then, not to restore external equilibrium or to establish a new one, but to overcome the consequences of the foreign deficit (this contrasted with a view in which the central issue was the determination of international equilibrium). The international adjustment responding to an asymmetrical and temporary exogenous shock relied on the *capital account* of the balance of payments – more precisely international short-term capital flows (this contrasted with a view – Hume's price-specie flow mechanism – in which the current account adjusted thanks to variations in the quantity of money). This adjustment required implementing a discretionary policy oriented towards the international short-term capital

market (this contrasted with a view in which international adjustment was implemented by an automatic mechanism).

Ricardo is generally associated by commentators with the Quantity Theory of Money and an automatic international adjustment adapted from Hume to a mixed monetary system of coins and convertible banknotes. Things are not that simple (see Deleplace 2017). Ricardo's approach to money is *not* a quantity theory: "in a sound state of the currency" the value of money is not determined by its quantity but by the value of the standard; the quantity of money only affects its value in disequilibrium and it does so through changes in the market price of the standard, not real balance effects; the quantity of money is not exogenous but endogenously adjusted to "the wants of commerce." As for international adjustment, Ricardo rejected its dependence upon bullion flows and favoured an appropriate management of the note issue, which should operate before exports or imports of gold had the opportunity to occur.

In spite of deep theoretical disagreements, there are two points on which Stuart's insights may help understanding the specificity of Ricardo's approach to money. On the one hand Stuart was the first to distinguish clearly between money (coin) and the standard of money (bullion) and to derive from this distinction the conclusion that monetary disorder (such as the debasement of the coin) or monetary institutions (such as seignorage) were reflected in the market price of the standard. This paved the way to Ricardo's idea that the high price of bullion was a "proof" of a monetary disorder (the depreciation of bank notes), not of real determinants of the supply of and the demand for bullion (such as an adverse balance of trade). On the other hand Stuart emphasised the monetary determinants of the exchange rate (such as the debasement of the domestic coin or the seignorage on the foreign coin). This paved the way to Ricardo's idea that the external depreciation of the currency (the lowering of its exchange rate below the par over and above the cost of exporting bullion) was always caused by its internal depreciation (due to an excess quantity of money) and never by an exogenous foreign balance.

At the end of the day, Stuart and Ricardo appear as squabbling bedfellows, sharing an approach to money at variance with the quantity theory inherited from Hume, but opposing each other on the question of the standard of money and on the relationship between money and capital.

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